

**DOCKET INDEX  
PACIFICORP / SCOTTISH POWER**

<b>DOCKET #</b> 98-2035-04	<b>IN THE MATTER OF:</b> The Application of PacificCorp and Scottish Power plc for an Order Approving the Issuance of PacificCorp Common Stock	15584
<b>Date</b>	<b>Description</b>	<b>SS#</b>

February 26, 1999	Filing of PacificCorp: [Inclusive to the EXHIBIT FILE]	
	* Direct Testimony of Richard T. O'Brien	16113
	* Direct Testimony of Andrew MacRitchie	16129
	* Exhibit to Testimony of Andrew MacRitchie: Comparison of Non-Production Cost/Customer for US Utilities (1996)	NEC
	* Direct Testimony of Alan V. Richardson	16130
	* Exhibit 1: Scottish Power photocopied booklet entitled "Group Activities: Investing for Growth"	NEC
[EXHIBIT FILE]	* Exhibit 2: Scottish Power photocopied booklet entitled "Values: Working together to build businesses.	NEC
	* Exhibit 3: Scottish Power photocopied booklet entitled "Quality of Supply Report 1997/1998"	NEC
	* Exhibit 4: Article in the Times entitled "Search for the best proves a fluid task"	NEC
	* Exhibit 5: Scottish Power Group Awards for 1997-98	16121
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	* Direct Testimony of Jack Kelly	16127
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	* Exhibit 1 to Testimony of Bob Moir:	16115
	-Summary	
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February 26, 1999	PacifiCorp cont. <ul style="list-style-type: none"> <li>- Appendix 1 to Testimony of Bob Moir (saved in f:\home\common\98-2035-04\B.MoirAppl.xls)</li> <li>- Sources</li> <li>- Appendix 2: Service Guarantees, List of Utilities contacted via Internet Home Page (saved in f:\home\common\98-2035-04\Utilities contacted via Internet.xls)</li> <li>* Exhibit 2: "Comparison of Proposed and Existing Service Standards" table</li> <li>* Exhibit 3: Performance Standards and Customer Guarantees tables</li> <li>* Exhibit 4: Underlying SAIDI: Scotland graph, Underlying SAIDI: Manweb graph, and 1997/98 Performance Benchmarking graph</li> <li>* Exhibit 5: Manweb (a Scottish Power Company) photocopied booklet entitled "Quality of Supply Report 1997/1998"</li> <li>*Exhibit 6: Manweb (a Scottish Power Company) photocopied pamphlet, "Standards of Service"</li> <li>*Exhibit 7: photocopied pages RE: Charters</li> <li>*Certificate of Service</li> </ul>	Excel Doc.  16120 Excel Doc.  16118 16119  NEC NEC NEC NEC
February 26, 1999	[PROPRIETARY FILE] Information with the above Filing of Pacificorp. (2 packets)	
March 2, 1999	Exhibit "A" to the Protective Order for Thomas F. Peel	NEC

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February 26, 1999

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**HAND DELIVERED**

Public Service Commission of Utah  
Heber M. Wells Building, 4th Floor  
160 East 300 South  
Salt Lake City, UT 84111

Re: PacifiCorp/ScottishPower - Docket No. 98-2035-04

Dear Commissioners:

Enclosed please find for filing an original and 15 copies of the direct testimony and exhibits of ScottishPower plc and PacifiCorp in the above-referenced docket. I am also enclosing diskettes containing the testimony and the exhibits created by ScottishPower and PacifiCorp in electronic format. Further, the yellow diskette enclosed herein contains the electronic spreadsheet upon which Exhibit SP\_\_\_ (AM-1) to the testimony of Andrew MacRitchie is based.

Please note that some exhibits have been marked "confidential" pursuant to Commission order and are submitted under seal. Parties may obtain these confidential documents pursuant to the terms of the Protective Order.

Thank you for your attention to this matter.

Sincerely yours,

CALLISTER NEBEKER & McCULLOUGH



Brian W. Burnett

BWB:ias

Enclosures

cc: Service List

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UTAH PUBLIC  
SERVICE COMMISSION

16126

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

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In The Matter Of The Application of )  
PacifiCorp and Scottish Power plc ) Docket No. 98-2035-004  
for an Order Approving the Issuance )  
of PacifiCorp Common Stock )

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SCOTTISH POWER

DIRECT TESTIMONY OF ROBERT D. GREEN

FEBRUARY 26, 1999

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## I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Robert D. Green, and my business address is 500 NE Multnomah, Suite 900, Portland, Oregon.

Q. By whom are you employed and in what capacity?

A. I am employed by Scottish Power plc ("ScottishPower"), a Glasgow-based company in the United Kingdom ("U.K."). My title is Group Controller.

Q. What are your responsibilities in your current position?

A. My responsibilities are to oversee the state regulatory approval process.

Q. What position will you hold with PacifiCorp after this transaction is closed?

A. After the transaction is completed, I will be the Chief Financial Officer of PacifiCorp.

Q. Please summarize your education and previous business experience.

A. I was educated at Dulwich College, a private school in London. I then attended Oxford University, gaining a degree in mathematics. I am a U.K. qualified chartered accountant. I have worked in a variety of businesses in senior financial positions. I have previous experience working in Hong Kong and for companies such as ITT, ADT and Rank. In ScottishPower, which I joined in 1991, I have held a variety of senior financial posts including Finance Director of Manweb plc before being appointed as Group Controller in 1996.

Q. Please summarize your direct testimony in this proceeding.

A. After providing background information on the transaction, my testimony makes the following points:

- **Ratemaking Policy:** The transaction will over time lead to prices for customers that are lower than they would have been without the transaction.

- 1           •       **Financial Integrity:** PacifiCorp will benefit from ScottishPower's financial  
2                                    strength, which should over time lead to lower borrowing costs as the financial  
3                                    markets perceive PacifiCorp's improved financial position.
- 4           •       **Cost Allocations and Affiliate Transactions:** ScottishPower currently complies  
5                                    with strict cost allocation and reporting requirements agreed to with its regulators  
6                                    in the U.K., and is capable of complying with similar affiliate rules and cost  
7                                    allocation methodologies applied by this Commission. I will explain how these  
8                                    would apply to PacifiCorp.
- 9           •       **Access to Books and Records:** The transaction will have no impact on the  
10                                   Commission's access to PacifiCorp's books and records.

11 I conclude by setting forth the conditions with which ScottishPower would comply in  
12 connection with regulatory approval of the transaction.

13 Q.    Please describe the transaction that will create the combined company, ScottishPower.

14 A.    ScottishPower proposes to merge with PacifiCorp by acquiring all of the outstanding  
15 common stock of PacifiCorp. Under the terms of the agreement, each PacifiCorp share  
16 will be exchanged tax-free for 0.58 American Depositary Receipts or 2.32 ordinary shares  
17 of ScottishPower. Before allowance for any buyback, this will give ScottishPower  
18 shareholders approximately 64% and current PacifiCorp shareholders approximately 36%  
19 ownership in the combined group. The combined company will be headquartered in  
20 Glasgow, Scotland and operate under the name of ScottishPower. Its U.S. headquarters  
21 will be located in Portland, Oregon. PacifiCorp will continue to operate in the U.S. under  
22 its current name and will still be headquartered in Portland, Oregon.

23 Q.    Are there other organizational changes that will occur in connection with the transaction?

24 A.    Yes. A holding company, or "HoldCo," will be formed in connection with the transaction.  
25 ScottishPower and PacifiCorp will both be subsidiaries of HoldCo. The existing  
26 organization charts for ScottishPower and PacifiCorp are shown on pages 1 and 2,

1           respectively, of Exhibit SP \_\_ (RDG-1). The anticipated organization chart for the new  
2           organization after the transaction is shown on page 3 of my Exhibit SP \_\_ (RDG-1).

3           Q.    What is the accounting method that will be used for the transaction?

4           A.    The transaction will be accomplished through a share-for-share exchange for all of the  
5           issued and outstanding shares of PacifiCorp common stock in a transaction in which all  
6           outstanding debt obligations of PacifiCorp will remain. This form of transaction is  
7           required to be accounted for using the "purchase" method of accounting. The purchase  
8           method of accounting requires all assets and liabilities of PacifiCorp to be valued at fair  
9           market value at the time of closing of the transaction. After assigning fair market values  
10          to all identifiable assets and liabilities, any unallocated portion of the purchase price is  
11          recorded as goodwill.

12          Q.    What are the documents associated with the transaction?

13          A.    The Agreement and Plan of Merger ("Merger Agreement"), included as Appendix 1 to the  
14          Application, was entered into by ScottishPower and PacifiCorp on December 6, 1998.  
15          The Merger Agreement describes the reorganization transaction and the rights and  
16          responsibilities of the various entities. The Merger Agreement was subsequently  
17          amended, and the amended Merger Agreement will be substituted for the document  
18          included with the Application. Exhibit SP \_\_ (RDG-2) is the confidential preliminary  
19          Proxy Statement. The final Proxy Statement will be provided once it is available.

20          Q.    Please briefly describe the Proxy Statement.

21          A.    The preliminary Proxy Statement describes the transaction to shareholders and includes  
22          notices of the Special Meetings of Shareholders at which shareholders will vote on the  
23          transaction. It is preliminary because the form was confidentially submitted to the  
24          Securities and Exchange Commission, and has not actually been issued to shareholders as  
25          of the date of preparation of this testimony.

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## II. RATEMAKING POLICY

Q. In the Application, ScottishPower and PacifiCorp suggest the possibility of prices for PacifiCorp's customers that are lower than they otherwise would have been without the transaction. How will this be achieved?

A. ScottishPower is committed to assist PacifiCorp in its efforts to improve customer service and system performance while keeping rates low. ScottishPower's previous experience in the U.K. in transforming regulated utility businesses gives us the confidence that we can replicate the experience with PacifiCorp. Our investments in systems and staff, along with implementing the process improvements that we found were successful in the U.K., gives us every reason to believe that we can mitigate the upward cost pressures inherent in this business. In addition, our ability to implement these measures in a way that will be more timely, more efficient, and with greater certainty of success due to our experience, will help to keep rates low over the long term.

Q. In some of the mergers between U.S. utilities in the recent past, utility commissions have required price reductions or a commitment to freeze rates as a condition for approval. Is ScottishPower proposing to freeze or reduce rates as a result of this transaction?

A. No. The benefits to customers from this transaction take the form of improvements in the quality of service and increased efficiency in operations, not rate adjustments. This transaction presents very limited opportunities for achieving immediate cost savings. Unlike most other U.S. utility mergers, there are no significant, redundant corporate operations to be eliminated, nor are there synergies to be obtained in combining operating systems. Over time, however, the improvements in operating performance achieved by ScottishPower will lead to cost savings resulting in rates lower than they would have been without the transaction.

Q. Will there be any elimination of significant corporate functions currently performed by PacifiCorp?



1 A. There will be some reduction in overlapping corporate functions, as described later in my  
2 testimony. In contrast to mergers between two U.S. operating utilities, however, this  
3 transaction does not present the opportunity to reduce a significant amount of costs  
4 through the elimination of redundant operations. ScottishPower will not, for example,  
5 eliminate the PacifiCorp headquarters function as part of this transaction. The small  
6 number of ScottishPower personnel that are anticipated to relocate to the U.S. means that,  
7 for the most part, corporate functions will continue to be undertaken by the current staff.

8 Q. What do you mean by synergies in the combined operating systems?

9 A. In the typical U.S. utility merger, the two combining utilities are serving adjacent areas. In  
10 these situations, there are immediately available synergies arising from the transaction.  
11 Transmission systems can be more efficiently utilized. Distribution systems can be  
12 combined and management structures streamlined. The legacy companies' generation  
13 portfolios can be re-evaluated and re-tooled to produce a more economical, lean  
14 generation mix. None of these circumstances is present in this transaction.

15 Q. Will the steps that ScottishPower intends to take to reduce operating costs provide an  
16 ability to reduce rates for customers?

17 A. At some point in the future, the efficiencies resulting from improved operating  
18 performance will mitigate future rate increases. ScottishPower has, to date, conducted  
19 only a high-level, preliminary benchmarking study to identify potential areas for cost  
20 reduction. This effort, however, was very preliminary in nature and insufficient to base  
21 any opinion or commitment to specific cost savings that will be forthcoming immediately.  
22 Without any firm assurances that such cost savings are available, it would be premature to  
23 reflect these hoped-for cost reductions in rates. As noted in the testimony of both  
24 Mr. Richardson and Mr. MacRitchie, the transformation we are proposing will take  
25 several years and require significant investment in people and systems.

26 Q. How will the Commission be able to incorporate costs savings into rates in the future?

1 A. The Commission will retain its ability to track PacifiCorp's future financial performance  
2 and will be able to use its ratemaking authority, when appropriate, to reflect these cost  
3 savings in rates. There is nothing about this transaction which will affect the  
4 Commission's ratemaking authority with respect to PacifiCorp.

5 Q. How does ScottishPower propose to offer prices, over time, that will be lower than they  
6 would have been without the transaction?

7 A. Three principles will guide ScottishPower's strategy on this point:

- 8 • ScottishPower will reduce corporate costs and overheads, where possible, by  
9 streamlining support functions and selectively eliminating redundant activities.
- 10 • ScottishPower will achieve efficiencies in operational costs by an amount greater  
11 than could be achieved by PacifiCorp, as further described in Mr. MacRitchie's  
12 testimony.
- 13 • ScottishPower proposes to increase overall system performance and to enhance  
14 customer service. This improvement will undoubtedly require initial capital  
15 investment, but will over the longer-term produce efficiencies and lower costs.

16 Using these principles as the basis for ScottishPower's strategy will produce prices lower  
17 than they would have been absent the transaction.

### 18 III. FINANCIAL INTEGRITY

19 Q. What effect will the transaction have on the ability of PacifiCorp to issue debt on  
20 reasonable terms?

21 A. The effect of the transaction, if any, should be positive, as PacifiCorp will become part of  
22 a larger, financially stronger entity. As a direct result of the announcement of the merger,  
23 the credit rating agencies placed PacifiCorp's ratings on "CreditWatch" with positive  
24 implications, which suggests the potential for an upgrade in PacifiCorp's debt ratings. This  
25 provides some indication that the cost of PacifiCorp's borrowings can be expected to be  
26 lower after the transaction.

- 1 Q. What economic and financial indicators do investors review in assessing a company's  
2 financial integrity?
- 3 A. In assessing a company's financial integrity, investors examine the economic forces that  
4 affect a company's business risk, including its competitive position, its operations and  
5 management and its regulation. Investors also review financial risk through measures such  
6 as interest coverage, capital structure, cash flow adequacy and financial flexibility.
- 7 Q. In your opinion, how would the transaction affect investors' perception of PacifiCorp's  
8 financial integrity?
- 9 A. The impacts of the transaction on PacifiCorp should be positive, given ScottishPower's  
10 financial strength. Measured by market capitalization of approximately \$12 billion  
11 currently--and which will be approximately \$18 billion after the  
12 transaction--ScottishPower is among the 20 largest investor-owned electric utilities in the  
13 world. As of September 30, 1998, ScottishPower had assets of approximately \$9.5 billion  
14 and shareholder equity of approximately \$2.9 billion. For its fiscal -year ended March 31,  
15 1998, ScottishPower had revenues of approximately \$5.0 billion. ScottishPower  
16 maintains a strong financial position through significant internal cash flow generation and a  
17 conservative balance sheet.
- 18 Q. What is ScottishPower's debt rating?
- 19 A. ScottishPower's bond rating as of December 1998 was rated Aa3 (Review Neg.) by  
20 Moody's and A+ (Watch Neg.) by Standard & Poor's.
- 21 Q. Is there any plan to retire the long-term debt of PacifiCorp?
- 22 A. No.
- 23 Q. Will ScottishPower maintain separate debt ratings for PacifiCorp?
- 24 A. Yes, so long as PacifiCorp debt remains outstanding.
- 25 Q. Will the transaction affect the capital structure of PacifiCorp?
- 26

1 A. Yes, we intend to strengthen the capital structure of PacifiCorp. We are proposing an  
2 actual capital structure equivalent to that of comparable, A-rated electric utilities in the  
3 U.S., with a common equity ratio for PacifiCorp of not less than 47%.

4 Q. In summary, what impact will the transaction have on PacifiCorp's financial condition?

5 A. The transaction should have little, if any, impact upon PacifiCorp's financial integrity in  
6 the short run. Over the longer term, PacifiCorp's integration into a larger, financially  
7 stronger organization should be viewed favorably by debtholders and rating agencies, and  
8 should result in lower borrowing costs.

#### 9 IV. COST ALLOCATIONS AND TRANSACTIONS WITH AFFILIATES

##### 10 COST ALLOCATION ISSUES

11 Q. Is ScottishPower familiar with corporate cost allocation issues?

12 A. Absolutely. We are used to dealing with cost allocation issues in the U.K. We have to  
13 allocate costs among our four main regulated businesses, ScottishPower, Manweb,  
14 Southern Water, and Scottish Telecom. When allocating these costs, we have to work  
15 with the U.K. regulators to arrive at a mutually acceptable result. We expect a similar  
16 process will occur in the U.S. and are ready to work with the Commission to ensure a fair  
17 result for all stakeholders.

18 Q. How are common or corporate costs allocated to the various companies and  
19 organizations, or various subsidiaries and affiliates within ScottishPower?

20 A. Generally, ScottishPower allocates costs to its affiliates in a manner similar to that  
21 employed by U.S. utilities, by applying a range of cost allocation bases that would include  
22 assessment of workload, usage statistics, salaries and net assets. For example, Human  
23 Resources costs are allocated to all businesses in proportion to their "total employee  
24 costs," and Information Systems Division costs are, for the most part, allocated on the  
25 basis of usage.

26 Q. Are there any exceptions to this basic rule?

1 A. The only variation to the above relates to the allocation of Corporate Costs to Southern  
2 Water. The reason for the exception is that the basis formerly used to allocate corporate  
3 costs prior to the acquisition was inappropriate to the circumstances, as it would have  
4 charged Southern Water with a level of corporate overhead such that its corporate costs  
5 would have increased. It was agreed with the U.K. regulatory authorities that the amount  
6 of corporate overhead costs allocated would be lower than the corporate overheads borne  
7 by Southern Water prior to the acquisition. The remaining costs would then be allocated  
8 to the other group companies as described above.

9 Q. Does ScottishPower intend to allocate corporate expenses to PacifiCorp upon completion  
10 of the transaction?

11 A. Yes. We will allocate a share of all the corporate costs to PacifiCorp based on the  
12 allocation techniques described above.

13 Q. Will PacifiCorp's corporate costs increase as a result of the allocation of ScottishPower's  
14 costs?

15 A. No. PacifiCorp will bear lower corporate costs than is currently the case. ScottishPower  
16 intends to apply cost allocation principles analogous to those utilized with Southern  
17 Water. These principles will be applied by assigning a fixed sum to PacifiCorp such that  
18 the overall PacifiCorp head office costs will go down.

19 Q. How much will PacifiCorp's current corporate costs be reduced?

20 A. By the end of the third year following the closing of the transaction, ScottishPower  
21 expects to achieve approximately \$15 million of annual cost savings in corporate costs  
22 which, when offset by \$5 million of cost increases, will produce a net reduction of \$10  
23 million annually in corporate costs. ScottishPower will commit to reflecting this reduction  
24 in PacifiCorp's results of operations.

25 Q. When do you anticipate that ScottishPower will advise the commission of its proposed  
26 allocation procedures?

1 A. ScottishPower will provide an analysis of its proposed allocation of corporate costs within  
2 three months of completion of the transaction. We will commit to filing this analysis and  
3 proposed allocations with each Commission.

4 Q. Will ScottishPower's cost allocation principles change as a result of the transaction?

5 A. No, we will continue to apply the same cost allocation principles. Because of the  
6 corporate structure following the transaction--with the creation of HoldCo as the parent  
7 to both ScottishPower and PacifiCorp--many of these cost allocation issues will fall within  
8 the scope of affiliated interest activities. As a result, different approval procedures may  
9 need to be followed. We are not proposing to change the substantive cost allocation  
10 principles, however.

11 **AFFILIATE TRANSACTIONS**

12 Q. Please describe the nature of the types of transactions that currently occur between  
13 ScottishPower and its affiliates and subsidiaries.

14 A. ScottishPower has a structure typical of a large company, and accordingly there are  
15 several types of transactions that occur between the various affiliates within the  
16 ScottishPower group. By far the greatest number of transactions is with Scottish  
17 Telecom. When Scottish Telecom provides telecom services throughout the group to all  
18 other affiliates and all other subsidiaries and ScottishPower itself, these services are  
19 provided at market rates.

20 Q. Is this the general rule for transactions between affiliates--that goods and services are  
21 supplied at market rates?

22 A. Yes.

23 Q. How is the market rate for the provision of services determined?

24 A. The market rate is determined on the basis of its assessment of how it charges in the  
25 external market.

26

1 Q. Have you identified the type of transactions that would occur between ScottishPower  
2 and/or any of its affiliates and PacifiCorp subsequent to the completion of this transaction?

3 A. As discussed above, because of the structure of the transaction and the creation of  
4 HoldCo, a number of cost allocation issues fall within the scope of affiliated interest  
5 activities. Other than this category of activities, however, we do not expect that a material  
6 number of affiliate transactions involving PacifiCorp will take place following the  
7 completion of the transaction.

8 Q. Please explain why the number of transactions will not be material.

9 A. Scottish Telecom, the affiliate I mentioned earlier, operates solely within the U.K. and  
10 there are no plans for Scottish Telecom to operate within the U.S. The same holds true  
11 with respect to the other electric and/or regulated operations of the other affiliates and  
12 subsidiaries of ScottishPower. The other main affiliates within the ScottishPower group  
13 are Southern Water, which supplies water and wastewater services to customers in the  
14 southeast of England, and Manweb, which provides electricity services to customers in  
15 northwest England and North Wales. Given the geographic separation between these  
16 affiliates and PacifiCorp, there will be very few, if any, transactions between them.

17 Q. For those transactions that do occur, how will ScottishPower determine the price?

18 A. In the absence of any alternative treatment prescribed by the Commission, we would  
19 propose that transactions of goods and services between affiliated interests be priced at  
20 market rates, in accordance with our practice as described above. In the case of cost  
21 allocations which become affiliated interest activities only because of the structure of the  
22 transaction, we propose that an at-cost basis be used, as is currently the case under the  
23 cost allocation principles outlined above.

24 Q. Please describe the regulatory oversight that exists in the U.K. with respect to the  
25 treatment of affiliated transactions with Scottish Telecom.

26

1 A. ScottishPower must provide reports on a regular basis to our regulators which explain the  
2 transactions that occur between the affiliates in the ScottishPower group.

3 Q. What other types of information must be supplied to the regulatory authorities in the U.K.  
4 with respect to the affiliate transactions?

5 A. ScottishPower is required to submit regulated accounts, which are very detailed accounts  
6 supplied to our regulators with a complete analysis setting out all the monetary transfers  
7 between one affiliate and another.

8 Q. Have the bases for those transfers been audited?

9 A. Yes. The bases of all those transactions are audited by our external auditors, and then  
10 submitted to the regulators. Rather than undertaking their own audit of those  
11 transactions, our regulators have always relied on our auditors.

12 Q. Has ScottishPower and/or its affiliates or subsidiaries ever been challenged by regulators  
13 with respect to the procedures and policies associated with accounting for the affiliate  
14 transactions between any of the subsidiaries?

15 A. Not to my knowledge. Our regulators routinely review and discuss affiliate transactions  
16 with us on a periodic basis. In connection with this oversight, we provide regular  
17 information when and as requested.

18 Q. How would you summarize ScottishPower's approach to affiliate transactions ?

19 A. ScottishPower is familiar with and, as a matter of course, complies with regulatory  
20 oversight of its affiliate transactions. We currently operate in an environment which  
21 includes such oversight, and we fully expect to satisfy similar requirements imposed by the  
22 states in which PacifiCorp operates.

23 **V. ACCESS TO BOOKS AND RECORDS**

24 Q. Where will the books, records, documents and other information relating to PacifiCorp be  
25 located?

26



1 A. The books, records, documents and other information relating to PacifiCorp will be  
2 located in Portland, Oregon, and will continue to be available to the Commission upon  
3 request at PacifiCorp's offices in Portland, Salt Lake City, Utah, and elsewhere in  
4 accordance with current practice.

5 Q. Will the Commission have reasonable access to the books, records, documents and other  
6 information which pertain to transactions between PacifiCorp and all its affiliated  
7 interests?

8 A. Yes. ScottishPower and PacifiCorp shall provide the Commission with copies of or  
9 access to all books of account, as well as all documents, data and records of their affiliated  
10 interests, which pertain to transactions between PacifiCorp and all its affiliated interests.

11 Q. Will the Commission have reasonable access to the books, records, documents and other  
12 information which pertain to the bases for charges from ScottishPower to PacifiCorp?

13 A. Yes. The Commission will have access to and may examine the records of ScottishPower  
14 and those of its subsidiaries which are the bases for charges to PacifiCorp. ScottishPower  
15 agrees to cooperate fully with such Commission examination.

16 Q. What are the written accounting policies and procedures that will be applied to regulated  
17 utility operations after the transaction?

18 A. PacifiCorp will keep its existing accounting policies and procedures applicable to the  
19 regulated utility operations in place after the transaction. These policies and procedures  
20 will allow PacifiCorp to report regulated results using the Federal Energy Regulatory  
21 Commission System of Accounts, and ensure that PacifiCorp will comply with all  
22 Commission accounting rules.

23 **VI. PROPOSED CONDITIONS**

24 Q. Based on your testimony, can you summarize the conditions which ScottishPower would  
25 propose in connection with regulatory approval of the transaction?

26 A. Yes. We propose the following conditions:

- 1           1.     To determine the reasonableness of allocation factors used by ScottishPower to  
2                     assign costs to PacifiCorp and amounts subject to allocation or direct charges, the  
3                     Commission or its agents may audit the records of ScottishPower which are the  
4                     bases for charges to PacifiCorp. ScottishPower will cooperate fully with such  
5                     Commission audits.
- 6           2.     ScottishPower and PacifiCorp will provide the Commission access to all books of  
7                     account, as well as all documents, data and records of their affiliated interest,  
8                     which pertain to any transactions between PacifiCorp and its affiliated interests,
- 9           3.     PacifiCorp will maintain its own accounting system, separate from ScottishPower's  
10                    accounting system. All PacifiCorp financial books and records will be kept in  
11                    Portland, Oregon, and will continue to be available to the Commission upon  
12                    request at PacifiCorp's offices in Portland, Salt Lake City, Utah, and elsewhere in  
13                    accordance with current practice.
- 14          4.     ScottishPower and PacifiCorp will exclude all costs of the transaction from  
15                    PacifiCorp's utility accounts.
- 16          5.     PacifiCorp will maintain separate debt and, if outstanding, preferred stock ratings.
- 17          6.     ScottishPower and PacifiCorp will provide the Commission with unrestricted  
18                    access to all written information provided to common stock, bond, or bond rating  
19                    analysts, which directly or indirectly pertains to PacifiCorp.
- 20          7.     ScottishPower and PacifiCorp agree to comply with all existing Commission  
21                    statutes and regulations regarding affiliated interest transactions, including timely  
22                    filing of applications and reports.
- 23          8.     ScottishPower will not subsidize its activities by allocating to or directly charging  
24                    PacifiCorp expenses not authorized by the Commission to be so allocated or  
25                    directly charged.
- 26

1           9.     Neither ScottishPower nor PacifiCorp will assert in any future Commission  
2                   proceeding that the provisions of the Public Utility Holding Company Act of 1935  
3                   preempt the Commission's jurisdiction over affiliated interest transactions.

4     Q.     Does this conclude your testimony?

5     A.     Yes, it does.

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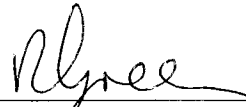
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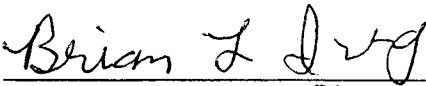
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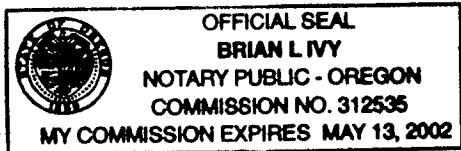
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  ) ss.  
COUNTY OF MULTNOMAH        )

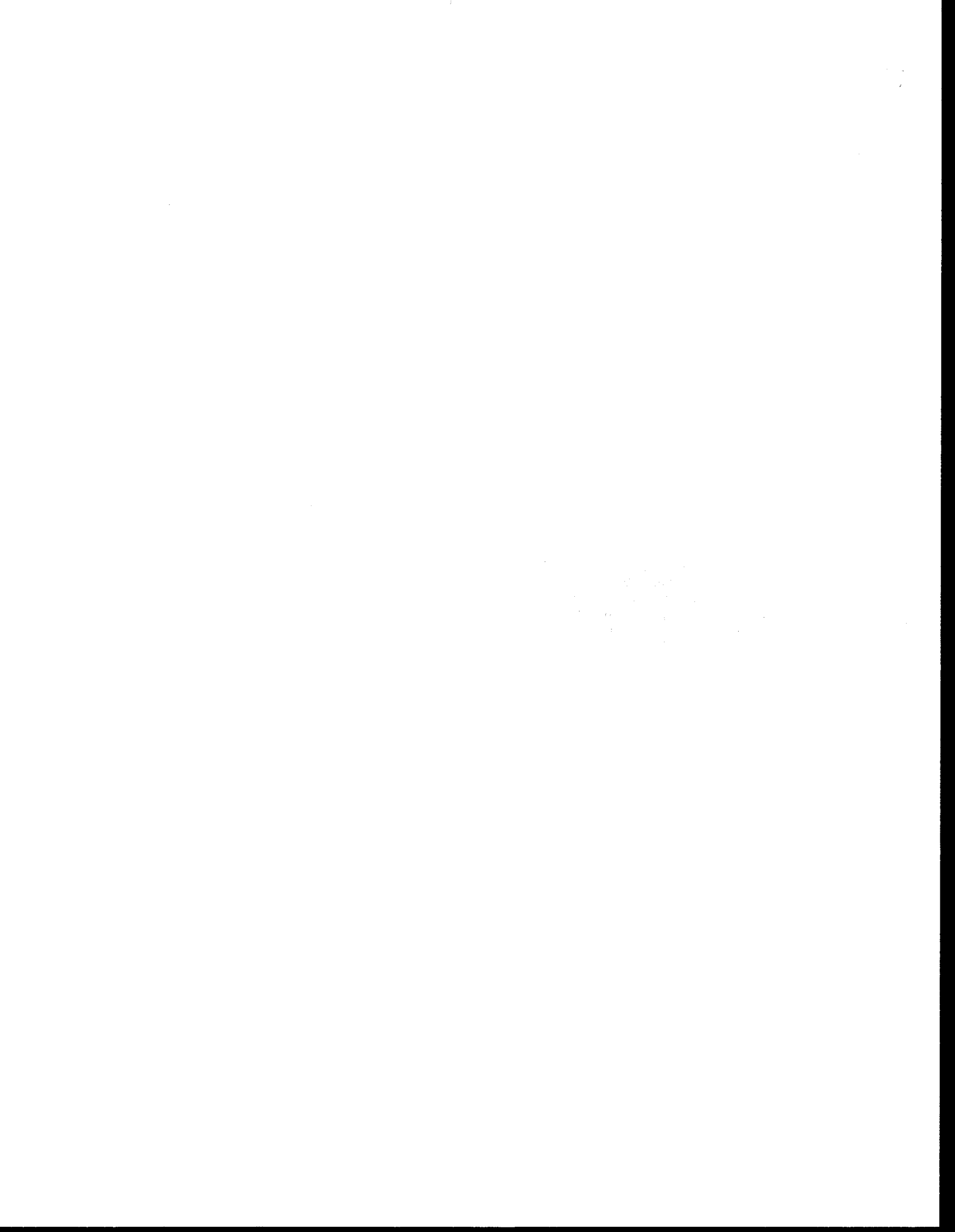
I, Robert D. Green, hereby declare under penalty of perjury under the laws of the State of Oregon that the foregoing testimony was prepared under my direction and supervision and that all testimony and exhibits thereto are true and correct to the best of my knowledge.

  
\_\_\_\_\_  
Robert D. Green

SUBSCRIBED and SWORN to before me this 24 day of February, 1999.

  
\_\_\_\_\_  
Print Name: Brian L. Ivy  
Notary Public in and for the State of Oregon,  
residing at 1508 SE 89th Ave  
My commission expires: May 13 2002



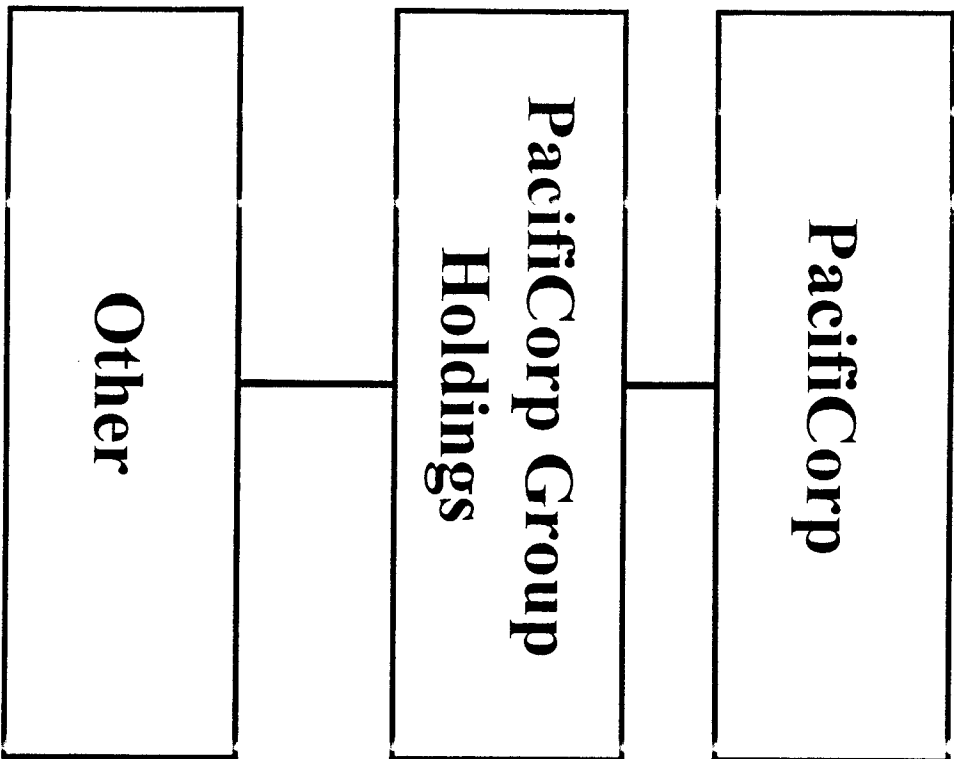


# STRUCTURE NOW

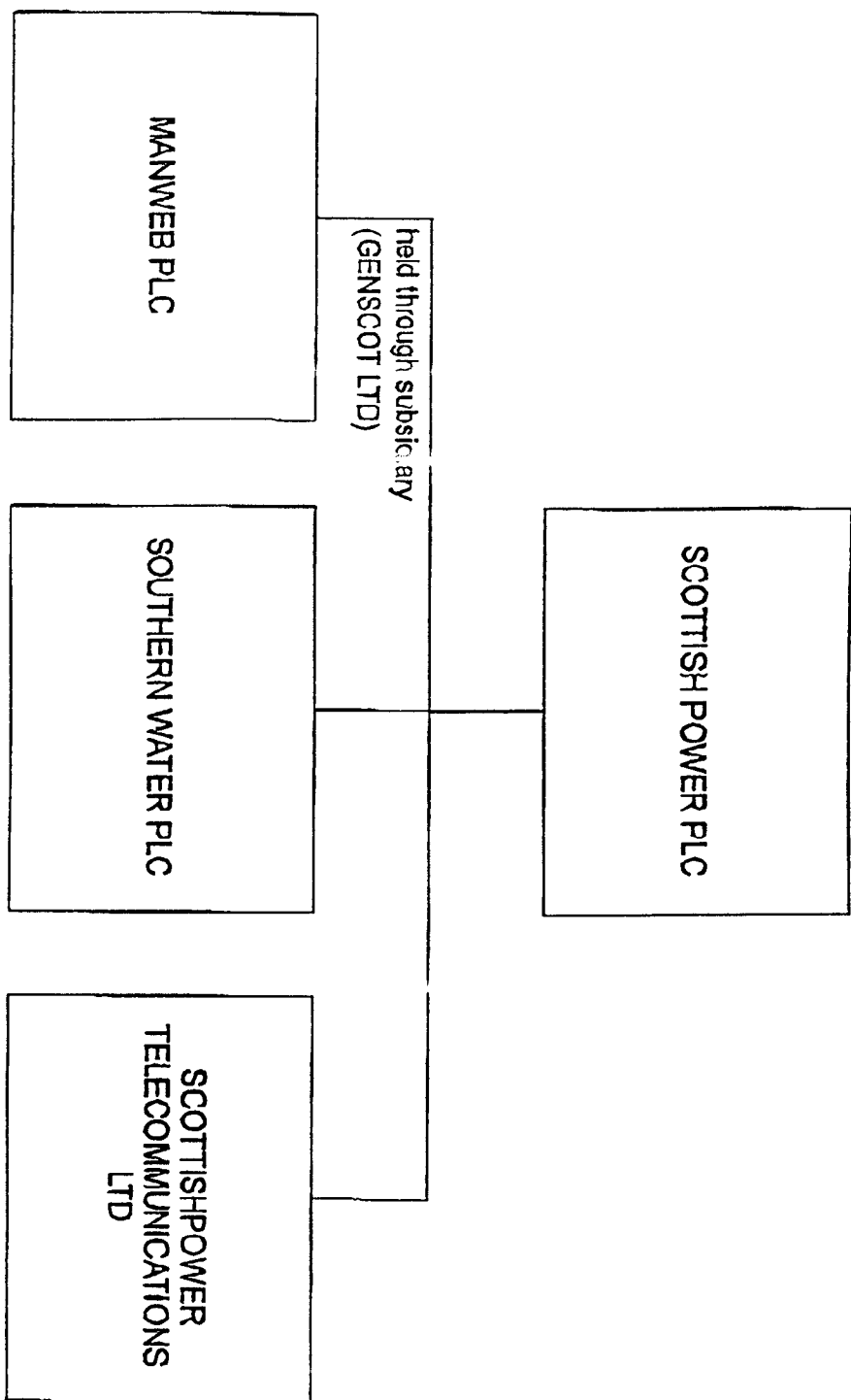
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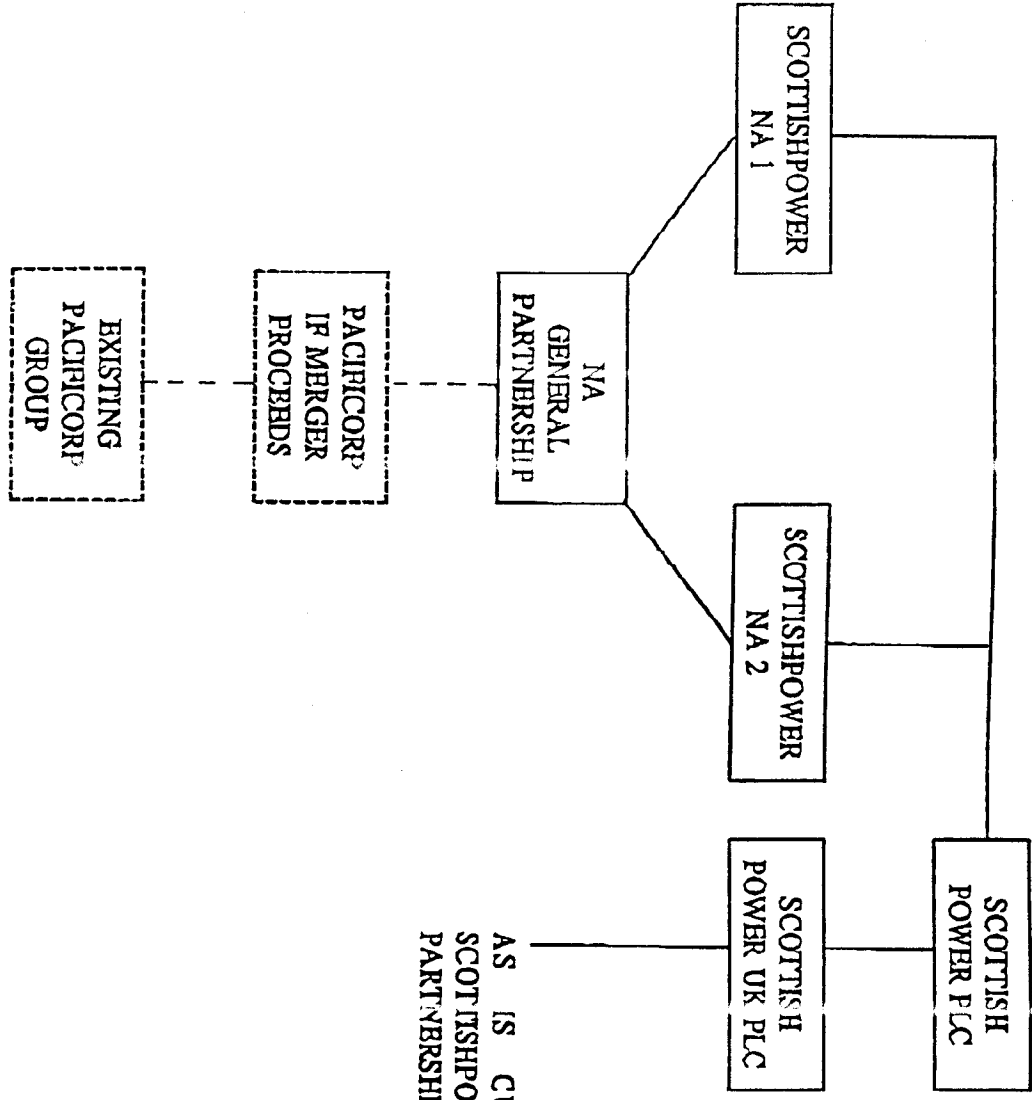
UTAH POWER  
SERVICE COMMISSION



# STRUCTURE NOW



STRUCTURE AFTER JUNE  
WHEN HOLDING COMPANY GOES IN



AS IS CURRENTLY BUT WITHOUT  
SCOTTISHPOWER NA1 & 2 & GENERAL  
PARTNERSHIP





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**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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In The Matter Of The Application of )  
PacifiCorp and Scottish Power plc ) Docket No. 98-2035-004  
for an Order Approving the Issuance )  
of PacifiCorp Common Stock )

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**SCOTTISH POWER**  
**DIRECT TESTIMONY OF JACK KELLY**  
**FEBRUARY 26, 1999**

**RECEIVED**  
**FEB 26 9 11 AM '99**  
UTAH PUBLIC  
**SERVICE COMMISSION**

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## I. INTRODUCTION

3 Q. Please state your name and business address.

4 A. My name is Jack Kelly and my business address is 500 N.E. Multnomah St., Suite 900,  
5 Portland, Oregon, 97232.

6 Q. By whom are you employed and in what capacity?

7 A. I am employed by Scottish Power plc ("ScottishPower"), a Glasgow-based company in the  
8 United Kingdom ("U.K."). My title is Managing Director, ScottishPower Learning.

9 Q. What are your responsibilities in your current position?

10 A. I have the responsibility for developing learning programs across the ScottishPower group  
11 and for taking the company's learning resources and expertise into the wider community.  
12 In this role, ScottishPower Learning is helping schools, communities and the unemployed.

13 Q. Please summarize your education and previous business experience.

14 A. I spent the early years of my career as a technical and operations engineer in the South of  
15 Scotland Electricity Board. Later, I became responsible for several projects aimed at  
16 increasing staff awareness of business issues through increased participation in decision  
17 making processes. Following my MBA dissertation, I became involved in managing the  
18 company's Total Quality Management initiative, which, among other things, addressed the  
19 training and development needs of managers in the newly privatized business environment.  
20 More recently, as a Group Manager, I was responsible for training managers and staff to  
21 work under a partnership arrangement and for developing material for vocational  
22 qualifications. I was appointed to my current position in 1996.

23

## SUMMARY OF TESTIMONY

24 Q. Please summarize your direct testimony in this proceeding.

25 A. ScottishPower holds as one of its values a firm commitment to develop and maintain the  
26 respect and trust of all the communities it serves. We achieve this through building

1 partnerships with local communities to support social and economic regeneration, and  
2 through contributing to a number of local initiatives.

3 Our employees also participate in a range of community programs, which allow them to  
4 develop their full potential and which benefit their communities.

5 ScottishPower community programs include support for education and employment  
6 initiatives, charities, and caring organizations representing youth, people with disabilities,  
7 the elderly and the disadvantaged. We also sponsor the performing arts, sport and  
8 recreation.

9 We are also actively involved in the social and economic regeneration of local  
10 communities and support a number of major projects aimed at developing the social and  
11 economic infrastructure of local areas. We also work in partnership with the public and  
12 private sector and local economic development agencies to offer high quality energy  
13 supply packages to attract foreign investors.

14 Through business activities and community support programs, the ScottishPower group  
15 has a significant effect on the U.K. economy, accounting for £5.6 billion of output in the  
16 economy, both directly and indirectly, and supporting a total of 153,150 jobs.

17 We recognize that many local areas in the U.S., as in the U.K., rely on limited resources to  
18 serve the needs of their community. Through a partnership program similar to the one  
19 successfully developed and implemented within the U.K., ScottishPower will work with  
20 PacifiCorp to become a partner in the local community, to earn and build upon the trust of  
21 those communities, and to increase the contributions we make in the areas of employee  
22 education, community learning, employee volunteerism and financial support of worthy  
23 causes.

24 My testimony will offer an overview of ScottishPower's current employee, community  
25 and low-income programs and outline the commitments ScottishPower will make in these  
26 areas:

- 1       •     **Employee training and development:** ScottishPower will introduce high quality  
2           training facilities in Oregon and Utah for all PacifiCorp employees. The Company  
3           will also establish management development programs in partnership with local  
4           colleges and universities.
- 5       •     **Community initiatives:** ScottishPower will promote and support access to life-  
6           long learning to both its employees and the local community, through its Open  
7           Learning network.  
8           ScottishPower will also seek to introduce a “school to work” initiative to assist  
9           young people in obtaining the necessary skills and experience to facilitate the  
10          transition from school to the work place. ScottishPower also commits to  
11          continuing PacifiCorp’s existing programs in the areas of the arts and community  
12          development.
- 13      •     **Customer Care initiatives:** ScottishPower will support PacifiCorp’s existing  
14          programs and will work with representative groups to introduce new pilots and  
15          programs to assist low-income customers and special needs groups.

## 16                            **II. EMPLOYEE TRAINING AND DEVELOPMENT**

17   Q.    Please describe ScottishPower’s current initiatives in this area.

18   A.    ScottishPower has two principal aims in this area. First, to be innovators in developing  
19          educational and career opportunities for our employees and second, to provide enhanced  
20          employment opportunities or the skills to secure rewarding jobs.

21          A major feature of ScottishPower’s success in this area has been the introduction of Open  
22          Learning Centers. These Centers offer free vocational and non-vocational learning to all  
23          ScottishPower employees and their families. This program has led to the development of  
24          a life long learning culture within the organization that has allowed staff and their families  
25          to take control of their own learning and personal development. The success of this  
26

1 initiative is clearly demonstrated through the levels of participation and support across the  
2 workforce and within the community.

- 3 • Through a network of 51 Open Learning Centers, over 750 programs are  
4 available, many of which lead to qualifications such as vocational qualifications,  
5 university diplomas and degrees. To date over 60 percent of ScottishPower  
6 employees have enrolled in these programs.
- 7 • We have also helped establish 9 community learning centers that offer a range of  
8 Company Learning Programs. 3,900 family and community members have enrolled  
9 in these and our in-house centers.
- 10 • To date, 1200 Personal Development Plans have been crafted and 1600 employee  
11 families have enrolled.

12 Q. What commitments is ScottishPower willing to make to employee training and  
13 development in the U.S.?

14 A. ScottishPower will introduce, on a phased basis, high quality training facilities in Oregon  
15 and Utah for all PacifiCorp employees. Such training centers will be required to support  
16 company initiatives to improve the performance of PacifiCorp after the merger is  
17 completed. The scope of this training will be both broad and deep, ranging from customer  
18 service, information technology, safety and engineering, to professional qualifications.  
19 ScottishPower recognizes that PacifiCorp employees will be required to learn new ways of  
20 working and new skills. To this end, ScottishPower will provide Open Learning Centers  
21 which will be accessible to a large proportion of PacifiCorp staff. These Learning Centers  
22 will provide a wide range of programs similar to those in the U.K., where our staff can  
23 access over 750 courses of their own choice, in their own time, free of charge. Learning,  
24 in our view, is a valuable pre-requisite to successful training. In time, we expect these  
25 Learning Centers to be made available to the families of employees and, ultimately,  
26 community groups.

1 Professional programs will include a Company-sponsored MBA program and other  
2 educational incentive programs leading to college degrees, which will be delivered in  
3 partnership with local business schools, colleges and universities. Technical training  
4 programs will focus on safety and environmental issues. ScottishPower also intends to  
5 develop and deliver an accredited craft apprentice training program. This program will  
6 provide the necessary flow through of skills required to support the future human  
7 resources needs of PacifiCorp, as well as support the employment needs of local  
8 communities.

9 Q. What financial commitment will ScottishPower make as part of these commitments?

10 A. We estimate that the financial commitment necessary to develop these programs would be  
11 approximately \$3 million. They would cost approximately \$1 million per year to operate.

### 12 III. OCCUPATIONAL HEALTH

13 Q. Please describe ScottishPower's current initiatives in this area.

14 A. ScottishPower's in-house Occupational Health Service provides employees with a wide  
15 range of employee health enhancing services and facilities, such as:

- 16 • Confidential, open access to health services, including physiotherapy and, as  
17 appropriate, alternative therapies.
- 18 • Proactive occupational health monitoring and interventions for work-related  
19 conditions, as well as an advisory service to ScottishPower on issues such as  
20 occupational safety, ergonomic assessment and stress in the workplace.
- 21 • Health center facilities available to all employees, including outreach areas of  
22 operation.
- 23 • Fitness centers available for staff and families.

24 Q. What commitments will ScottishPower make in this area in the U.S.?  
25  
26

1 A. ScottishPower will examine what it can do to encourage a healthy lifestyle consistent with  
2 the company's values of creating a positive working environment for staff. This may  
3 involve introducing some of the successful programs already adopted in the U.K.

#### 4 IV. COMMUNITY INITIATIVES

5 Q. Please describe ScottishPower's current initiatives in this area.

6 A. ScottishPower's community program represents an integrated, focused approach to  
7 address and support a range of national and local community causes and initiatives in the  
8 U.K. In addition to financial support, the Company provides professional services and  
9 advice to a variety of organizations. The Company's community initiatives are focused in  
10 the areas of education and employment, the arts, and community development.

11 The U.K. Government has recognized ScottishPower's prominent involvement in the area  
12 of community programs, as evidenced by positive public comment. In addition, Ian  
13 Robinson, Chief Executive Officer of ScottishPower, chairs the New Deal Advisory Task  
14 Force for Scotland. The New Deal program is aimed at improving employment prospects  
15 for the young and long-term unemployed. The Advisory Taskforce advises the  
16 government on key issues of unemployment program policy and design, markets the New  
17 Deal, stimulates action and commitment across industry, and advises the government on  
18 progress with implementation. Through the Pathfinders program, Ian Robinson also chairs  
19 a group advising the Secretary of State for Scotland on economic policy priorities.

#### 20 Education and employment

21 ScottishPower Learning, established in July 1996, is a joint initiative with the Trades  
22 Unions in Scotland, England and Wales. Specific programs delivered by ScottishPower  
23 Learning include:

- 24 • Unemployed programs. More than 550 young people have received training in the  
25 areas of craft skills, information technology, call center and business  
26



1 administration. Of those who have completed training, 77 percent have move into  
2 full time employment or further education and training.

- 3 • Partnerships with other non-profit organizations. The Company has established 40  
4 programs for over 400 young people in the areas of developing self esteem, social  
5 and life skills.
- 6 • School to work initiative. Coordinated with the Education Business partnership,  
7 Careers Service and other interested parties, this program has helped over 200  
8 youths struggling with academic qualifications to obtain vocational training.
- 9 • Community Learning Centers. ScottishPower has assisted in establishing nine  
10 community learning centers that offer an array of learning programs. These  
11 centers, and the Company's in-house centers, have a combined enrollment of 3,900  
12 family and community members.
- 13 • Understanding electricity. ScottishPower also publishes and distributes learning  
14 resources covering safety, energy conservation, environmental impact, energy  
15 sources and electricity production to schools.
- 16 • School safety initiatives. The Company, in partnership with the police and local  
17 fire companies, supports a variety of safety initiatives aimed at raising awareness of  
18 potential hazards and the avoidance of unsafe situations.
- 19 • Company visitor centers. ScottishPower owns and operates a number of centers  
20 that explain the Company's operations and community involvement. These centers  
21 attract visitors from across the U.K. and overseas.
- 22 • Scottish Knowledge. The Company contributes to this program, which promotes  
23 and markets Scottish Learning Institutions and their services worldwide.

#### 24 The Arts

25 ScottishPower supports an integrated arts and education program that involves  
26 community performances, school programs, and outreach initiatives accessible to

1 communities and special needs groups in both cities and rural communities. ScottishPower  
2 has been recognized for its support of the arts by the Association of Business Sponsorship  
3 of the Arts (ABSA) at both a national and regional level in the U.K.

4 Examples of ScottishPower support programs include:

- 5 • National proms series and schools proms programs in North West England and  
6 Scotland, dance workshops at the Edinburgh International Festival, school theater  
7 workshops, opera performances in Scotland and Wales, and ScottishPower Pipe  
8 Band performances.
- 9 • Corporate support of the 20<sup>th</sup> Century Gallery at the National Museum of Scotland  
10 and the Beatles Heritage project in Liverpool.
- 11 • Support of a number of local theatres in Edinburgh, Crewe, Canterbury and  
12 Chester.
- 13 • Public concerts and performances, supported by ScottishPower, are held  
14 throughout the ScottishPower operating area, including the International  
15 Eisteddfodd in North Wales and the Bawl Fireworks display in Kent.

#### 16 **Community Development**

17 ScottishPower is actively involved in the social and economic health of local communities  
18 and supports a number of major projects aimed at developing the social and economic  
19 infrastructure of local areas. Specific projects supported include:

- 20 • Partnership with the public sector and local development corporations to offer high  
21 quality, competitive supply packages of electricity and gas services to foreign  
22 investors.
- 23 • Innovative partnerships with organizations to improve infrastructures and service  
24 delivery channels. Through projects such as the Highlands & Islands Telecoms  
25 partnership, ScottishTelecom has made essential investment in the  
26 telecommunications infrastructure in remote areas of the Scottish highlands.

- 1       •     The Company is also working with local government in a number of areas,  
2             including recognition of improvements in customer service through sponsorship of  
3             the Council for Scottish Local Authorities (CoSLA) Quality Awards.
- 4       •     In Wales, ScottishPower has launched a Welsh Language Scheme that enables the  
5             Company to communicate with customers in the language they prefer.  
6             ScottishPower was the first privatized utility to have its Welsh Language scheme  
7             approved by the Welsh Language Board.

8       ScottishPower also enhances the health and welfare of its communities through support of  
9       active leisure programs, including:

- 10      •     The learn to swim program, a partnership between Southern Water and the  
11             Amateur Swimming Association. This program has taught more than 250,000  
12             children aged 4-12 to enjoy water sports safely.
- 13      •     Youth rugby in Wales and amateur rowing in Scotland, England and Wales.
- 14      •     Youth soccer in local communities throughout Scotland.

15   Q.    What commitments will ScottishPower make in this area in the U.S.?

16   A.    ScottishPower intends to continue to support PacifiCorp's community initiatives. The  
17        Company will also look to introduce on a phased basis a number of successful community  
18        programs from the U.K. The first of these will be the School to Work initiative.  
19        ScottishPower will consider the joint development of such an initiative with state  
20        educational authorities and the local business community. Skill development opportunities  
21        will be made available through the Company's Open Learning Centers, work experience  
22        mentoring, and work shadowing.

23        ScottishPower will also maintain the Community Advisory Boards. As a result of the  
24        Pacific Power/Utah Power merger, PacifiCorp agreed to fund Advisory Boards in the  
25        states of Utah and Wyoming, together with a single Advisory Board for the states of the  
26        Pacific Power & Light service territory. ScottishPower recognizes that these Boards can

1 provide effective community input to management and that this input is essential.

2 ScottishPower commits to maintaining the key role these Boards provide to the Company  
3 and the community.

4 Q. What is financial commitment will ScottishPower make as part of these commitments?

5 A. The extent of the financial commitment at this stage is unclear. Further details will be  
6 provided once ScottishPower has had an opportunity to examine the potential to introduce  
7 into the U.S. some of its successful U.K. programs.

#### 8 IV. LOW-INCOME CUSTOMER INITIATIVES

9 Q. Please describe ScottishPower's current initiatives in this area in the U.K.

10 A. The ScottishPower group supports a number of initiatives aimed at assisting low-income  
11 groups within the community. These programs are part of ScottishPower's commitment to  
12 the delivery of the highest standards of service to all customers.

13 Through our partnership with organizations such as EAGA (Energy Action Grants  
14 Association), we provide affordable warmth to low income families through a program of  
15 grants to reduce fuel costs, fixed energy payments, benefit advice, and access to  
16 competitively priced energy deals. We have also formed an alliance with the housing  
17 charity HACT (Housing Association Charitable Trust) to provide a unique, comprehensive  
18 energy product to the U.K.'s 1.5 million housing association tenants and the sector's  
19 95,000 employees. Both programs provide affordable warmth to low income families  
20 through the introduction of easier and more affordable ways to pay and reduce energy use.  
21 In addition, affinity agreements with the Trade Union Congress (TUC) and the National  
22 Farmers Union offer competitively priced domestic electricity and gas to their 135,000  
23 members.

24 ScottishPower has built upon established links with a number of organizations such as  
25 Energy Action Scotland, Citizens Advice, Age Concern and Help the Aged, and many  
26 groups that represent ethnic communities and special needs customers, to deliver product

1 and customer service packages. Through innovative programs such as the Carefree  
2 register, customers with special needs can register to receive specific product information  
3 and support as well as information and advice through a network of community liaison  
4 staff.

5 Q. What commitments will ScottishPower make in this area?

6 A. ScottishPower intends to continue PacifiCorp's existing low-income initiatives. The  
7 Company also seeks to take some of its most successful programs in the U. K. and  
8 gradually introduce them in the U.S. These programs include:

- 9 • **Heat Assistance Funding.** PacifiCorp is already a partner in non-profit heating  
10 assistance programs in all of its states and both donates company funds and solicits  
11 funds from customers. ScottishPower proposes to expand this program by  
12 reintroducing the matching concept with PacifiCorp matching customer donations  
13 annually. ScottishPower also proposes to double the number of customers it will  
14 assist.
- 15 • **Debt Counseling.** ScottishPower proposes to establish a debt counseling service  
16 for customers. This program was first introduced by ScottishPower and Manweb  
17 over five years ago and has been instrumental in reducing the number of customers  
18 disconnected for nonpayment of electricity bills. As part of the program, debt  
19 counselors visit customers with payment problems to help develop an effective  
20 payment plan.
- 21 • **Education on Energy Efficiency and Electricity Safety.** ScottishPower will  
22 expand the commitment to educate customers regarding energy efficiency in order  
23 to help customers with payment difficulties. We will also actively promote  
24 electrical safety to all PacifiCorp's customers.

25 Q. What financial commitment will ScottishPower make as part of these commitments?  
26

1 A. We estimate that the financial commitment necessary to develop and operate these  
2 programs would be approximately \$1.5 million per year.

3 Does this conclude your testimony?

4 A. Yes.

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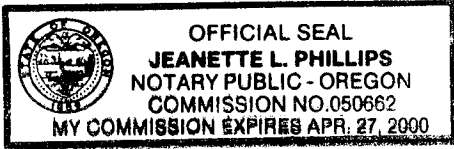


STATE OF OREGON                    )  
  ) ss.  
COUNTY OF MULTNOMAH        )

I, Jack Kelly, hereby declare under penalty of perjury under the laws of the State of Oregon that the foregoing testimony was prepared under my direction and supervision and that all testimony and exhibits thereto are true and correct to the best of my knowledge.

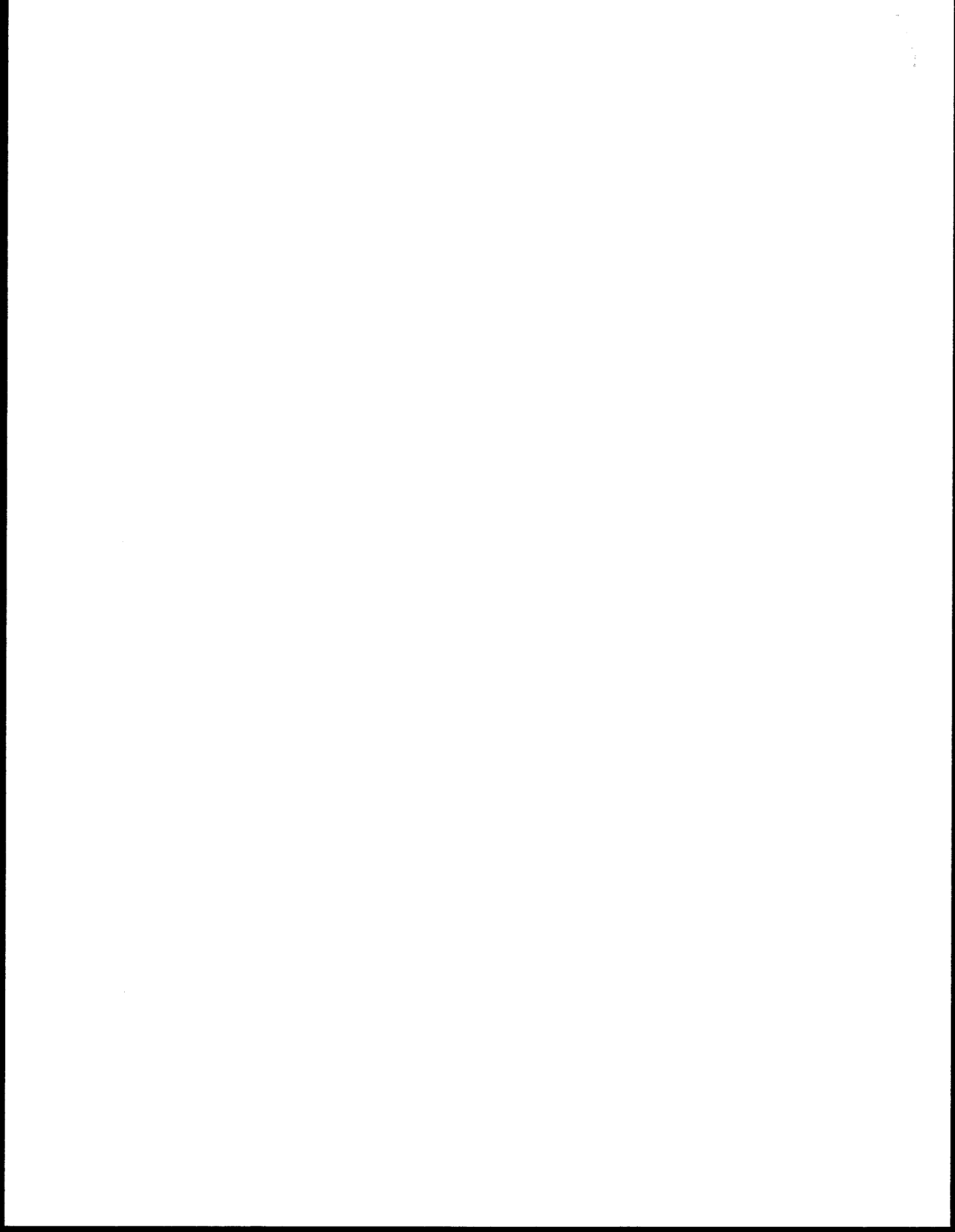
Jack Kelly  
Jack Kelly

SUBSCRIBED and SWORN to before me this 25<sup>th</sup> day of February, 1999.



Jeanette L. Phillips  
Print Name: Jeanette L. Phillips  
Notary Public in and for the State of Oregon,  
residing at Portland  
My commission expires: 4-27-2000





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**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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In The Matter Of The Application of )  
PacifiCorp and Scottish Power plc ) Docket No. 98-2035-004  
for an Order Approving the Issuance )  
of PacifiCorp Common Stock )

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**SCOTTISH POWER**  
**DIRECT TESTIMONY OF ANDREW MacRITCHIE**  
**FEBRUARY 26, 1999**

**RECEIVED**  
**FEB 26 9 12 AM '99**  
**UTAH PUBLIC**  
**SERVICE COMMISSION**

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## INTRODUCTION

3 Q. Please state your name and business address.

4 A. My name is Andrew MacRitchie, and my business address is 500 N.E. Multnomah St.,  
5 Portland, Oregon, 97232.

6 Q. By whom are you employed and in what capacity?

7 A. I am employed by Scottish Power plc ("ScottishPower" or the "Company"), a Glasgow-  
8 based company in the United Kingdom ("U.K."), in the role of Business & Organization  
9 Development Manager.

10 Q. What are your responsibilities in your current position?

11 A. My current responsibilities are to manage the ScottishPower teams based in the U.S.  
12 working on the merger of ScottishPower and PacifiCorp. I report to Alan Richardson.

13 Q. Please summarize your education and previous business experience.

14 A. My first degree was undertaken at Glasgow University in Electrical and Electronic  
15 Engineering. After working as Operations Manager for a large transport company, I  
16 joined ScottishPower in 1986, initially as a Project Team Leader on engineering IT project  
17 work, before moving into an internal consultancy role in the Productivity Services section.  
18 Since then I have either led, or took a leading part in, many of the significant change  
19 programs within the Company. These included development and implementation of the  
20 benchmarking framework for the Distribution and Customer Service parts of the business,  
21 project **management** of the Manweb transition following its acquisition, and production of  
22 a **strategic development plan** for integrating the water business with the electric wires  
23 business. In between these project roles I was responsible for regulation, strategic  
24 planning, IT and change management for the Power Systems (transmission and  
25 distribution) business of ScottishPower. I obtained my MBA from Strathclyde Graduate  
26

1 Business School in 1992 and undertook an Executive Development Program at Wharton  
2 Business School in 1996.

3 Q. What position will you hold with PacifiCorp after this transaction is closed?

4 A. After the transaction is completed, I will be responsible to the PacifiCorp CEO for the  
5 development and implementation of transition plans, the development of business plans  
6 and strategic guidance to the business.

7 **SUMMARY OF TESTIMONY**

8 Q. What is the purpose of your direct testimony in this proceeding?

9 A. The purpose of my testimony is to demonstrate that ScottishPower has proven capabilities  
10 with regard to transforming and delivering step change improvements in regulated utility  
11 businesses. When applied to PacifiCorp, these capabilities will lead to improvements in  
12 performance and efficiency at a pace and scale greater than PacifiCorp could manage on  
13 its own. In so doing, service levels will be raised for all customers and costs reduced over  
14 time. These cost reductions will mitigate the traditional upward pressure on prices.

15 Q. Please summarize your testimony in this proceeding.

16 A. As part of its assessment of PacifiCorp, ScottishPower developed high-level preliminary  
17 estimates of the potential for operating cost savings. The estimates were developed  
18 through benchmarking the vast majority of PacifiCorp's non-generation operating costs  
19 against those for other U.S. electric utilities as provided through FERC Form 1  
20 submissions. The benchmarking exercise showed that PacifiCorp's operating costs per  
21 customer were higher than those experienced by many other utilities both in the Pacific  
22 Northwest and across the rest of the U.S. As such, we believe there is potential for  
23 reducing operating costs in PacifiCorp. However, benchmarking is merely the first step in  
24 ScottishPower's methodology for transforming utility businesses. This methodology has  
25 been developed and honed through its application in the Scottish core businesses since  
26

1 1991 and in Manweb and Southern Water following their acquisitions. The key success  
2 factors within this methodology are:

- 3 • the use of benchmarking to identify best practices within and outside of the  
4 organization;
- 5 • a specific management approach for delivering complex organizational change; and
- 6 • a structured approach to defining and implementing investments in people and  
7 systems to enable change.

8 These aspects of our methodology are encompassed within an overall style of management  
9 which ensures clear accountability and sustained management focus, backed by a  
10 commitment at all levels in the organization to deliver against aggressive goals.

11 Our capability in transforming regulated utility businesses is unique, in that it is a complex  
12 mix of skills, experiences, knowledge, processes, systems and people that deliver the  
13 results. This capability has not been developed to the same extent within PacifiCorp. As  
14 such, the combination of ScottishPower's transformation capabilities and the experience  
15 and operational management of PacifiCorp will be able to deliver improvements in  
16 performance and efficiency faster, more economically, to a greater extent and with more  
17 certainty than PacifiCorp could achieve on a stand-alone basis.

18 While our proven capability in change management and our ability to deliver step changes  
19 in performance and efficiency are a matter of record, it should be noted that we have only  
20 begun the process to quantify the potential efficiencies which exist. A significant amount  
21 of work **still** needs to be undertaken with PacifiCorp before we can assess the potential for  
22 efficiencies with any degree of certainty. Furthermore, cost savings will only be achieved  
23 on an incremental basis over time. Our current estimate is that it will take up to five years  
24 to undertake the transformation both in terms of cost and performance improvement. We  
25 therefore submit that any attempt to infer an impact on rates as a result of our preliminary  
26 yardstick comparisons is inappropriate, as discussed in Robert Green's testimony. Rather,

1 we recommend that the Commission utilize the traditional ratemaking process to effect  
2 any required changes in rates.

### 3 BENCHMARKING ANALYSIS

4 Q. Does ScottishPower intend to take advantage of opportunities to reduce costs in  
5 PacifiCorp's regulated utility business?

6 A. Yes, we do. However, it is important to stress that ScottishPower believes customers  
7 should benefit from both a low cost and high quality service. We pursue these twin  
8 objectives with equal vigor. ScottishPower has established a corporate objective that  
9 PacifiCorp should be within the top ten major U.S. electric utilities with respect to non-  
10 generation operating costs as soon as possible. To achieve this objective, we are going to  
11 have to look directly at the performance of each area of the business, including the costs  
12 of performing each function. Robert Green's testimony discusses the reduction in costs  
13 that will be achieved in the corporate area. To achieve our overall objective, the scope of  
14 our inquiry must extend beyond corporate costs.

15 Q. Have you estimated the potential cost savings that could be achieved in PacifiCorp?

16 A. We conducted a high-level yardstick assessment in the fall of 1998 to determine the  
17 amount of potential cost savings that could be obtained over a period of time subsequent  
18 to the transaction. A copy of the results of this assessment are attached as  
19 Exhibit SP \_\_\_\_ (AM-1).

20 Q. Please describe Exhibit SP \_\_\_\_ (AM-1).

21 A. Exhibit SP \_\_\_\_ (AM-1) compares the operating costs per customer for PacifiCorp to  
22 other U.S. electric utilities. This comparison was based upon 1996 FERC Form 1 data  
23 and is limited to transmission, distribution, customer service and informational, marketing,  
24 sales, administrative, and general expenses less those expenses under the FERC headings  
25 of "customer service and informational" and "uncollectibles".  
26

1 Q. Why did you exclude production, customer service and informational expenses and  
2 uncollectibles from this calculation?

3 A. These categories were excluded because we found that geography, system resource  
4 addition decisions and state policies on demand-side management, advertising and  
5 collections policies, rather than performance, were the primary drivers for these categories  
6 of costs. Since our objective was to develop a basis for comparing PacifiCorp's historical  
7 performance to that of other utilities in those areas under management control, these  
8 categories needed to be excluded.

9 Q. What conclusions do you draw from Exhibit SP \_\_\_\_ (AM-1)?

10 A. I conclude from Exhibit SP \_\_\_\_ (AM-1) that PacifiCorp has higher operating costs than  
11 average. It also suggests that a substantial amount of cost reduction would have to occur  
12 in order for the Company to be ranked as one of the top ten electric utilities in the U.S.  
13 The results of this yardstick assessment lead us to believe that potential cost savings for  
14 PacifiCorp exist.

15 Q. Why do you categorize the cost savings as "potential"?

16 A. As I will detail later, ScottishPower has had extensive experience in all parts of its business  
17 in identifying and then implementing cost savings in conjunction with delivering  
18 improvements in performance. What we have found is that the yardstick assessment that  
19 was the start of this process, while directionally correct, can be somewhat misleading for a  
20 number of reasons:

- 21 • Differences in overall operating environments for individual utilities may require  
22 them to invest in and then operate more expensive systems such as underground  
23 high-voltage transmission facilities;
- 24 • Different cost allocation procedures or accounting conventions regarding the  
25 capitalization or expensing of certain items have the potential to distort results; and  
26

- 1           • Yardstick comparisons have inherent data problems and can mask best or worst  
2 practices in specific areas. Drawing too great a set of inferences about steps that  
3 should be taken to better manage the organization without knowing whether best  
4 practices are being employed in any or all areas could lead to erroneous  
5 recommendations.

6                           **SCOTTISHPOWER'S METHODOLOGY FOR TRANSFORMING**  
7                           **REGULATED UTILITY BUSINESSES**

8 Q. Please outline ScottishPower's methodology for transforming regulated utility businesses  
9 and explain how these will apply to this transaction.

10 A. ScottishPower has managed many significant business transformations within its Scottish  
11 businesses and within manweb and Southern Water. Each transformation has had a  
12 different set of issues and therefore required a tailored approach. However, there are  
13 several common key elements that have been developed as part of each and every  
14 significant change program which the Company has undertaken. We have now established  
15 these elements as key success factors for every future business transformation. These key  
16 success factors are outlined below:

- 17           • the use of benchmarking to identify best practices within and outside of the  
18 organization;
- 19           • a specific management approach for delivering complex organizational change; and
- 20           • an understanding of the investments that are required in people and systems to  
21 enable change to take place.

22 The success of the ScottishPower approach to business transformation is due to more than  
23 just the methodology. The critical element is the overall style of management within  
24 which the methodology is encompassed, ensuring clear accountability and sustained  
25 management focus, backed by a commitment to deliver against aggressive goals. It is this  
26 approach to business transformation which we intend to apply to PacifiCorp.



1 Q. Could you please explain how you use benchmarking as part of this transformation  
2 process?

3 A. A framework for delivering benchmarking has been developed internally within  
4 ScottishPower and refined over time with the benefit of our past experiences. It was  
5 initially developed by drawing on the experiences of leading benchmarking practitioners  
6 such as Rank Xerox and Royal Mail. Its ultimate objective is to deliver action plans  
7 developed by a process relying upon comparisons with companies that exhibit superior  
8 performance, including companies outside the utility businesses. A copy of the approach  
9 we use in conducting benchmarking is provided, starting on page 5, of Exhibit SP \_\_\_\_  
10 (AM-2).

11 Q. What benchmarking exercises has ScottishPower undertaken and what has been the  
12 outcome?

13 A. ScottishPower has undertaken numerous benchmarking exercises to facilitate the  
14 successful transformation of all of its businesses. The most significant ones we have  
15 conducted in the areas of distribution and customer service are described below:

16 **Benchmark I (1992)**

17 ScottishPower's earliest introduction to benchmarking was a quantitative study undertaken  
18 by McKinsey consultancy called Benchmark I. This sought to identify the performance  
19 gap between the Company and leading class utilities. For Distribution & Supply, Duke  
20 Power was identified as the benchmark, and an efficiency target of \$30.4 million was set  
21 and achieved over four years.

22 **Activity Costing (1993)**

23 A large activity costing project was initiated to identify internal benchmarks between  
24 ScottishPower's nine operating districts. This allowed ScottishPower to identify best  
25 practices between similar operating units within the Company. The process proved  
26 extremely successful with internal budgets being set for the first time by internal

1 comparison. A value of approximately \$4.8 million was identified and delivered over two  
2 years.

3 **Benchmark II (1994)**

4 External benchmarking, both qualitative and quantitative, was undertaken with various  
5 U.S. utilities as well as companies from outside the industry. A detailed understanding of  
6 the characteristics of leading class companies in terms of performance and quality was  
7 gained and change plans were developed to incorporate these. These set a target of  
8 \$32 million which was delivered over three years. It also led to a major re-organization of  
9 activities and business accountabilities, coupled with the development of a five-year  
10 information systems development plan to establish the systems infrastructure to support  
11 improved efficiency and performance.

12 **Regulatory Positioning (1994/95)**

13 During 1994/95, OFFER undertook regulatory price reviews with all the regional  
14 electricity companies. One of the methods it used for measuring relative efficiency levels  
15 between companies was yardstick comparisons. Detailed regression analysis had, for  
16 example, demonstrated that there was a close comparison between operating costs and  
17 numbers of customers. The study demonstrated that ScottishPower was the lowest-cost  
18 distributor and positioned extremely favorably in terms of customer service performance  
19 compared with its competitors. ScottishPower believed that its strategy of "sticking to the  
20 knitting" was critical to this outcome.

21 **Acquisition and Integration of Manweb (1995/96)**

22 In 1995, ScottishPower launched a successful bid for Manweb. During the following  
23 transition and integration phases of merging the two organizations, the ScottishPower  
24 benchmarking approach was used to identify synergies and the opportunity for the sharing  
25 of best practices. Total cost savings of \$102 million were identified during this exercise.  
26

1           **Benchmark III (1996/97)**

2           With the integration of Manweb complete, further external benchmarking of both a  
3           strategic and generic nature was undertaken. The primary focus of these studies was the  
4           area of best practices in procurement. This led to a plan which subsequently delivered  
5           savings of over \$12.8 million of annual cost. This involved extensive studies with  
6           companies such as Nissan, BP and Compaq.

7           **Benchmark IV (1997/98)**

8           Benchmark IV utilizes new, improved work and asset management systems to establish a  
9           more accurate set of internal benchmarks between similar operating units within the  
10          organization. These newly developed benchmarks, coupled with further external  
11          benchmarks, have established a target of \$12.8 million annual cost savings being delivered.  
12          As can be seen from the examples above, benchmarking has been a major driver of  
13          ScottishPower business performance since privatization. More important, ScottishPower  
14          has successfully achieved the targets set through the benchmarking exercises. Outlined  
15          below is a summary of these initiatives:

16

<b>Benchmarking Initiative</b>	<b>Year</b>	<b>Total Annual Cash Saving Nominal (\$million)</b>
Benchmark I – Quantitative Yardstick Comparison	1992	30.4
Benchmark II – Qualitative and Quantitative Study	1993	32.0
Acquisition and Integration of Manweb	1995	102.0
Benchmark III – Generic Benchmarking	1996	12.8
Benchmark IV – Internal Benchmarking	1997	12.8

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23          Q.     What is the management approach which ScottishPower uses to deliver complex  
24               organizational change?

25          A.     The success of any business change initiative, whether it relates to improving performance,  
26               systems or processes can be judged only by the ability of an organization to implement it.

1 Many companies have had their "fingers burned" through failing to manage effectively the  
2 implementation of change. ScottishPower's approach has two key management  
3 methodologies that support the successful delivery of change within the organization:

- 4 • Program Management; and
- 5 • Performance Framework.

6 Q. Please describe the program management methodology.

7 A. ScottishPower has developed in-house a methodology for delivering complex change  
8 within the company called program management. This methodology ensures the  
9 coordination of many discrete projects which are linked by a common goal. Each project  
10 has a senior operational manager as a sponsor who ensures that the project remains  
11 business-led. The overall program is managed through a program office which reports to  
12 a senior management steering group. As projects near the implementation stage, a  
13 standard approach has been developed to formalize the transfer from project to line  
14 management as well as to enable full training for all users.

15 Exhibit SP \_\_\_ (AM-3) provides a more in-depth description of the methodology.

16 Q. Please describe the performance framework methodology.

17 A. The performance framework methodology is designed to track and report the results of  
18 business change. As discussed earlier, a key element of the successful implementation of  
19 change is the rigor with which ScottishPower's change initiatives are tracked through  
20 delivery with senior management accountability assigned. Exhibit SP \_\_\_ (AM-4)  
21 provides an example of the standard monthly reporting which is used within the Power  
22 Systems business to ensure top management visibility of change.

23 Q. What is ScottishPower's approach with employees in implementing change?

24 A. ScottishPower works hard to nurture an organizational culture where change is viewed  
25 positively. This has not occurred overnight and still continues to be developed within the  
26

1 organization. Some of the activities associated with facilitating the attitudinal changes are  
2 outlined below:

- 3 • External and internal benchmarking has been instrumental in changing attitudes and  
4 working practices. External benchmarking has helped to eliminate parochial  
5 attitudes that have historically slowed change. Benchmarking assists in developing  
6 a learning culture that seeks the betterment of processes, always believing that  
7 there is a smarter way to operate;
- 8 • Strengthening and adding more depth to general management capabilities through  
9 an extensive range of tailored courses such as Business Leadership Programs and  
10 MBA courses;
- 11 • Introduction of schemes such as "Managing in the Millennium," which is designed  
12 for employees with limited formal qualifications who show the potential to move  
13 into management or supervisory roles;
- 14 • The provision of an extensive network of 51 Open Learning centers has provided  
15 staff with the opportunity to learn new skills. As well as benefiting the employees  
16 personally, it also provides renewed confidence through the achievement of  
17 additional knowledge and new skills; and
- 18 • Constant communication of the rationale for change and the plans that are in place  
19 to deliver it. In many projects, employees are now actively involved in driving  
20 change from the "bottom up" through local initiatives and projects generated by  
21 courses such as "Managing in the Millennium."

22 Underpinning the development of agility within the organization is the Values program to  
23 which the company is totally committed. ScottishPower recognizes that as the business  
24 changes and grows, it is important that this is underpinned by a commonly held set of  
25 values. To support acceptance of these values by staff, a Values Based Leadership  
26 development process has helped employees understand how the values fit into day-to-day

1 operations. This scheme has been in place since 1996 and has helped shape the identity  
2 and culture of the Company.

3 Q. What role does investment in information systems play in implementing change?

4 A. With respect to investment in information systems, a significant amount of the change  
5 within ScottishPower has been facilitated by the introduction of new technology.

6 ScottishPower has successfully managed a broad range of projects which are primarily  
7 business change projects with a significant IT component. The fact that the design of  
8 customer facing systems dovetails so closely with the business strategy is no coincidence.

9 ScottishPower has undertaken fundamental reviews of its IS strategy with respect to the  
10 customer and asset management systems under a project known as the System Framework  
11 Study. This is attached as Exhibit SP \_\_\_\_ (AM-5). The Study provided the blueprint for  
12 an integrated systems infrastructure which underpinned the business transformation in the  
13 core ScottishPower businesses.

14 Q. Have the efficiency improvements made by ScottishPower in its various businesses been at  
15 the expense of customer service?

16 A. No, on the contrary. ScottishPower has always pursued its efficiency goals alongside a  
17 parallel objective of raising customer service and system performance standards. Indeed,  
18 our external benchmarking exercises have often been as much about identifying service  
19 excellence as they have about replicating low-cost operations. Our track record in this  
20 area speaks for itself, and the testimonies of Alan Richardson and Bob Moir describe some  
21 of the **very real** service improvements we have made as part of the transformation of  
22 Manweb and Southern Water.

23 **PLANS FOR ACHIEVING COST REDUCTIONS AT PACIFICORP**

24 Q. When will ScottishPower begin the process of examining the potential for cost reductions  
25 for PacifiCorp?

1 A. Shortly before completion of the transaction, ScottishPower intends to set up a full  
2 integration team and conduct an exhaustive survey into the operations of PacifiCorp based  
3 on our benchmarking methodology. This process has to be accomplished jointly with  
4 PacifiCorp to ensure ownership of the plans which will subsequently need to be delivered  
5 by PacifiCorp with minimal management input from ScottishPower. The output of this  
6 process will be an integrated business plan for PacifiCorp with detailed initiative plans to  
7 support the performance goals.

8 Q. How long will it take for the cost savings from this process to be realized?

9 A. A significant amount of work and further investment still needs to be undertaken in  
10 conjunction with PacifiCorp before the positive effects of this effort will materialize.  
11 Therefore, the cost savings will be realized only incrementally and over a period of time.  
12 Our current estimate is that it will take up to five years to undertake the transformation  
13 both in terms of cost and performance improvement.

14 Q. What does this mean with respect to the opportunity to require price reductions in  
15 connection with approval of this transaction?

16 A. Based upon the lack of any definitive estimates of potential cost savings available at  
17 present, any attempt to set lower rates today to take advantage of yet-to-be realized cost  
18 savings is premature. As discussed in Robert Green's testimony, once the cost savings  
19 have been achieved, this Commission will be able to gauge the effect of these steps in our  
20 operating results. To the extent that a rate review is justified, ScottishPower would  
21 expect to have its rates re-examined and any justifiable changes could be made at the  
22 relevant time.

23 Q. Does this conclude your testimony?

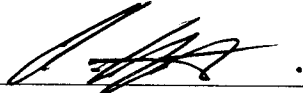
24 A. Yes, it does.

25

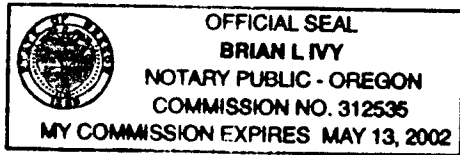
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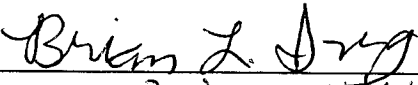
STATE OF OREGON                    )  
  ) ss.  
COUNTY OF MULTNOMAH        )

I, Andrew MacRitchie, hereby declare under penalty of perjury under the laws of the State of Oregon that the foregoing testimony was prepared under my direction and supervision and that all testimony and exhibits thereto are true and correct to the best of my knowledge.

  
\_\_\_\_\_  
Andrew MacRitchie

SUBSCRIBED and SWORN to before me this 24 day of February, 1999.



  
\_\_\_\_\_  
Print Name: Brian L. Ivy  
Notary Public in and for the State of Oregon,  
residing at 1508 SE 89th Ave.  
My commission expires: May 13 2002



## Comparison of Non-Production Cost/Customer for US Utilities (1996)

	Company	Customers	Non-production Costs per Cust. (\$)
1	Florida Power & Light Company	3,550,742	157.88
2	Florida Power Corporation	1,292,057	179.77
3	Consumers Energy Company	1,580,343	184.08
4	Citizens Electric Company	6,211	191.07
5	San Diego Gas & Electric Company	1,157,452	194.02
6	Northwestern Wisconsin Electric Co.	10,796	195.72
7	Wisconsin Electric Company	961,982	199.24
<b>8</b>	<b>Puget Sound Energy, Inc.</b>	<b>849,065</b>	<b>200.07</b>
<b>9</b>	<b>New Century Energy</b>	<b>1,498,251</b>	<b>205.16</b>
10	Superior Water, Light & Power Co.	13,948	210.57
11	Madison Gas and Electric Company	120,746	214.28
12	WPI, Holdings	382,008	214.29
13	Public Service Electric and Gas Co.	1,884,860	221.27
14	WPS Resources	426,234	221.61
15	Northwestern Public Service	55,526	222.20
16	Black Hills Corporation	55,464	227.01
17	Southern California Edison Company	4,201,586	227.18
18	Empire District Electric Co.	137,926	229.40
19	Connecticut Valley Electric Co., Inc.	10,331	231.20
20	Connectiv	915,114	237.34
21	Northern States Power Company	1,411,783	241.81
22	Bangor Hydro-Electric Company	118,760	245.07
23	Sierra Pacific Power Company	746,029	247.53
24	Lockhart Power Company	5,762	247.48
25	Central Maine Power Company	519,005	247.55
26	Commonwealth Edison Company	3,395,802	247.56
27	MidAmerican Energy Company	637,966	247.95
28	LG&E Energy	805,976	250.14
29	Texas Utilities Electric Company	2,409,216	254.03
30	St. Joseph Light & Power Company	61,062	255.85
31	First Energy	2,135,604	259.72
32	Virginia Electric and Power Company	1,943,619	265.16
33	Illinois Power Company	557,638	265.93
34	Tampa Electric Company	506,038	265.99
35	MDU Resources Group, Inc.	112,681	268.63
36	Portland General Electric	660,767	271.04
37	Interstate Energy	498,830	271.51
38	UNITIL, Corp.	89,082	273.30
39	South Carolina Electric & Gas Co.	488,984	277.04
40	Oklahoma Gas and Electric Company	680,584	279.14
41	Pacific Gas and Electric company	4,439,305	279.61
42	Central Louisiana Electric Company	219,077	280.17
43	Central Illinois Light Company	193,577	281.18
44	Western Resources	1,040,974	281.63
45	AEP-Central & South West	4,614,022	282.18
46	Detroit Edison Company	2,013,608	285.09
47	Ameren	1,453,972	288.03
48	Tucson Electric Power Company	306,773	288.25
49	Alaska Electric Light and Power	13,840	288.38
50	Indianapolis Power & Light Company	411,218	291.22
51	Southern Indiana Gas and Electric	121,185	292.90
52	New England Electric System	1,281,737	293.79
53	Public Service Co. - New Mexico	337,568	295.47
54	Potomac Electric Power Company	679,426	296.20
55	Baltimore Gas and Electric company	1,100,208	298.78
<b>56</b>	<b>PacifiCorp</b>	<b>1,383,094</b>	<b>300.13</b>
57	Entergy Corporation	2,421,875	302.02
58	Central Hudson Gas & Electric Corp.	263,781	302.69
59	Pennsylvania Power & Light Co.	1,230,139	304.81
60	Allegheny Power Systems	1,959,939	305.72
61	Texas-New Mexico Power Company	216,316	306.86
62	UtiliCorp United, Inc.	355,569	310.52
63	Long Island Lighting Company	1,030,010	310.78
64	Dayton Power and light Company	477,307	311.24

Top Ten

Note: Companies in **bold** have similar operating conditions to PacifiCorp i.e. customer mix and terrain.

1st Quartile

PacifiCorp

Comparison of Non-Production Cost/Customer for US Utilities (1996)

	Company	Customers	Non-production Costs per Cust. (\$)
65	Edison Sault Electric Company	21,074	312.23
66	New York State Electric & Gas Corp.	807,637	315.52
67	Maine Public Service Company	35,173	317.86
68	Carolina Power & Light Company	1,108,633	321.40
69	Niagara Mohawk Power Corporation	1,553,511	321.71
<b>70</b>	<b>Idaho Power Company</b>	<b>346,436</b>	<b>322.31</b>
71	Con Ed-Orange & Rockland	3,262,722	323.66
72	Cinergy	1,377,077	328.85

Source: EIA summary data from the FERC Form 1

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**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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In The Matter Of The Application	)	
of PacifiCorp and Scottish Power plc	)	Docket No. 98-2035-004
for an Order Approving the	)	
Issuance of PacifiCorp Common	)	
Stock	)	

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**SCOTTISH POWER**  
**DIRECT TESTIMONY OF BOB MOIR**  
**FEBRUARY 26, 1999**

**RECEIVED**  
 FEB 26 9 11 AM '99  
 UTAH PUBLIC SERVICE COMMISSION

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## I. INTRODUCTION

Q. Please state your name and position.

A. My name is Bob Moir and I am currently the General Manager of the Metering Business within ScottishPower's Power Systems Division.

Q. Please state your responsibilities and qualifications.

A. I am responsible for meter reading, meter installation, and maintenance of ScottishPower's electric meters. In my position, I am responsible for ensuring that the data obtained from meters is transmitted to the appropriate billing systems. Earlier in my career with ScottishPower, I was one of the general managers responsible for implementation of the company's service standards. I have been employed by the company for 31 years. I have a Higher National Certificate in Electrical and Electronic Engineering and have attended the Senior Management Programme at the Strathclyde Business School.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to describe the package of service standards ScottishPower will implement at PacifiCorp after completion of the transaction. We believe these standards will redefine the relationship between PacifiCorp and its customers and lead to substantial improvements in the quality of service delivery.

Q: Could you describe this package of service standards?

A: There are two types of service standards in the package. The first type deals with total company improvements and are general in nature. These standards are what our customers can expect with regard to the overall level of service provided by the company. We refer to these as Performance Standards. The second type of standards are the company's guarantees to individual customers regarding the quality of their interactions with the company. We refer to these as Customer Guarantees. When taken together, this package of service standards will be the most comprehensive offered by any electric utility

1 in the United States. As such, the package represents an unprecedented commitment on  
2 the part of ScottishPower to substantially improve the level of service PacifiCorp offers to  
3 its customers.

4 Furthermore, we are prepared to be measured on our record of service improvement and  
5 pay penalties in the event that we do not fulfill our commitments. ScottishPower's  
6 proposed service standards package is therefore truly "best in class." See Exhibit SP \_\_  
7 (BM-1) for a comparison between the service standards proposed by ScottishPower and  
8 those in place at other major utilities in the United States. See also Exhibit SP \_\_ (BM-2)  
9 for comparisons between current state commission requirements and those offered by  
10 ScottishPower in its service standards package.

11 Q. Why does ScottishPower believe service standards are important?

12 A. ScottishPower believes successful businesses must satisfy the needs of their customers.  
13 Numerous surveys consistently identify system performance and customer service as the  
14 key determinants of service quality for electric service providers. The standards that  
15 ScottishPower is proposing address these key deliverables directly and define in detail the  
16 level of service improvement customers can expect from PacifiCorp. In short,  
17 ScottishPower believes that providing an enhanced level of service is good business.  
18 There is another very important reason why ScottishPower is prepared to commit to such  
19 a comprehensive package of service standards. This reason is grounded in  
20 ScottishPower's philosophy of driving internal business performance improvement by  
21 using an externally-based measurement system. In our experience, this is one of the most  
22 effective vehicles for institutionalizing targeted changes in business process and  
23 galvanizing management action. Setting challenging external service targets will therefore  
24 help to spur on the improvements required in PacifiCorp's core business.

25 Q. What are the specific service standards contained in the package?  
26

1 A. The service standard package contains the following specific commitments from  
2 ScottishPower:

3 **A. Performance Standards:**

4 The following Performance Standards relate to the network:

- 5 1) *System Availability.* By 2005 PacifiCorp will undertake to reduce the underlying  
6 System Average Interruption Duration Index (SAIDI) by 10%.
- 7 2) *System Reliability.* By 2005 PacifiCorp will undertake to reduce the underlying  
8 System Average Interruption Frequency Index (SAIFI) by 10%.
- 9 3) *Momentary Interruptions.* By 2005 PacifiCorp will undertake to reduce the  
10 underlying Momentary Average Interruption Frequency Index (MAIFI) by 5%.
- 11 4) *Worst Performing Circuits.* The 5 worst performing circuits in each state will be  
12 selected annually on the basis of the Circuit Performance Indicator (CPI) and  
13 corrective measures will be taken within 2 years of implementation of the  
14 performance targets to reduce the CPI by 20%.
- 15 5) *Supply Restoration.* For power outages because of a fault or damage on our  
16 system, we will restore supplies on average to 80% of customers within 3 hours.

17 The following Performance Standards relate to customer service:

- 18 1) *Telephone Service Levels.* Within 120 days after completion of the transaction,  
19 80% of calls to PacifiCorp's Business Centers will be answered within 30 seconds.  
20 The long-term goal will be to move to a service level of 80% within 10 seconds.
- 21 2) *Commission Complaint Resolution.* PacifiCorp will investigate and provide a  
22 response to all complaints referred by the Commission within 3 working days.  
23 Complaints related to service disconnection will be responded to within 4 business  
24 hours. Ninety percent of complaints referred to PacifiCorp by the Commission will  
25 be resolved within 30 days. These standards will be implemented within 90 days of  
26 completing the transaction.

1     **B.     Customer Guarantees:**

2             The following Customer Guarantees will be backed by payments to customers when  
3             PacifiCorp does not meet its published standard.

- 4             1)     *Restoring the Customer's Supply.* If the customer loses electricity supply because  
5                     of a fault in our system, we will try to put the customer's supply back on within 24  
6                     hours.
- 7             2)     *Appointments.* We will keep all mutually agreed appointments with the customer,  
8                     whether over the phone or in writing. Beginning in the year 2001 we will offer the  
9                     customer a morning appointment, between 8 AM and 1 PM, or an afternoon  
10                    appointment, between 12 Noon and 5 PM.
- 11            3)     *Switching On the Customer's Power.* Upon customer request we will activate the  
12                    power supply within 24 hours provided no construction is required and all  
13                    government requirements are met.
- 14            4)     *Estimates for Providing a New Supply.* We will call the customer back within 2  
15                    business days of the customer's initial call and schedule a mutually agreed  
16                    appointment with an estimator. If we need to change our network we will provide  
17                    a written estimate to the customer within 15 business days of the customer's initial  
18                    meeting with our estimator. If we do not need to change our network we will  
19                    provide an estimate to the customer within 5 business days of the customer's initial  
20                    meeting with our estimator.
- 21            5)     *Response to Bill Inquiry.* If the customer has a question about their electric bill we  
22                    will investigate and respond to the customer's inquiry within 15 business days.
- 23            6)     *Problems with the Customer's Meter.* If the customer suspects there is a problem  
24                    with their meter we will investigate and report back to the customer within 15  
25                    business days.
- 26

1 7) *Planned Interruptions.* If we need to turn the customer's power supply off for  
2 planned maintenance work or testing, we will give the customer at least 2 days  
3 notice.

4 8) *Power Quality Complaints.* If the customer notifies us about a problem with the  
5 quality of electric supply we will either initiate an investigation within 7 days or  
6 explain the problem in writing within 5 business days.

7 If we fail to meet these Customer Guarantees we will make payments to the affected  
8 customers. See Exhibit SP \_\_ (BM-3) for an elaboration on the definitions of these  
9 standards.

10 Q. How is your testimony organized?

11 A. The first three sections of my testimony discuss the three areas addressed by the service  
12 standards package, i.e., Performance Standards relating to the network, Performance  
13 Standards relating to customer service, and Customer Guarantees, respectively. In the  
14 next section, I discuss how we will achieve improvements to these areas through  
15 investment and training of PacifiCorp's workforce. I then describe ScottishPower's track  
16 record in achieving similar objectives in the United Kingdom. In the final section, I  
17 discuss the reporting commitments that ScottishPower will undertake to inform  
18 PacifiCorp's customers and the Commission about its progress in achieving these  
19 objectives.

20 **II. PERFORMANCE STANDARDS RELATING TO THE NETWORK**

21 Q. Could you please describe the performance improvements to the network ScottishPower  
22 will implement after the transaction with PacifiCorp is complete?

23 A. ScottishPower has identified five discrete Performance Standards relating to the network  
24 that PacifiCorp will introduce following completion of the transaction. These standards  
25 are designed to reduce the frequency and duration of outages to PacifiCorp's retail  
26



1 customers. These standards are quantifiable "stretch goals" designed to be achieved  
2 within the five year time period following the transaction, or by 2005.

3 Q. What are the Performance Standards relating to the network?

4 A. The five Performance Standards relating to the network are: targeted reductions in System  
5 Average Interruption Duration Index (SAIDI); System Average Interruption Frequency  
6 Index (SAIFI); Momentary Average Interruption Frequency Index (MAIFI); an  
7 improvement in the five worst performing circuits in each state; and average restoration of  
8 power outages within three hours to 80% of PacifiCorp's customers.

9 Q. What level of improvement will ScottishPower make to SAIDI, SAIFI and MAIFI?

10 A. We will commit to reduce SAIDI and SAIFI by 10% and MAIFI by 5% from an accurate  
11 baseline for PacifiCorp's system. We will achieve these reductions by 2005 or 5 years  
12 following completion of the transaction. The SAIDI, SAIFI and MAIFI indices will be  
13 calculated separately for each state jurisdiction. In this way, there will be comparable  
14 improvements in reliability for all states.

15 Q. How were the improvement targets established?

16 A. ScottishPower is committed to improving PacifiCorp's system performance as quickly as  
17 possible. The targets are designed to be achievable "stretch goals" for the company. They  
18 were established based on ScottishPower's review of PacifiCorp's historical performance  
19 and our experience with improving system reliability in the United Kingdom.

20 ScottishPower used its best judgment to set these performance goals, but there are some  
21 uncertainties over the pace of improvement that can be reasonably expected given the  
22 information that is currently available.

23 Q. What are the constraints regarding the information that is currently available?

24 A. ScottishPower recognizes that base-line data may change from PacifiCorp's current,  
25 historical outage data because of uncertainty regarding the accuracy of the historical  
26 performance to date. Once ScottishPower implements new monitoring and reporting

1 information systems for the PacifiCorp system, the accuracy of PacifiCorp's outage data  
2 will improve. This change in measurement and monitoring accuracy may by itself cause an  
3 increase in the reported (but not actual) reliability indices. In the event that improved  
4 measurement techniques cause meaningful changes in reliability indices, ScottishPower  
5 proposes to modify the historical base-line data to reflect the new measurement technique.  
6 Regardless of the base-line, however, ScottishPower is committed to the substantial  
7 improvements to network performance contained in the service standards package. To  
8 underline this commitment, ScottishPower will subject the reporting systems to quality  
9 assurance and audit so that the figures are as accurate as possible.

10 Q. Could you please describe ScottishPower's commitment regarding the improvement to the  
11 five worst performing circuits?

12 A. We propose to improve the five worst performing circuits in each state by twenty percent.  
13 PacifiCorp measures circuit performance on the basis of the Circuit Performance Indicator  
14 (CPI).<sup>1</sup> The CPI excludes extreme events and is calculated over a three-year average to  
15 identify consistently poor performing circuits. ScottishPower intends to reduce the CPI  
16 for the worst performing circuits by twenty percent within two years of implementation of  
17 the performance targets. Improving the five worst performing circuits is designed to  
18 address the immediate problems of those groups of customers that suffer the poorest  
19 quality of supply.

20 Q. What is the basis for setting the CPI improvement target at twenty percent?

21 A. Similar to the targeted improvement levels for SAIDI, SAIFI and MAIFI, the twenty  
22 percent improvement in CPI is designed to be a "stretch goal" for PacifiCorp. It was  
23  
24

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25  
26 <sup>1</sup> The CPI is a weighted, composite index based on the following five factors: 1) MAIFI; 2)  
SAIDI; 3) SAIFI; 4) Number of lockouts; and 5) Load Factor.

1 established based on ScottishPower's review of PacifiCorp's historical performance and  
2 our experience with improving system reliability in the U.K. on a per circuit basis.

3 Q. Could you please explain the target being proposed for supply restoration?

4 A. We propose to restore power to an average of 80% of our customers within three hours in  
5 instances where there has been a power outage because of a fault or damage to our  
6 system. We will institute new procedures and reporting systems to more accurately track  
7 this performance metric. Once the improved reporting systems are in place and  
8 ScottishPower has some experience with the supply restoration target, ScottishPower will  
9 be willing to consider the possibility of increasing the performance target above 80%.

10 Q. Are there benefits to customers from implementing ScottishPower's Performance  
11 Standards relating to the network?

12 A. Yes. There are significant customer benefits from such improvements. These benefits  
13 result primarily from improved customer service. It is clear from market research that  
14 customers value the improvements in reliability and service quality planned by  
15 ScottishPower. Industrial and commercial customers care about system performance  
16 because outages can be very costly. Outages result in reduced productivity of capital and  
17 labor, damage to foodstuffs and other products, and loss of customer goodwill resulting  
18 from missed deadlines. For residential customers, power outages can result in  
19 inconvenience, discomfort, damage to food and other perishable items and reduced  
20 personal security. The achievement of the network targets set by ScottishPower will  
21 therefore substantially reduce the cost and inconvenience of power outages for PacifiCorp  
22 customers.

23 Q. Is ScottishPower willing to underwrite its commitments by agreeing to financial penalties?

24 A. In principle we do not believe that large-scale financial penalties directed to the company  
25 are appropriate. Rather, we believe in a penalty regime that rewards the individual  
26 customers who suffer poor service (as embodied in our Customer Guarantees).

1 Nevertheless, as an act of goodwill and in order to demonstrate our commitment to  
2 achieve the standards as set out, we propose financial penalties be payable by the company  
3 in the event we do not achieve the five Performance Standards relating to the network  
4 (SAIDI, SAIFI, MAIFI, five worst performing circuits and restoration of power) within  
5 the five-year period following approval of the transaction. For each of the standards not  
6 achieved in any jurisdiction at the end of the five-year period, we will pay a financial  
7 penalty equal to \$1.00 for every customer in such jurisdiction. In the event that  
8 ScottishPower fails to meet its Performance Standards relating to the network in all  
9 jurisdictions this would equate to a total penalty of some \$7 million.

10 Q. How will the proceeds from these financial penalties be applied?

11 A. The monies should be visibly returned to the community, and not diluted through the rate  
12 base or divided up amongst customers as a rebate. One possibility is to have the proceeds  
13 paid into the PacifiCorp Foundation.

### 14 **III. PERFORMANCE STANDARDS RELATING TO CUSTOMER SERVICE**

15 Q. What Service Performance Standards does ScottishPower plan to implement?

16 A. ScottishPower has targeted two areas for improvement regarding Service Performance.  
17 First, PacifiCorp will reduce the time it takes to answer telephone calls to its Business  
18 Centers. Second, PacifiCorp will reduce the time it takes for the Company to investigate  
19 and respond to all customer complaints referred to it by the Commission.

20 Q. Please explain the commitment ScottishPower is making to improve telephone service  
21 levels.

22 A. The target we have set for ourselves is that within 120 days after completion of the  
23 transaction, 80% of the calls to PacifiCorp's Business Centers will be answered within 30  
24 seconds. This target will be increased to 80% in 20 seconds by January 1, 2001 and 80%  
25 in 10 seconds by January 1, 2002. While these targets are very demanding (the current  
26 average speed of answer in the Business Centers is over three minutes), ScottishPower has

1 a significant degree of confidence in its ability to achieve these targets given the high  
2 performance of ScottishPower's call centers in the U.K.

3 Q. Will improvements in PacifiCorp's call center performance result in significant  
4 improvements in customer satisfaction?

5 A. Yes. Customers expect to be able to contact us quickly and easily. Customer research  
6 conducted by PacifiCorp shows that there are significant reductions in customer  
7 satisfaction the longer it takes PacifiCorp's Customer Service employees to answer  
8 customer calls. ScottishPower pledges to dramatically reduce the average speed of  
9 answer from its current level. In addition, by reducing the average speed of answer and  
10 implementing best practices from ScottishPower's Call Center operations, PacifiCorp will  
11 be able to make it easier for customers to reach the right person to answer their questions.  
12 As a result of the transaction, PacifiCorp will be able to make significant strides to  
13 improve performance in this area.

14 Q. Could you please explain the benchmarks that ScottishPower will implement regarding  
15 prompt resolution of Commission complaints?

16 A. There are three separate complaint resolution benchmarks that ScottishPower proposes to  
17 measure and improve. Benchmark 1 is the length of time it takes PacifiCorp to investigate  
18 and respond to non-disconnect complaints. ScottishPower proposes to reduce this  
19 response time from the current level of 5 business days to an average of 3 business days  
20 within 90 days of completion of the transaction.<sup>2</sup> Benchmark 2 is the length of time it  
21 takes to investigate and respond to disconnect complaints. ScottishPower proposes to  
22 reduce this response time by 50% from the current average of 8 business hours to an  
23 average of 4, within 90 days of completion of the transaction.<sup>3</sup> Benchmark 3 is the  
24

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25 <sup>2</sup> Business days are defined as Monday through Friday excluding company holidays.

26 <sup>3</sup> Business hours are defined as 8:00 a.m. to 5:00 p.m.

1 percent of complaints referred to the Company by the Commission that are resolved within  
2 30 days. Currently, PacifiCorp closes 86 percent of all complaints within 30 days.  
3 ScottishPower proposes to increase this percentage to 90 percent within 30 days of  
4 completion of the transaction and to 95 percent by 2001. For any complaint referred to  
5 PacifiCorp by the Commission, PacifiCorp may request an extension of time to respond,  
6 which Commission staff can grant at its discretion.

7 Q. How will customers benefit from these improvements in complaint response and  
8 resolution?

9 A. First, customers will benefit by having their complaints responded to and resolved in a  
10 more expeditious manner. Second, the targets themselves will inform customers as to  
11 when they can expect a response. A standardized and more rigorous approach to  
12 complaint resolution will result in better customer service and consistency in the complaint  
13 resolution process. This will help reduce customer confusion, uncertainty and anxiety  
14 about their particular service problem. Third, it will help expedite resolution of the  
15 customer service problem and reduce the need for "follow-up" inquiries. The sooner  
16 PacifiCorp learns about customer problems, the sooner they can be fixed. Improved  
17 response times will allow for early identification of customers' problems which will lead to  
18 the development of more timely solutions.

#### 19 IV. CUSTOMER GUARANTEES

20 Q. What are the Customer Guarantees that ScottishPower will implement at PacifiCorp after  
21 the transaction is authorized?

22 A. PacifiCorp will provide Customer Guarantees in the following areas:

- 23 • Restoring Supply
- 24 • Keeping Appointments
- 25 • Switching on the Customer's Power
- 26 • Estimates for Providing a New Supply

- 1 • Response to Bill Inquiry
- 2 • Problems with the Customer's Meter
- 3 • Planned Interruptions
- 4 • Power Quality Complaints

5 Q. What benefits will customers receive from the improvements resulting from  
6 implementation of the Customer Guarantees?

7 A. Customers will have better, quicker, and more reliable interactions with the company. We  
8 know that keeping appointments is a leading indicator for customer satisfaction, that fewer  
9 follow-up inquiries are necessary and that Commissions expect commitment and follow-  
10 through by companies. There are also significant benefits to customers from quick  
11 restoration of service. In addition, quick response time demonstrates a commitment to  
12 customers. Responding quickly and professionally to complaints about power quality, to  
13 inquiries about bills or to requests for supply reduces customer frustration and leads to  
14 improved customer/company relations. Efficient resolution of meter problems produces  
15 significant benefits by reducing customer debt exposure. Providing sufficient notice to  
16 customers when their service has to be shut off for planned maintenance or testing  
17 demonstrates that the company is considerate of its customers and understands how  
18 important it is for customers to be able to rely on electric service. These are the types of  
19 benefits that Customer Guarantees provide. Each Customer Guarantee targets an area  
20 that customers value. There is an enormous benefit that results from customers knowing a  
21 company is committed to providing the level of service they demand in the areas about  
22 which they care.

23 Q. Are there financial penalties associated with these guarantees?

24 A. Yes. Associated with each of these Customer Guarantees is a time period within which  
25 PacifiCorp will respond. Failure to do so will result in a payment of \$50 to a residential  
26 customer and \$100 to an industrial or commercial customer. The complete list of

Customer Guarantees is shown in the table below and includes details of the customer payments to be made in the event of non-performance by the company.<sup>4</sup>

MEASURE	GUARANTEE DESCRIPTION	NONPERFORMANCE PAYMENT
<b>Customer Guarantee 1:</b> Restoring the Customer's Supply	If a customer loses their electricity supply because of a fault in the system, PacifiCorp will try to put supply back on as soon as possible.	If power is not restored in 24 hours, customers can claim: <ul style="list-style-type: none"> <li>➤ \$50 for residential customers</li> <li>➤ \$100 for commercial and industrial customers</li> </ul> In addition for each extra period of 12 hours the customer's supply has not been activated, the customer can claim \$25
<b>Customer Guarantee 2:</b> Appointments	PacifiCorp will keep all mutually agreed to appointments with the customer, whether over the phone or in writing. Beginning in the year 2001, PacifiCorp will offer customers a morning appointment between 8 AM and 1 PM or an afternoon appointment between 12 noon and 5 PM.	If PacifiCorp fails to meet its guarantee, PacifiCorp will automatically pay the customer \$50.
<b>Customer Guarantee 3:</b> Switching on the Customer's Power	Upon customer request, PacifiCorp will activate the power supply within 24 hours provided no construction is required and all government requirements are met.	If PacifiCorp fails to meet its guarantee, it will automatically pay the customer \$50. In addition, for each extra period of 12 hours the customers power supply has not been activated, PacifiCorp will automatically pay-out \$25 to the customer.
<b>Customer Guarantee 4:</b> Estimates for providing a New Supply	PacifiCorp will call customers back within 2 working days of their initial call and schedule a mutually agreed to appointment with an estimator. If it needs to change its network, PacifiCorp will provide a written estimate to the customer within 15 working days of the initial meeting with its estimator. If	If PacifiCorp fails to meet its guarantee, PacifiCorp will automatically pay the customer \$50 for each failure.

<sup>4</sup> The customer will realize these payments through a credit on their bill.



1		PacifiCorp does not need to change its network, it will provide an estimate within 5 working days of the initial meeting with its estimators.	
2			
3			
4	<b>Customer Guarantee 5:</b>	If a customer has a question about their electricity bill, PacifiCorp will investigate and respond the inquiry within 15 working days.	If PacifiCorp fails to meet its guarantee, PacifiCorp will automatically pay the customer \$50.
5	Response to Bill		
6	Inquiries		
7	<b>Customer Guarantee 6:</b>	If a customer tells PacifiCorp about a problem with their meter, PacifiCorp will investigate and report back to the customer within 15 working days.	If PacifiCorp fails to meet its guarantee, PacifiCorp will automatically pay the customer \$50.
8	Problems with the		
9	Customer's Meter		
10	<b>Customer Guarantee 7:</b>	If PacifiCorp needs to turn off a customer's supply for planned maintenance work or testing, PacifiCorp will give the customer at least 2 days' notice.	If PacifiCorp fails to meet its guarantee, customers can claim:
11	Planned		➤ \$50 for residential customers
12	Interruptions		➤ \$100 for commercial and industrial customers
13			
14	<b>Customer Guarantee 8:</b>	If a customer notifies PacifiCorp about a problem with their quality of electricity supply, PacifiCorp will either initiate an investigation within 7 working days or explain the problem in writing within 5 working days.	If PacifiCorp fails to meet its guarantee, it will automatically pay the customer \$50.
15	Power Quality		
16	Complaints		

17 Q. How significant are the increases in service quality you are planning and when will they be  
18 delivered?

19 A. In total, we believe the improvements in service quality represented by the Customer  
20 Guarantees are very significant indeed. As part of our commitment to customer service  
21 the company has set a timetable for implementing the Customer Guarantees. Most should  
22 be implemented within ninety days after approval of the transaction.

23 Q. What will the pattern of improvement look like?

24 A. We are planning substantial, steady improvement over time. PacifiCorp will track changes  
25 in customer service internally on a quarterly basis, so that improvements or problems can  
26

1 be identified quickly. We expect to see significant improvement over the five year period  
2 but a relatively high number of failures in the earlier years should be expected.

3 Improvement to customer service should become apparent in the second year in most  
4 areas with a significant decline in payout of Customer Guarantees.

5 Q. For how long will these new Customer Guarantees remain in place?

6 A. We propose to keep these service guarantees in place for at least five years.

7 **V. HOW SCOTTISHPOWER WILL ACHIEVE THESE**  
8 **IMPROVEMENTS**

9 Q. How will ScottishPower achieve its targeted improvements in service standards?

10 A. ScottishPower will achieve its planned improvements through directed capital investments,  
11 training, and changing PacifiCorp's corporate philosophy to emphasize customer  
12 satisfaction as the company's top priority.

13 Q. What scale of expenditures will be required for ScottishPower to fulfill its commitment?

14 A. ScottishPower will spend approximately \$55 million during the five-year implementation  
15 period to implement the proposed service standards package.<sup>5</sup> These expenditures are in  
16 addition to the funding for which PacifiCorp had already planned without the transaction.  
17 Of this \$55 million, about \$30 million will be capital investment for new infrastructure  
18 (primarily investments in the distribution network required to achieve improvements in  
19 reliability). The remaining \$25 million will cover the costs of additional maintenance,  
20 payments for Customer Guarantee failures, employees and training. These investments  
21 and the related process changes will allow PacifiCorp to more accurately measure system  
22 performance and instigate directed improvements in electric service and customer  
23 interaction.

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24  
25  
26 <sup>5</sup> This figure excludes cost increases associated with potential investments in new information  
technology systems. It also excludes the cost of needed customer education and communications activities.

1 Q. Does ScottishPower have proprietary information technologies that it will provide  
2 PacifiCorp as a result of the transaction?

3 A. Yes. As an example, ScottishPower has developed a fault reporting and customer  
4 monitoring system called Prosper that we plan to implement at PacifiCorp. Prosper acts  
5 as a data base for network information that will allow PacifiCorp to more accurately  
6 measure circuit performance and target investment at the worst performing circuits. It  
7 cost ScottishPower \$2 million to develop and implement Prosper in the United Kingdom.  
8 As a result of the transaction, PacifiCorp will gain access to this proprietary technology  
9 for only the incremental cost of integrating it with PacifiCorp's existing information.

10 Q. Are investments in technology and infrastructure the only actions ScottishPower will take  
11 to improve system performance?

12 A. No. ScottishPower will also train employees in how to satisfy customers. Training will  
13 also occur to familiarize employees with any new technologies obtained or developed as a  
14 result of this new emphasis on improved performance. ScottishPower intends to promote  
15 a shift in corporate culture at PacifiCorp so that all employees at all levels of the company  
16 understand and adopt the company's new emphasis on improved performance and  
17 customer satisfaction. Training is not a single event but a whole series which will be  
18 driven by the company's plans to deliver on its commitments. ScottishPower brings to this  
19 transaction a whole new way of doing business: making customer satisfaction the highest  
20 priority of the company and its employees.

21 **V. SCOTTISHPOWER'S TRACK RECORD**

22 Q. What is ScottishPower's experience in improving network performance and implementing  
23 service guarantees?

24 A. ScottishPower has the experience to improve system performance and is committed to  
25 making customer service PacifiCorp's highest priority following completion of the  
26 transaction. ScottishPower has almost eight years of experience with service standards in

1 the United Kingdom and we have a proven track record of performance improvements.  
2 From 1992/93 to 1997/98, for example, our performance on the Customer Guarantee  
3 standards improved by 93%.<sup>6</sup> ScottishPower has also achieved high levels of customer  
4 satisfaction for the customers of Manweb and Southern Water. For instance, our network  
5 performance as measured by customer minutes lost improved by 50% for Manweb from  
6 1991/92 to 1997/98. Indeed, we have maintained a steady year-on-year improvement  
7 across all our businesses in the main service measures of system availability, guaranteed  
8 standards, and customer complaints. We are confident we can also achieve significant  
9 levels of service improvement for the customers of PacifiCorp. See Exhibit SP \_\_ (BM-4)  
10 for details of network performance statistics for Manweb and ScottishPower.

11 Q. How has ScottishPower used targeted service standards in the U.K.?

12 A. Since 1991, ScottishPower has utilized service targets to improve and maintain system  
13 performance at high levels. Indeed, ScottishPower continues to achieve ever higher  
14 standards by setting targets and striving to exceed them. Furthermore, it does so in the  
15 absence of any penalty regime imposed by the U.K. regulators. As mentioned earlier in  
16 my testimony, we believe by committing to externally based targets we are better able to  
17 drive improvement in our internal business processes. Setting standards is also consistent  
18 with our management philosophy, which emphasizes accountability and delivery. For a  
19 summary of the system performance improvements made recently in the United Kingdom,  
20 see Quality of Supply Report, 1997/1998 for ScottishPower and Manweb, included in  
21 Exhibit SP \_\_ (BM-5). For a summary of the standards of service currently in effect at  
22 ScottishPower, see Exhibit SP \_\_ (BM-6).

23 Q. How did ScottishPower arrive at the Customer Guarantee package offered in the United  
24 Kingdom?

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25  
26 <sup>6</sup> As measured by a drop in failures to meet such targets.

1 A. In 1990 and 1991, when the government in the U.K. privatized the electric companies in  
2 England, Wales and Scotland, the Office of Electricity Regulation (OFFER) was created  
3 to regulate the activities of the new companies. Following a long period of consultation  
4 involving OFFER, the companies and consumer committees, legislation was enacted that  
5 required each company to report its performance against a number of key customer  
6 service standards covering activities such as appointments, faults, metering and billing.  
7 Since privatization ScottishPower has looked critically at the attributes of customer  
8 service that are important to customers. We had the opportunity to do so when  
9 ScottishPower was privatized, and again when we acquired Manweb and Southern Water.  
10 ScottishPower has performed a significant amount of customer research and analysis to  
11 determine what customers care about. Through the use of surveys, and practical  
12 experience, ScottishPower has determined which service standards provide the greatest  
13 benefit to the customer, and deliver the highest level of customer satisfaction. Our current  
14 portfolio of standards in the U.K. reflects these customer priorities.

15 Q. Apart from its U.K. experience, what else did ScottishPower consider when deciding upon  
16 the service standards package to offer to PacifiCorp customers?

17 A. Ongoing analysis of customer complaints is one method ScottishPower uses to determine  
18 whether it is offering the service standards that customers value. We therefore examined  
19 PacifiCorp's complaint history. In addition, where PacifiCorp had customer survey  
20 information available, we incorporated it into our planning. For example, we know that  
21 PacifiCorp's customers are seeking improvement in the turnaround time for estimates for  
22 providing new supply. This has therefore been incorporated as a Customer Guarantee.  
23 We also looked at the service standards offered by other utilities in this country to  
24 determine what types are being offered. Some of the standards that ScottishPower plans  
25 to implement at PacifiCorp are offered by U.S. utilities, but none of the utilities we looked  
26 at offered all of them. We have consciously designed the PacifiCorp service standards

1 package to be the most comprehensive available in the U.S. This, we believe, helps to  
2 establish the measure of our commitment to customers and provides a clear signal in terms  
3 of what they can expect from the ScottishPower/PacifiCorp combination. For a more  
4 complete discussion, please see Exhibit SP \_\_\_ (BM-1).

5 Q. Were there other objective standards that demonstrated ScottishPower's success at  
6 providing superior customer service?

7 A. Two years after the service standards were introduced in the U.K., the British Government  
8 created an award that is given to companies that can demonstrate they are at the forefront  
9 of customer service. The award is called the Charter Mark. The company submits an  
10 application and a panel visits each applicant company to meticulously assess the merits of  
11 that company. The award is issued for a period of three years. The award indicates to  
12 customers that the holder is viewed as a provider of excellent customer service, handles  
13 and responds to customer complaints in a positive manner and regularly seeks input from  
14 customers on how to improve service. ScottishPower won the Charter Mark in 1993, and  
15 was successful when reapplying in 1996. We are in the process of reapplying again for  
16 1999. The key to this year's application will again be our service standards performance  
17 and how the number of failures continue to fall against a backdrop of targets which are  
18 regularly tightened.

19 Southern Water has also received the Charter Mark, but only after its acquisition by  
20 ScottishPower. Southern Water is one of the few major water and wastewater companies  
21 to receive the Charter Mark.

22 While Manweb received a Charter Mark prior to its acquisition by ScottishPower, the  
23 company received the award for a second time after its acquisition by ScottishPower. In  
24 order to successfully reapply, Manweb had to demonstrate continual improvement upon  
25 the standards in place when the honor was first awarded in 1993. See Exhibit SP \_\_\_  
26 (BM-7) for information concerning Charter Mark awards.

1 Q. Does ScottishPower have any experience with improving system performance standards  
2 for larger industrial customers?

3 A. Many of the problems experienced by these customers concern the issue of power quality.  
4 ScottishPower has considerable expertise with the development of power quality solutions  
5 for our customers in the United Kingdom. Over the past twenty-five years, the South of  
6 Scotland has seen a shift away from traditional heavy industries such as ship building to  
7 such endeavors as high tech engineering. With this shift, ScottishPower has seen a change  
8 in emphasis on what is demanded by these new customers. For many electronic  
9 companies, operating in marginal markets where productivity is a critical factor, quality of  
10 power supply is an important criterion when deciding the location of a new plant.  
11 ScottishPower, recognizing this and the important role the company plays in supporting  
12 inward investment in Scotland, has actively promoted its approach to developing customer  
13 solutions and improving power quality. We will bring this experience to PacifiCorp and  
14 work with large customers to address their power quality issues.

15 **VI. SCOTTISHPOWER'S REPORTING COMMITMENTS**

16 Q. Will ScottishPower provide information to both customers and the Commission on  
17 whether ScottishPower has achieved its objectives regarding system performance and  
18 customer service?

19 A. Yes. ScottishPower will provide annual reports to both customers and the Commission.

20 Q. Please describe these reports.

21 A. ScottishPower will issue a report to the customer by June 30 of each year regarding its  
22 record in improving Performance Standards and how well it has performed against its  
23 Customer Guarantees. Each report will contain an overview of ScottishPower's standards,  
24 targets and guarantees and describe the performance results for that year. This description  
25 will be simple and easy to understand and will include graphical information. The  
26 description will note any problem areas in fulfillment of our commitments and describe

1           how we intend to fix such problems. The report will also discuss any new targets we will  
2           be applying in the coming year.

3    Q.    How will the Commission know if ScottishPower is fulfilling its commitments?

4    A.    ScottishPower will also provide an annual report to the Commission by May 31 of each  
5           year. PacifiCorp and ScottishPower will offer to the Commission a reporting plan that  
6           will discuss implementation of ScottishPower's programs and procedures for providing  
7           improved performance. The report will provide a general summary of how PacifiCorp  
8           performed according to the standards, targets and guarantees. The report will:

- 9           •       provide performance results for each standard, target or guarantee;
- 10          •       identify excluded exceptions;
- 11          •       explain any historical and anticipated trends and events that affected or will affect  
12           the measure in the future;
- 13          •       describe any technological advancements in data collection that will significantly  
14           change any performance indicator;
- 15          •       discuss any "phase in" of new standards, targets or guarantees; and
- 16          •       include the name and telephone numbers of contacts at PacifiCorp to whom  
17           inquiries should be addressed.

18           Data calculations to measure performance will be audited by the company and an outside  
19           auditor.

20   Q.    Will this report address whether the company is not meeting its standards, targets or  
21           guarantees?

22   A.    Yes. If the company is not meeting a standard, target or guarantee, the report will:

- 23          •       provide an analysis of relevant patterns and trends;
- 24          •       describe the cause or causes of the unacceptable performance;
- 25          •       describe the corrective measures undertaken by the company;
- 26          •       set a target date for completion of the corrective measures; and



1           •       provide details of any penalty payments due.

2       Q.     Does ScottishPower use any quality standards to monitor its improvements?

3       A.     Yes. Recently, ScottishPower submitted the processes it uses for customer service  
4           standards for International Standards Organization (ISO) 9002 accreditation. This  
5           international standard for quality systems is recognized world-wide.<sup>7</sup> One of the benefits  
6           of seeking ISO 9002 accreditation is that accreditation requires internal and external audits  
7           be completed across all businesses and company standards. These audits provide added  
8           credibility to the statistics we provide to OFFER. Likewise, ScottishPower will seek ISO  
9           9002 or ANSI accreditation for PacifiCorp's program to offer Customer Guarantees.

10      Q.     Could you please summarize your testimony?

11      A.     By implementing this service standards package, ScottishPower will redefine the  
12           relationship between PacifiCorp and its customers. The breadth of the service standards  
13           package is unique in the United States and represents the measure of ScottishPower's  
14           commitment to PacifiCorp's customers to provide them with excellent service.

15      Q.     Does this conclude your testimony?

16      A.     Yes, it does.

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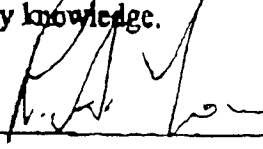
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26           <sup>7</sup> ISO, established in 1947, is a worldwide federation of national bodies representing approximately  
          90 member countries. ISO 9002 outlines a model for quality assurance that is accepted throughout the  
          European Economic Community.



MEMBER OF THE LAW )  
SOCIETY OF SCOTLAND ) SS.  
AND NOTARY PUBLIC )

I, Bob Moir, hereby declare under penalty of perjury that the foregoing testimony was prepared under my direction and supervision and that all testimony and exhibits thereto are true and correct to the best of my knowledge.



Bob Moir

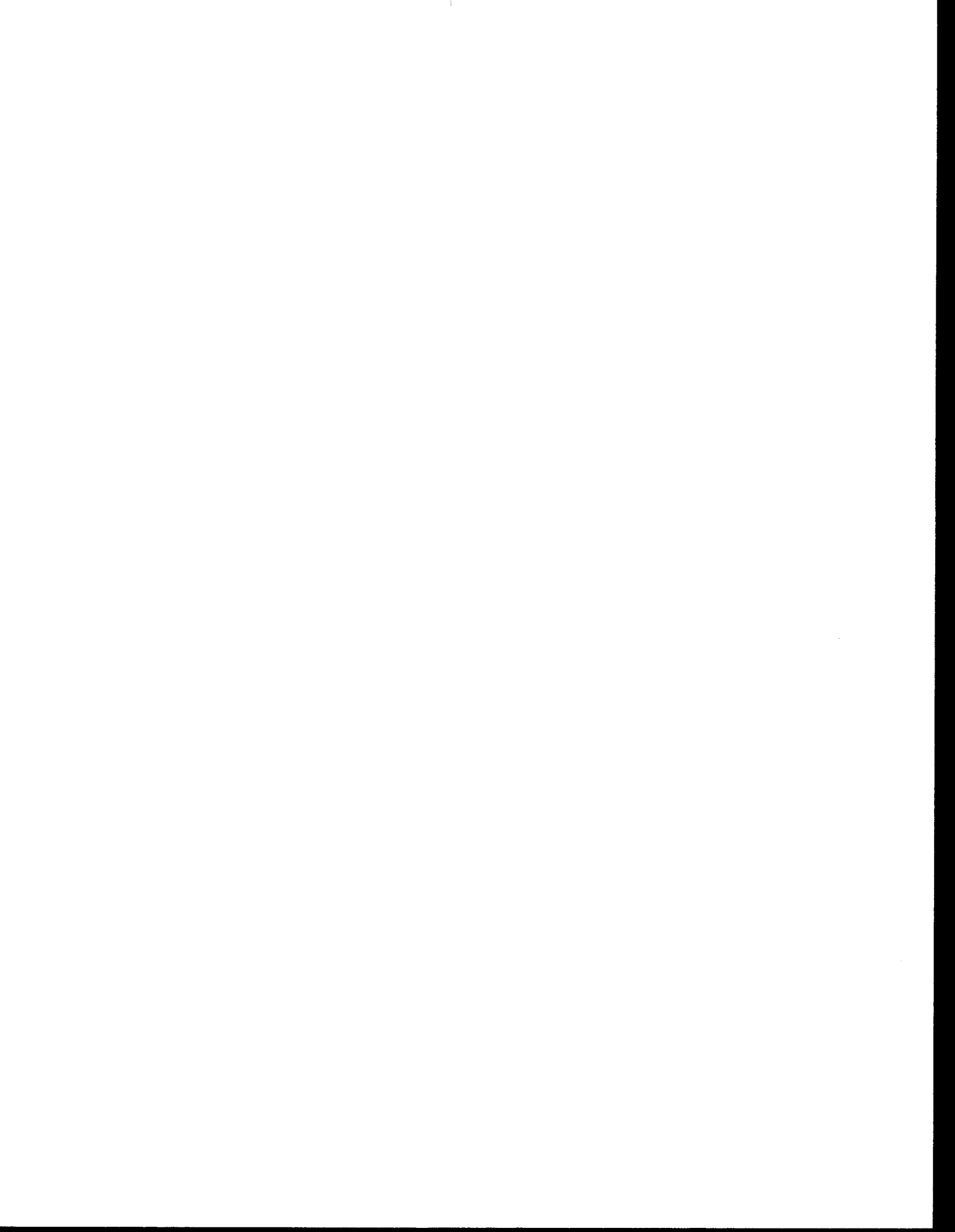
SUBSCRIBED and SWORN to before me this 26 day of February, 1999.



WAYNE LAWRENCE

Print Name:

Notary Public in and for BIGGARA BAILLIE  
residing at 7 CASTLE STREET  
EDINBURGH



## SUMMARY

ScottishPower is proposing to introduce a set of customer service commitments to PacifiCorp's retail customers as part of their merger. These initiatives, in the form of system performance targets and customer service guarantees, were designed with the intention of being as rigorous and comprehensive as any U.S. electric utility and to offer substantial benefits to customers.

This report compares the proposed standards to the performance targets and customer service guarantees in place at other major utilities in the U.S. It also summarizes results from a recent PacifiCorp customer survey designed to gauge customer support for the idea of new service standards.

Four major findings can be drawn from the analysis documented in this report:

- 1) As an integrated set of customer service standards, the proposed ScottishPower performance targets and customer guarantees are the most comprehensive set of standards offered by any U.S. utility.
- 2) The proposed ScottishPower standards address all important aspects of customer service, when compared with customer service standards that have been recommended as part of performance based regulation (PBR) initiatives in the U.S., or compared with U.S. utilities' standards approved as part of PBR or other regulatory proceedings. The proposed network reliability standards comport with recommended IEEE distribution reliability indices.
- 3) The proposed customer guarantees address a more complete range of customer service attributes than any major U.S. utility's customer guarantees we have been able to identify. In several important measures, the proposed ScottishPower guarantees are the most rigorous offered by any U.S. utility.
- 4) The majority of customers support the idea of instituting service standards such as those proposed by ScottishPower. They perceive that they will benefit directly as a result of new service standards.

The fourth conclusion is quite significant in the context of regulatory approval of the transaction. Customers perceive real value in the type of service standards proposed by ScottishPower.

In summary, the proposed customer service performance targets and guarantees can be held up as a leading or "best practices" set of customer service commitments. If adopted, they will provide benefits of manifest value to customers and should be recognized as a concrete and valuable benefit that customers will gain from the transaction.

## SURVEY INFORMATION REGARDING SERVICE STANDARDS

ScottishPower is proposing, as part of its transaction with PacifiCorp, a comprehensive quality of service initiative. The initiative consists of a set of system performance targets and a set of customer service guarantees. The service quality initiative is believed by the companies to be a valuable benefit to customers resulting from the transaction. This document addresses how the proposed performance targets and guarantees compare with measures and practices of other U.S. utilities. The report also addresses how well the proposed initiative addresses customers' expressed desires for service quality and improvements in service.

### I. Comparison to Customer Service Measures, Commitments and Recommendations

To address how well the proposed customer service commitments compare with practices at other utilities, we consulted several sources, summarized below.

**IEEE** - The Institute of Electrical and Electronics Engineers (IEEE) has had under development for several years recommendations and standard definitions for distribution system reliability indices. The most recent report publishes recommended definitions and summarizes surveys of U.S. utilities' use of these measures.<sup>1</sup> IEEE defines twelve different reliability indices. In general, these can be grouped in four different categories of indices, as shown in Table 1. The first two categories of Table 1 address the frequency and duration, respectively, of sustained outages, as averaged for the system as a whole or as averaged for only customers experiencing an outage. The other two indices measure the frequency of momentary outages or identify the incidence of customers experiencing the worst number of outages. The IEEE report also summarizes surveys of U.S. utilities in 1990 and 1995, which identified that utilities most often track one or more of four frequency and duration of outage indices - SAIDI, SAIFI, CAIDI and ASAI. Only about 25% of U.S. utilities responding to the 1995 survey track momentary outage frequency - MAIFI.

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<sup>1</sup> See "Trial Use Guide for Electric Power Distribution Reliability Indices," IEEE P1366/D18, January 1998.

TABLE 1  
 IEEE Reliability Indices Summary

	Reliability Issue	System Average Indices	Per Customer or Per Event Average Indices
1.	Frequency of Sustained Outages (System Reliability)	SAIFI ASIFI	CAIFI
2.	Duration of Sustained Outages (System Availability)	SAIDI ASAI ASIDI	CAIDI CTAIDI
3.	Frequency of Momentary Outages	MAIFI	
4.	Worst Performing Circuits or Customer Groups		$\frac{CEM_{min}}{CEMSM_n}$

NARUC PBR Report - Recommendations regarding quality of service measures were made in the context of performance-based regulation in a 1997 report of the National Association of Regulatory Utility Commissioners (NARUC).<sup>2</sup> The report confirmed that various service quality issues are important to customers. It recommended that any PBR scheme should address and include measures for 1) number of complaints, 2) frequency of outages, 3) duration of outages, 4) momentary outage frequency, 5) major outage recovery, and 6) employee safety<sup>3</sup>. The report also concluded that rebates to individual customers for failures were preferable to general penalties.

Utah DPU Report - The November, 1996 Utah Division of Public Utilities report to the Public Service Commission [DPU 1996] summarized a survey of ten states, six of which had service quality reporting programs in place at that time.<sup>4</sup> The report determined that few states had yet to require collection and reporting of data on service quality, but pointed out that increasing attention was being focused on the topic. For the six states requiring some level of reporting on service reliability, between one and three indices were measured. The report also identified seven different measures of customer service in use.

<sup>2</sup> Biewald, Bruce *et al.*, Synapse Energy Economics, Inc., Performance-Based Regulation in a Restructured Electric Industry, prepared for the National Association of Regulatory Utility Commissioners, November 8, 1997.

<sup>3</sup> Note that employee safety is not a customer service issue, *per se*, but may in some instances relate to customer service quality. Employee safety for utilities is rigorously regulated by OSHA and national and local electrical codes.

<sup>4</sup> DPU 1996 - Quality of Service Standards - Survey Results of Other State Commissions. Memorandum Report to the Utah Public Utility Commission from Utah Division of Public Utilities, November 6, 1996, by R. Campbell, L. Alt and T. Peel.

Amongst the six states, all required reporting on between one and three such measures, with the exception of New York, which covered all seven.

Texas PUC Report - A report prepared for the Texas PUC in April, 1998 [TPUC 1998], reviewed other state quality of service standards and reported on focus group meetings conducted with various Texas utility customers.<sup>5</sup> Of the 25 states discussed, ten had or were developing some type of specific service standards or formal customer service and reliability reporting requirements. The report recommended that service quality standards should be responsive to customer expectations and that customers should be compensated when they receive poor service. It further recommended that utility performance should be measured and publicly available, using benchmarks of price, customer satisfaction and reliability. A number of potential satisfaction and reliability measures were suggested.

PacifiCorp Survey - PacifiCorp gathered information on U.S. utilities' service quality commitments from two main sources. First, utilities with state regulatory requirements under performance-based regulation or other regulatory initiatives were examined to establish which requirements included consideration of customer service measures or standards. This information was compiled from service quality proposals that the Company had on file describing proposals in various states and by contacting individual state commissions to determine if such proposals were in effect. PacifiCorp also reviewed customer guarantees of the top 105 U.S. electric utilities, as published on their internet web pages<sup>6</sup>. The results of these surveys are tabulated in Appendix I. In total twenty-eight utilities were identified with customer service related performance targets or customer commitments or guarantees. Eight of these had both performance targets and customer guarantees.

Summary of Customer Service Standards and Guarantees - The studies and surveys described above yield a wide variety of customer service standards, indices and commitments. Table 2 displays a generalized grouping of customer service attributes that have been addressed in the service commitments analyzed. The grouping comprises 16 categories. The table shows which categories are identified as important or recommended by the NARUC, Utah DPU, and Texas PUC reports, in the columns so labeled. Another column displays a count of the number of utilities identified in PacifiCorp's survey that address that category. The final column indicates how the proposed PacifiCorp/ScottishPower service commitments address these categories.

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<sup>5</sup> TPUC 1998 - What Customers Demand: Quality of Service in the Electric Utility Industry in Texas, Special Project Report, the Lyndon B. Johnson School of Public Affairs, University of Texas at Austin, April 1998, by C. Coleman *et al.*

<sup>6</sup> With the following method: U.S. investor owned utilities were sorted by number of retail customers served in 1997. The top 105 were selected, representing 96% of retail IOU customers and 95% of retail MWh sold in that year. The RDI Powerdat database, based on utilities' FERC Forms One, was the source of this information. For each of these utilities, we searched their internet web sites for any information describing guarantees, commitments or promises to customers regarding customer service. From this search, fifteen utilities were identified. A listing of the utilities reviewed is in Appendix 2.



TABLE 2  
 CUSTOMER SERVICE QUALITY PROGRAM ATTRIBUTES

	NARUC	UDPU	TPUC	Utility Survey	Proposed
<b>Performance Standards</b>					
1	Availability (duration)	X	X	X	14 PS
2	Reliability (frequency)	X	X		12 PS
3	Power Quality (momentary)	X	X		3 PS
4	Worst Performing			X	2 PS
5	Telephone Response		X	X	5 PS
6	System Outage Restoration	X		X	1 PS
7	Complaint Response				1 PS
<b>Customer Guarantees</b>					
8	Supply Restoration				3 CGP
9	Estimates for New Supply				0 CGP
10	Appointment		X	X	13 CGP
11	Switching on Power		X	X	11 CGP
12	Planned Interruption Notice				5 CGP
13	Billing Issues		X		6
	Inquiry Response Adjustment Count				CGP
14	Meter Issues		X	X	4
	Inquiry Response Estimated Count				CGP
15	Satisfaction Level		X		4
	General Population Transaction Related			X	
16	Disconnections				2
	Number/Ratio In Error				
17	Power Quality				3
	Complaint Response				CGP
18	Other Miscellaneous				5
	CGP-Customer Guarantee Payment				PS-Performance Standard



TABLE 4  
 Comparison of Utility Performance Standards for Network Reliability

Utilities with Standards:	CMP	ConEd	Maine PSCo	NiMo	O&R	PG&E	Penn P&L	PSCo	Puget	RG&E	SDG&E	SCE
Proposed ScottishPower Reliability Standards												
Frequency of Sustained Outages (SAIFI)	X	X	X	X	X	X	X		X	X	X	X
Duration of Sustained Outages (SAIDI)	X	X	X	X	X	X	X	X	X	X	X	X
Frequency of Momentary Outages (MAIFI)				X			X				X	
Worst Performing Circuits or Customer Groups (CPI)												
Supply Restoration												X <sup>7</sup>

Source: Telephone interviews and source documents noted in Appendix 1

<sup>7</sup> SCE offers a guarantee to customers that it will respond to calls reporting disruption within four hours and it will restore supply within 24 hours, but not a system performance standard.

Table 2 indicates that the proposed ScottishPower initiative covers virtually all categories of service quality issues that were identified in this analysis. It also gives an indication that the proposed standards and guarantees are amongst the most comprehensive offered by U.S. utilities. This conclusion is further substantiated in Table 3, which compares the proposed ScottishPower customer guarantees with other utilities' guarantees, as identified in the PacifiCorp survey.

From this search, seventeen utilities were identified offering some type of service guarantees to customers. Two of the seventeen did not include monetary compensations as part of their guarantees, and two were described as trial or pilot programs. The types of guarantees offered and tabulated in Table 3 using a subset of the groupings used in Table 2. The number of service categories guaranteed by these utilities ranged between two and five. The average was 3. The most common type of commitment was to keep appointments, with 13 utilities offering a guarantee, ten of which were backed by a payment<sup>8</sup>. A similar number of utilities offered a guarantee regarding new service, either guaranteeing to connect new customers within a specified number of days or guaranteeing to meet a committed day quoted to the customer. Only two utilities offer a payment to customers in the event an outage is not restored within a guaranteed time limit. No other utility offers any specific guarantee regarding response time to address a power quality complaint or estimates for providing a new supply.

A comparison of utilities' network reliability standards, summarized in Table 4, also supports the conclusion that the proposed ScottishPower service quality initiative is the most comprehensive of all utility programs identified in this survey. Of the eleven companies identified with specific performance targets, no other utility's standards addressed all four reliability issues highlighted in Table 1. Only one had a system standard for supply restoration.

Conclusions of Comparison - The proposed ScottishPower customer commitments are clearly among the best customer service commitments offered by U.S. utilities. In fact, the proposal is arguably the most comprehensive set identified. No other U.S. utility's customer service commitments addressed as complete a range of customer concerns or issues as the proposed set. The importance of comprehensiveness lies in the inherent trade-off between various customer service operations and issues.<sup>9</sup> By including both a SAIFI standard and a customer supply restoration standard, the proposed standards focus the company on a balanced approach to maintaining the overall system and responding quickly to outages. Similarly, by including a wide range of customer responsiveness guarantees as well as system performance targets, the company maintains incentives and measurability across the full range of customer service concerns.

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<sup>8</sup> In some cases the commitment was to notify customer in advance if an appointment would not be kept.

<sup>9</sup> For example, the PACE Distribution '97 benchmarking study pointed out that "reliability goals will also drive your maintenance strategies. Companies driven by SAIFI tend to focus on preventive maintenance activities, where companies driven by CAIDI will focus on trouble call performance."

The proposed commitments uniquely address several critical customer issues, including the supply restoration standard of 80% of customer outages within 3 hours and responsiveness to power quality complaints. These two concerns are among the most important service issues identified by residential and C&I customers, respectively, as described in the next section.

## II. Customer Survey on Service Standards

In 1999, PacifiCorp conducted a survey of Pacific Power and Utah Power customers to gauge the extent to which customers support the idea of service standards such as those proposed by ScottishPower. This survey found that:

- 69% of customer support the idea of instituting service standards
- 80% of customers believe that they would receive better overall service as a result of the type of service standards being proposed by ScottishPower
- 80% of customers would prefer to be compensated through a credit to their account in the event that PacifiCorp did not meet the service standards

The results of this survey demonstrate that a majority of customers perceive value in service standards such as those proposed by ScottishPower.

## III. CONCLUSIONS

The proposed customer service initiative has been compared to recommended customer service performance targets, to other utilities' performance targets and customer guarantees, and to customers' expressions of service quality priorities. In each case, the proposed performance targets and guarantees compare very favorably.

The proposed performance targets and customer service guarantees address all important aspects of customer service, when compared with customer service standards that have been recommended as part of performance based regulation (PBR) initiatives in the U.S., or compared with U.S. utilities' standards approved as part of PBR or other regulatory proceedings. The proposed network reliability standards conform with recommended IEEE distribution reliability indices, and are the only set of standards that address all four reliability areas covered by IEEE P1366.

The proposed customer guarantees address a more complete range of customer service attributes than any major U.S. utility's customer guarantees we have been able to identify. In several important measures, the proposed ScottishPower guarantees are the most rigorous offered by any U.S. utility.

Customer research indicates that the majority of customers perceive value in service standards such as those proposed by ScottishPower. The proposed customer service initiative clearly addresses issues that matter to customers, accounting for millions of customer interactions annually. The proposed customer service performance targets and guarantees can be held up as a leading or “best practices” set of customer service commitments. If adopted, they will provide benefits of manifest value to customers and should be recognized as a concrete and valuable benefit that customers will gain from the transaction.

## Appendix I

Performance Standards?	Service Guarantees?	Utility / State	Service Quality Initiatives
No	Yes  (no SS commitments)	Arizona Public Service	<u>Service Guarantees:</u> -- Commitment to meet agreed timelines for connecting power, building facilities and installing lines -- Service appointment arrival within 30 minutes of promised time -- Four hour power restoration when power lost due to equipment failure -- 24 hour notice for scheduled outages
Yes  (proposed)	No	Pacific Gas & Electric (California)	<u>Proposed Performance Standards:</u> -- SAIDI 144.98 minutes per customer -- SAIFI 1.48 interruptions per customer -- Maintenance, repair and replacement outages per mile 0.1444/mile -- % of first visit problem resolution 82.80% -- % of on-time field performance 95.40% -- % of first time contact resolution 80.90% -- Average speed to answer phone calls (monitored monthly) 20 seconds -- Employee safety 7.92 recordables
Yes	No	San Diego Gas & Electric (California)	<u>Performance Standards:</u> Total maximum reward/penalty of \$19-\$21 million - based on four broad indicators of performance. Price performance weighted around 50%. (1994 total reward was \$6.2 million). A. Price Performance - Maximum reward/penalty \$10 million Benchmark is 137% of national average, declining to 132% by 1998. Changes by \$1 million for each ¼% increase or decrease in rates. B. Employee Safety - Maximum reward/penalty \$3 - \$5 million Based on OSHA loss time frequency standard. Measures company's total employee loss time against total employee working hours. Benchmark is 1.20 units lost time. C. Customer Satisfaction - Maximum reward/penalty \$2 million Survey of customers who had contact with the utility of the past year. Benchmark of 92% "very satisfied" response from customers surveyed. D. System Reliability - Maximum reward/penalty \$4 million Measures SAIDI for prior calendar year excluding major events. Benchmark 70 minutes. Note: 1994 performance was 70.1.



Performance Standards?	Service Guarantees?	Utility / State	Service Quality Initiatives																								
<p>Yes  (based on 1992 baseline)</p>	<p>Yes</p>	<p>Southern California Edison (California)</p>	<p><u>Performance Standards:</u></p> <table border="1"> <thead> <tr> <th><u>Customer Service Category</u></th> <th><u>Performance Measure</u></th> <th><u>Benchmark/Target Value</u></th> </tr> </thead> <tbody> <tr> <td>Telephone</td> <td> <ul style="list-style-type: none"> <li>* turn on/off</li> <li>* billing inquiry</li> <li>* credit/extensions</li> <li>* commercial/industrial</li> <li>* Hispanic</li> <li>* Voice response unit</li> <li>* Other</li> </ul> </td> <td> <p>based on results of 1992 study</p> </td> </tr> <tr> <td>In-person services (previously known as local offices)</td> <td> <ul style="list-style-type: none"> <li>* turn on/off</li> <li>* deposit</li> <li>* payment</li> <li>* credit/extensions</li> <li>* reconnect</li> </ul> </td> <td> <p>based on results of 1992 baseline study</p> </td> </tr> <tr> <td>field service organizations</td> <td> <ul style="list-style-type: none"> <li>* meter reads</li> <li>* turn off</li> <li>* collection</li> <li>* disconnection</li> <li>* billing inquiry</li> </ul> </td> <td> <p>based on results of 1992 baseline study</p> </td> </tr> <tr> <td>design organization</td> <td> <ul style="list-style-type: none"> <li>* planning/approval</li> <li>* scheduled/work in progress</li> <li>* completed</li> </ul> </td> <td> <p>based on results of 1992 baseline study</p> </td> </tr> <tr> <td>electric service unavailability</td> <td> <p>average customer minutes of interruption per year (ACMI), excluding outages of five minutes or longer.</p> </td> <td> <p>applied on a two-year rolling average basis: initial application will cover 1997-1998 performance</p> </td> </tr> <tr> <td>electric service unavailability</td> <td> <p>total number of circuit interruptions during the year</p> </td> <td> <p>applied on a two-year rolling average basis: initial application will cover 1997-1998 performance</p> </td> </tr> <tr> <td>employee safety</td> <td> <p>accident frequency</p> </td> <td> <p>number of accidents which are reported each year for each 20,000 hours worked.</p> </td> </tr> </tbody> </table> <p><u>Service Guarantees:</u></p> <p>\$50 credit to customer account when any one of the guarantees are not met:</p> <ul style="list-style-type: none"> <li>-- Meet committed date for meter installation or request to turn on service</li> <li>-- Respond within 4 hours to service disruptions not involving storms</li> <li>-- 24 hour service restoration</li> </ul>	<u>Customer Service Category</u>	<u>Performance Measure</u>	<u>Benchmark/Target Value</u>	Telephone	<ul style="list-style-type: none"> <li>* turn on/off</li> <li>* billing inquiry</li> <li>* credit/extensions</li> <li>* commercial/industrial</li> <li>* Hispanic</li> <li>* Voice response unit</li> <li>* Other</li> </ul>	<p>based on results of 1992 study</p>	In-person services (previously known as local offices)	<ul style="list-style-type: none"> <li>* turn on/off</li> <li>* deposit</li> <li>* payment</li> <li>* credit/extensions</li> <li>* reconnect</li> </ul>	<p>based on results of 1992 baseline study</p>	field service organizations	<ul style="list-style-type: none"> <li>* meter reads</li> <li>* turn off</li> <li>* collection</li> <li>* disconnection</li> <li>* billing inquiry</li> </ul>	<p>based on results of 1992 baseline study</p>	design organization	<ul style="list-style-type: none"> <li>* planning/approval</li> <li>* scheduled/work in progress</li> <li>* completed</li> </ul>	<p>based on results of 1992 baseline study</p>	electric service unavailability	<p>average customer minutes of interruption per year (ACMI), excluding outages of five minutes or longer.</p>	<p>applied on a two-year rolling average basis: initial application will cover 1997-1998 performance</p>	electric service unavailability	<p>total number of circuit interruptions during the year</p>	<p>applied on a two-year rolling average basis: initial application will cover 1997-1998 performance</p>	employee safety	<p>accident frequency</p>	<p>number of accidents which are reported each year for each 20,000 hours worked.</p>
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Yes	No	Public Service of Colorado	<p><u>Performance Standards:</u></p> <p>Quality of Service Plan proposed in conjunction with merger request and earnings sharing proposal. PSCo commits to a 2-year trial period to evaluate the appropriateness of the program. After 2 years, if required, the plan will be adjusted based on the findings and will continue during the remaining three years of the regulatory plan.</p> <table border="0"> <thead> <tr> <th><u>Category</u></th> <th><u>Measure</u></th> <th><u>Reward/Penalty</u></th> </tr> </thead> <tbody> <tr> <td>Customer complaints</td> <td>73 to 81</td> <td>up to maximum of +/- \$1 million</td> </tr> <tr> <td>Phone response time</td> <td>68 to 95 seconds</td> <td>Same as above</td> </tr> <tr> <td>Response to gas odor odor complaints</td> <td>73 to 77%</td> <td>Same as above</td> </tr> <tr> <td>SAIDI</td> <td>72 to 82 minutes</td> <td>Same as above</td> </tr> </tbody> </table> <p>Maximum penalty of \$4 million represents 0.19% of total revenues.</p>	<u>Category</u>	<u>Measure</u>	<u>Reward/Penalty</u>	Customer complaints	73 to 81	up to maximum of +/- \$1 million	Phone response time	68 to 95 seconds	Same as above	Response to gas odor odor complaints	73 to 77%	Same as above	SAIDI	72 to 82 minutes	Same as above
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Yes	No	Illinois (all IOUs)	<p><u>Performance Standards:</u></p> <p><u>Record requirements</u>        Must keep records showing service interruptions experienced by each customer for most recent 5 years</p> <p>Annual reliability reports must be filed each June and include:        - SAIFI, CAIDI and CAIFI indices        - List of worst performing circuits for each utility's operating area        - Explanation of action taken or planned to improve circuit performance</p> <p>Beginning in 2000, utilities must file an annual report listing the 0.1 percent of customers (or 100 customers, whichever is smaller) with largest number of interruptions during prior year. For same 0.1 % or 100 customers, must also include list of customers with largest number of interruption duration hours during prior year.</p> <p><u>Service standards based on customer voltage:</u>        - At 69,000 volts, &lt;= 3 controllable interruptions and &lt;= 9 hours of total interruption duration for last 3 consecutive years        - At 15,000 volts to 69,000 volts, &lt;= 4 interruptions and &lt;=12 hours of total interruption duration for last 3 consecutive years.        - At below 15,000 volts, &lt;= 6 controllable interruptions and &lt;= 18 hours of total interruption duration</p>															
Yes (minimal)	Yes	Commonwealth Edison (Illinois)	<p><u>Performance Standards:</u></p> <p><u>Commonwealth Edison only:</u>        - Must maintain service records detailing info on each interruption affecting 10 or more customers or power fluctuations affecting 30,000 or more customers        - Must design and implement an administrative procedure to resolve and pay claims for actual damages and replacement value to minimize need for formal complaint proceedings at ICC.</p> <p><u>Service Guarantees:</u></p> <p>Customers receive a \$25 refund if ComEd:        - fails to provide 24 hour notice of planned service interruptions        - does not complete new service installations within 14 days after customer notification</p>															

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No	No	Iowa	Iowa regulators can award equity return premiums (or impose penalties) on a case-by-case basis for service quality and other factors																											
No	No	Kansas	Kansas regulators require utilities to provide annual reports on tree trimming as well as SAIFI, SAIDI and CAIDI indices.																											
Yes	Yes	Central Maine Power	<p><u>Performance Standards:</u></p> <p>Plan includes five benchmark indicators of customer satisfaction, service reliability and customer service:</p> <p>Customer Satisfaction:</p> <ul style="list-style-type: none"> <li>- Percent of phone center transaction customers who respond positively regarding service they received. Benchmark 82%</li> <li>- Percent of new installations who respond service was on time. Benchmark 72%</li> </ul> <p>Service Reliability:</p> <ul style="list-style-type: none"> <li>- CAIDI - Benchmark 180 minutes</li> <li>- SAIFI - Benchmark 2.0</li> </ul> <p>Customer PUC Complaint Ratio        Benchmark 1.17 per 1,000 customers (1993 result)</p> <p>Central Maine's performance is reviewed annually as measured by the above indicators. Regulators use a point system to determine penalties. Maximum is 100 points (based on 20 points for each of the five targets). Fines begin when points fall below 100 points, as follows:</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <tr><td style="text-align: right;">99 to 99.9</td><td style="text-align: right;">\$250,000</td></tr> <tr><td style="text-align: right;">98 to 98.9</td><td style="text-align: right;">\$500,000</td></tr> <tr><td style="text-align: right;">97 to 97.9</td><td style="text-align: right;">\$750,000</td></tr> <tr><td style="text-align: right;">96 to 96.9</td><td style="text-align: right;">\$1,000,000</td></tr> <tr><td style="text-align: right;">94 to 95.9</td><td style="text-align: right;">\$1,500,000</td></tr> <tr><td style="text-align: right;">93 to 93.9</td><td style="text-align: right;">\$2,000,000</td></tr> <tr><td style="text-align: right;">Under 92</td><td style="text-align: right;">\$3,000,000</td></tr> </table> <p>Maximum penalty of \$3 million is 0.33% of annual revenues of around \$900 million.</p> <p><u>Service Guarantees:</u></p> <ul style="list-style-type: none"> <li>- Keep scheduled appointments. If no notification 4 hours in advance, \$25 credit.</li> <li>- Credit equal to amount of mistake (up to \$10) when utility notified of inaccurate bill.</li> <li>- If service is not connected on promised date, first electric bill is free (up to \$250).</li> </ul>	99 to 99.9	\$250,000	98 to 98.9	\$500,000	97 to 97.9	\$750,000	96 to 96.9	\$1,000,000	94 to 95.9	\$1,500,000	93 to 93.9	\$2,000,000	Under 92	\$3,000,000													
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Yes	No	Maine Public Service Company	<p><u>Performance Standards:</u></p> <p>Under Maine Public Service Company's profit sharing plan, seven indicators are used to gauge customer service and reliability. The maximum penalty is \$200,000, or about 0.4% of retail revenues. The indicators are:</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"><u>Indicator</u></th> <th style="text-align: center;"><u>Baseline</u></th> <th style="text-align: center;"><u>Penalty</u></th> </tr> </thead> <tbody> <tr><td>SAIFI</td><td style="text-align: center;">3.1</td><td style="text-align: right;">\$28,570</td></tr> <tr><td>CAIDI</td><td style="text-align: center;">66 minutes</td><td style="text-align: right;">\$28,570</td></tr> <tr><td>Installation of Service</td><td style="text-align: center;">95%</td><td style="text-align: right;">\$28,570</td></tr> <tr><td>Knowledgeable Staff:</td><td></td><td></td></tr> <tr><td>  Residential</td><td style="text-align: center;">92%</td><td style="text-align: right;">\$28,570</td></tr> <tr><td>  Commercial</td><td style="text-align: center;">92%</td><td style="text-align: right;">\$28,570</td></tr> <tr><td>Bill Accuracy</td><td style="text-align: center;">0.50%</td><td style="text-align: right;">\$28,570</td></tr> <tr><td>PUC Complaint Ratio</td><td style="text-align: center;">1.0</td><td style="text-align: right;">\$28,570</td></tr> </tbody> </table> <p>A point system is used to determine penalties. Maximum penalty is \$28,570 per indicator.</p>	<u>Indicator</u>	<u>Baseline</u>	<u>Penalty</u>	SAIFI	3.1	\$28,570	CAIDI	66 minutes	\$28,570	Installation of Service	95%	\$28,570	Knowledgeable Staff:			Residential	92%	\$28,570	Commercial	92%	\$28,570	Bill Accuracy	0.50%	\$28,570	PUC Complaint Ratio	1.0	\$28,570
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Yes	No	Boston Edison (Massachusetts)	<p><u>Performance Standards:</u></p> <p>Boston Edison's restructuring settlement provides for the following performance standards with associated penalties:</p> <p>Service reliability (total minutes per year average customer is without service):</p> <ul style="list-style-type: none"> <li>- less than 142 minutes = no penalty</li> <li>- between 143 and 154 minutes = \$125,000 penalty</li> <li>- 155 and 166 minutes = \$250,000</li> <li>- 167 to 177 = \$500,000</li> <li>- more than 177 = \$1 million</li> </ul> <p>Customer service standard (based on percentage of acceptable responses to annual satisfaction survey):</p> <ul style="list-style-type: none"> <li>- 77% favorable or very favorable responses = no penalty</li> <li>- 74% to 76% = \$125,000 penalty</li> <li>- 71% to 73% = \$250,000</li> <li>- 68% to 70% = \$500,000</li> <li>- Less than 67% = \$1 million</li> </ul> <p>Distribution line losses:</p> <ul style="list-style-type: none"> <li>- 0% to 5.52% line losses = no penalty</li> <li>- 5.53% to 5.96% = \$125,000 penalty</li> <li>- 5.97% to 6.41% = \$250,000</li> <li>- 6.42% to 6.85% = \$500,000</li> <li>- 6.86% to 7.30% = \$1 million</li> </ul>												
No	Yes	COM/Electnc (Massachusetts)	<p><u>Service Guarantees (pilot program in New Bedford area):</u></p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: center;"><u>Standard</u></th> <th style="text-align: center;"><u>Customer Credit</u></th> </tr> </thead> <tbody> <tr> <td>Accurate meter readings</td> <td style="text-align: right;">\$25</td> </tr> <tr> <td>Appointments on schedule</td> <td style="text-align: right;">\$25</td> </tr> <tr> <td>Direct payment/phone pay accuracy</td> <td style="text-align: right;">\$25</td> </tr> <tr> <td>New residential service within 5 days</td> <td style="text-align: right;">First month's bill free (up to \$500)</td> </tr> <tr> <td>Next day answers to billing questions</td> <td style="text-align: right;">\$25</td> </tr> </tbody> </table>	<u>Standard</u>	<u>Customer Credit</u>	Accurate meter readings	\$25	Appointments on schedule	\$25	Direct payment/phone pay accuracy	\$25	New residential service within 5 days	First month's bill free (up to \$500)	Next day answers to billing questions	\$25
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Yes	No	Mississippi Power	<p><u>Performance Standards:</u></p> <p>Rate adjustments are made based on a company performance rating (CPR) of between 0-10. Ratings are weighted based on the following:</p> <ol style="list-style-type: none"> <li>a. Customer Price - 50% weighting</li> <li>b. Customer Satisfaction - 25% weighting</li> <li>c. Customer Service Reliability - 25% weighting</li> </ol>												

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No	Yes	Kansas City Power & Light (Missouri)	<u>Service Guarantees:</u> - Service connected when promised or \$100 credit for each additional day (up to \$500) - Advance notice for planned service interruptions. Otherwise, \$25 credit. - Credit of 10 percent of corrected amount (up to \$500) if meter read or bill is inaccurate. - If utility work results in customer property damage, \$500 credit. - \$25 credit if all customer questions are not answered promptly. - \$25 credit for missed appointments.
No	Yes	Montana Power	<u>Service Guarantees:</u> - Commitment to resolve problem if employees damage customer property - Install yard lights by date promised or first month lighting bill is free - Repair yard light within 10 days or that month's lighting bill is free - Install service line by date promised, or pay \$50 each late working day (\$250 max) - Keep appointments to one hour of designated time. Otherwise, \$25 credit
No	No	New Jersey	<u>Performance Standards:</u> New Jersey is creating statewide reliability standards that likely will be published in the New Jersey Public Utility Code. The standards are subject to passage of restructuring legislation in the state. The standards being currently developed have penalties for non-conformance.
No	Yes	Public Service Electric & Gas (New Jersey)	<u>Service Guarantees:</u> Public Service Electric & Gas in 1995 became the first NE utility to give its customers service guarantees which cover areas from appliance repair to billing accuracy: - 30-day guarantee on repairs to PSE&G electrical facilities on customer premises. - Otherwise credit customer account for \$25 residential; \$100 business. - Service activation on day promised. \$25 per day residential, \$100 per day business - Company-owned dusk-to-dawn street light repairs within 3 working days. Otherwise, free service for one month. - Bill accuracy. If inaccurate, credit of \$25 for residential customers; for business customers, 10% of corrected bill with minimum credit of \$25 and maximum of \$500. - Keep appointments. If not, \$25 credit residential; \$100 business. - Install new street lights within 10 working days. Otherwise, credit account for one month's charge for each new lights not installed for each additional 10 working day timeframe. Max credit of \$500 - Provide new electric service within 5 working days. \$25 residential, \$100 per day business, max of \$500 (overhead service only) - Respond to individual customer's no heat problem or power outage within quoted time. \$25 residential, \$100 business.

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Yes	Yes	Niagara Mohawk Power (New York)	<p><u>Performance Standards:</u></p> <table border="1"> <thead> <tr> <th>Indicator</th> <th>Target</th> <th>Penalty</th> </tr> </thead> <tbody> <tr> <td>PSC complaints</td> <td>&lt;10 monthly per 100,000 customers</td> <td>\$220,000 to \$1 million</td> </tr> <tr> <td>Residential satisfaction</td> <td>80.0% happy</td> <td>\$220,000 to \$1 million</td> </tr> <tr> <td>System interruption (SIF)</td> <td>&lt; 93</td> <td>\$1.32 million</td> </tr> <tr> <td>Customer interruption (CID)</td> <td>&lt;2.07</td> <td>\$1.32 million</td> </tr> <tr> <td>Power quality</td> <td>Momentaries (vary by kV)</td> <td>\$110,000 to \$220,000</td> </tr> </tbody> </table> <p>NiMo is also subject to cumulative annual program goals related to low-income customer assistance. Areas subject to measurement include enrollments, energy efficiency services and energy use management workshops.</p> <p>Maximum penalty that can be incurred by not meeting the low-income goals is \$1.1 million.</p> <p>NiMo's total annual penalty exposure \$13.2 million. Half is related to customer service performance and the remaining one-half is associated with service reliability.</p> <p><u>Service Guarantees:</u></p> <ul style="list-style-type: none"> <li>- Commitment to restore customer property to original condition after work done</li> <li>- Service connection within five days or \$25 per day credit</li> <li>- For one year after converting heating/water system to gas, dissatisfied residential customers can restore heating/water heating equipment to use original fuel at NiMo's expense.</li> </ul>	Indicator	Target	Penalty	PSC complaints	<10 monthly per 100,000 customers	\$220,000 to \$1 million	Residential satisfaction	80.0% happy	\$220,000 to \$1 million	System interruption (SIF)	< 93	\$1.32 million	Customer interruption (CID)	<2.07	\$1.32 million	Power quality	Momentaries (vary by kV)	\$110,000 to \$220,000																
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Yes	Yes	Consolidated Edison (New York)	<p><u>Performance Standards:</u></p> <table border="1"> <thead> <tr> <th>Indicator</th> <th>Target</th> </tr> </thead> <tbody> <tr> <td>PSC contacts (per 100,000 customers)</td> <td>&lt; 8.99</td> </tr> <tr> <td>30-day completion of</td> <td>&gt; 94.9%</td> </tr> <tr> <td>Call answer rate</td> <td>&gt; 94.9%</td> </tr> <tr> <td>Customer satisfaction survey ratings</td> <td></td> </tr> <tr> <td>-emergency calls</td> <td>&gt; 80.5%</td> </tr> <tr> <td>-call center calls</td> <td>&gt; 83.5%</td> </tr> <tr> <td>-service center visits</td> <td>&gt; 84.2%</td> </tr> <tr> <td>Days to complete initial work</td> <td>&lt; 7.5 days</td> </tr> <tr> <td>Days to complete final work</td> <td>&lt; 10 days</td> </tr> <tr> <td>% meters read on time</td> <td>&gt; 86.9%</td> </tr> <tr> <td>Bill accuracy (% OK)</td> <td>&gt; 97.2%</td> </tr> <tr> <td>Electric reliability:</td> <td></td> </tr> <tr> <td>SAIFI (radial)</td> <td>350 - 537</td> </tr> <tr> <td>SAIFI (network)</td> <td>7.54 - 13.55</td> </tr> <tr> <td>CAIDI (radial)</td> <td>1.18 - 1.81 hrs</td> </tr> <tr> <td>CAIDI (network)</td> <td>2.27 - 3.5 hrs</td> </tr> </tbody> </table> <p>Performance standards must be met, or ConEd faces a maximum penalty of 35 basis points on common equity.</p> <p><u>Service Guarantees:</u></p> <p>\$50 credit to customer account if ConEd:</p> <ul style="list-style-type: none"> <li>- fails to turn on service within 24 hours after account opened</li> <li>- turns service off in error</li> <li>- misses scheduled meter reading appointment</li> </ul>	Indicator	Target	PSC contacts (per 100,000 customers)	< 8.99	30-day completion of	> 94.9%	Call answer rate	> 94.9%	Customer satisfaction survey ratings		-emergency calls	> 80.5%	-call center calls	> 83.5%	-service center visits	> 84.2%	Days to complete initial work	< 7.5 days	Days to complete final work	< 10 days	% meters read on time	> 86.9%	Bill accuracy (% OK)	> 97.2%	Electric reliability:		SAIFI (radial)	350 - 537	SAIFI (network)	7.54 - 13.55	CAIDI (radial)	1.18 - 1.81 hrs	CAIDI (network)	2.27 - 3.5 hrs
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Yes	Yes	Rochester Gas & Electric (New York)	<p><u>Performance Standards:</u></p> <p>RG&amp;E's exposure for failing to meet minimum service quality standards is a total of \$1.25 million.</p> <table border="1"> <thead> <tr> <th><u>Indicator</u></th> <th><u>Target</u></th> <th><u>Max. Penalty</u></th> </tr> </thead> <tbody> <tr> <td>SAIFI</td> <td>1.27</td> <td>\$375,000</td> </tr> <tr> <td>CAIDI</td> <td>1.73</td> <td>\$375,000</td> </tr> <tr> <td>Appointments kept</td> <td>99%</td> <td>\$83,000</td> </tr> <tr> <td>Calls answered w/in 30 seconds</td> <td>&gt; 73%</td> <td>\$83,000</td> </tr> <tr> <td>Bills adjusted</td> <td>&lt; 2.70%</td> <td>\$83,000</td> </tr> <tr> <td>Estimated bills</td> <td>&lt; 13.7%</td> <td>\$83,000</td> </tr> <tr> <td>PSC complaints (per 100,000 customers)</td> <td>&lt; 9.0%</td> <td>\$83,000</td> </tr> </tbody> </table> <p><u>Service Guarantees:</u></p> <table border="1"> <thead> <tr> <th><u>Standard</u></th> <th><u>Refund</u></th> </tr> </thead> <tbody> <tr> <td>1. Prompt, courteous service</td> <td>no credit</td> </tr> <tr> <td>2. Keep customer appointments</td> <td>\$20</td> </tr> <tr> <td>3. Prompt billing resolutions</td> <td>\$20</td> </tr> <tr> <td>4. Prompt meter read</td> <td>no credit</td> </tr> <tr> <td>5. Advance notice for service interruptions</td> <td>\$20</td> </tr> <tr> <td>6. Street and area lights</td> <td></td> </tr> <tr> <td>-- respond to outage in 24 hrs</td> <td></td> </tr> <tr> <td>-- new installation by date promised</td> <td>One month service charge free</td> </tr> </tbody> </table>	<u>Indicator</u>	<u>Target</u>	<u>Max. Penalty</u>	SAIFI	1.27	\$375,000	CAIDI	1.73	\$375,000	Appointments kept	99%	\$83,000	Calls answered w/in 30 seconds	> 73%	\$83,000	Bills adjusted	< 2.70%	\$83,000	Estimated bills	< 13.7%	\$83,000	PSC complaints (per 100,000 customers)	< 9.0%	\$83,000	<u>Standard</u>	<u>Refund</u>	1. Prompt, courteous service	no credit	2. Keep customer appointments	\$20	3. Prompt billing resolutions	\$20	4. Prompt meter read	no credit	5. Advance notice for service interruptions	\$20	6. Street and area lights		-- respond to outage in 24 hrs		-- new installation by date promised	One month service charge free
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Yes	Yes	Central Hudson Gas & Electric (New York)	<p><u>Performance Standards:</u></p> <table border="1"> <thead> <tr> <th><u>Indicator</u></th> <th><u>Target</u></th> </tr> </thead> <tbody> <tr> <td>Customer satisfaction index</td> <td></td> </tr> <tr> <td>Keeping scheduled appointments</td> <td>\$20 credit if appointment missed</td> </tr> <tr> <td>SAIFI</td> <td>&lt; 1.20</td> </tr> <tr> <td>CAIDI</td> <td>&lt; 2.27 hrs</td> </tr> </tbody> </table>	<u>Indicator</u>	<u>Target</u>	Customer satisfaction index		Keeping scheduled appointments	\$20 credit if appointment missed	SAIFI	< 1.20	CAIDI	< 2.27 hrs																																
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Performance Standards?	Service Guarantees?	Utility / State	Service Quality Initiatives
No	Yes	NYSEG (New York)	<p><u>Service Guarantees</u></p> <ol style="list-style-type: none"> <li>1. Turn on/off service with one day notice</li> <li>2. New service within 5 days</li> </ol> <p>Refund for not meeting the standards is \$25 per day.</p>
Coming	No	Ohio	<p>In 7/98, Ohio regulators approved new consumer protection standards for electric utility customers. The rules take effect 7/1/99. The standards cover:</p> <ol style="list-style-type: none"> <li>1. New service installations. Utilities must complete 99% of new service requests within 3 business days if no construction is needed. If construction is necessary, 90% of such new requests must be done within 10 business days.</li> <li>2. Answering phones. In answering customer calls, utilities must maintain a monthly average 60-second answer time.</li> <li>3. Customer complaints. Each customer complaint must be investigated by the utility within 3 business days. If requested by the customer, a report must be delivered in writing.</li> <li>4. Outage reports. All service outages affecting 2,500 customers for at least four hours must be reported to the PUC. If an outage is projected to last longer than 24 hours and impacts more than 100 customers, a report must be filed with the PUC.</li> </ol>
No	Yes	Oklahoma Gas & Electric	<p><u>Service Guarantees</u></p> <ul style="list-style-type: none"> <li>- Residential home comfort guaranteed for one year. If not satisfied, OG&amp;E will correct the problem or replace heating/cooling system with one of customer's choice at no cost.</li> <li>- Guarantee that heating, cooling and water heating consumption (KWH) won't exceed the calculated average monthly usage for two years. Otherwise, customer will be paid triple the difference in utility costs.</li> </ul>
Yes	No	PacifiCorp (Oregon)	<p><u>Performance Standards</u></p> <p>Eight performance measures for evaluating service quality, as well as revenue requirement deductions for poor performance, are included in the AFOR. The standards are in effect for ten years beginning in 1/98.</p> <ol style="list-style-type: none"> <li>1. At fault customer complaints</li> <li>2. Average interruption duration</li> <li>3. Average interruption frequency</li> <li>4. Average momentary interruption frequency</li> <li>5. Major safety violations - objective is 0.0 violations. Penalty is \$100,000 to \$500,000 for each violation cited by PUC.</li> <li>6. Annual review / vegetation management - no specific provisions for revenue requirement reduction</li> <li>7. Annual review / inspection &amp; maintenance programs (such as distribution facilities)</li> <li>8. Annual review / special programs - specific issues that may affect T&amp;D operation, maintenance or safety.</li> </ol>



Performance Standards?	Service Guarantees?	Utility / State	Service Quality Initiatives								
Yes	No	Portland General Electric (Oregon)	<p><u>Performance Standards:</u></p> <ul style="list-style-type: none"> <li>- At fault customer complaints</li> <li>- Average interruption duration</li> <li>- Average interruption frequency</li> <li>- Average momentary interruption frequency</li> <li>- Major safety violations</li> <li>- Annual review / vegetation management</li> <li>- Annual review / inspection &amp; maintenance programs</li> <li>- Annual review / special programs</li> </ul>								
No	Yes	Duquesne Light (Pennsylvania)	<p><u>Service Guarantees:</u></p> <p>\$25 credit to customer account if Duquesne:</p> <ul style="list-style-type: none"> <li>- doesn't turn on service within one day after all approvals received</li> <li>- fails to provide knowledgeable, competent and professional response to a customer inquiry</li> <li>- calculates an inaccurate bill</li> <li>- fails to arrive at customer's home within one hour of a scheduled visit</li> </ul>								
Yes	Yes	Pennsylvania Power & Light	<p><u>Performance Standards:</u></p> <table border="0" style="width: 100%;"> <tr> <td>CAIDI</td> <td style="text-align: right;">157</td> </tr> <tr> <td>SAIFI</td> <td style="text-align: right;">1.12</td> </tr> <tr> <td>SAIDI</td> <td style="text-align: right;">1.52</td> </tr> <tr> <td>MAIFI</td> <td style="text-align: right;">4.58</td> </tr> </table> <p><u>Service Guarantees:</u></p> <p>\$25 credit to account if following guarantees are not met:</p> <ul style="list-style-type: none"> <li>- Keep appointments or call with 24 hours notice to reschedule</li> <li>- New connections within 7 days after all requirements are met</li> <li>- Reconnect meters within 2 days after request</li> </ul>	CAIDI	157	SAIFI	1.12	SAIDI	1.52	MAIFI	4.58
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Performance Standards?	Service Guarantees?	Utility / State	Service Quality Initiatives
Proposed	No	Texas (statewide)	<p>In summer 1998, the Public Utility Commission proposed new continuity of service rules that focus on increasing service reliability to customers receiving substandard service. If adopted, the rules would require each Texas utility to improve the performance of its worst-performing feeders in stages. By April 30, 2000, 94 percent of each utility's customers must receive service at or above the level provided to 90 percent of its customers for the year ending April 30, 1999. By April 30, 2001, 98 percent of customers would have to meet or exceed the 90 percent threshold.</p> <p>No distribution feeder could contribute to the percentage of customers below the service standard in consecutive years, so customers receiving below-standard service in 2000 would not be the same customers who received poor service in 1999.</p> <p>Reliability standards apply individually to Texas utilities based on each utility's performance.</p> <p>System-wide standards. Interim standards shall be established for the 24-month period ending April 30, 1999. The interim standards shall be the system-wide average of the 1998 and the 1999 reporting years for each reliability index. The interim standards will be adjusted based on the 36-month period ending April 30, 2000. The resulting standards will be the average of the three reporting years 1998, 1999 and 2000.</p> <p>SAIFI. Each utility shall maintain and operate its electric distribution so that the SAIFI value for the 2000 reporting year does not exceed the interim systemwide SAIFI standard by more than 10%. For the 2001 reporting year and thereafter, the SAIFI value shall not exceed the systemwide SAIFI standard by more than 5.0%.</p> <p>SAIDI. Each utility shall maintain and operate its electric distribution so that the SAIDI value for the 2000 reporting year does not exceed the interim systemwide SAIDI standard by more than 10%. For the 2001 reporting year and thereafter, the SAIDI value shall not exceed the systemwide SAIDI standard by more than 5.0%.</p> <p>Distribution feeder standards. Standards shall be established for the 24-month period ending April 30, 1999. The standards shall be the average of the 1998 and 1999 reporting years for each index at the value represented by the 10% of the distribution feeders with the highest values.</p>
No	Yes	Central & Southwest (Texas)	<p><u>Service Guarantees:</u></p> <ul style="list-style-type: none"> <li>- On-time for service appointments (two-hour timeframe)</li> <li>- Service to be turned on by end of next day after request received (when meter is already installed)</li> <li>- Two days notice for scheduled interruptions</li> <li>- Security light relamping within 3 days</li> </ul> <p>No credit amounts for customers indicated</p>
Yes	Yes	Puget Sound Energy (Washington)	<p><u>Performance Standards:</u></p> <p>Washington regulators could impose up to \$7.5 million a year in penalties if PSE fails to meet the standards.</p> <ul style="list-style-type: none"> <li>· Overall customer satisfaction: 90%</li> <li>· WUTC complaint ratio: Less than 0.5 complaints per 1,000 customers</li> <li>· Telephone response: 75% of calls answered "live" within 30 seconds</li> <li>· Customer satisfaction with call center: at least 91%</li> <li>· Annual length of non-storm outages: Less than 2.5 hours</li> <li>· Annual length of non-storm outages in year 5: Less than 116.1 minutes</li> <li>· Annual frequency of non-storm outages: Less than 1,473 interruptions</li> <li>· Annual frequency of non-storm outages in year 5: Less than 1.25 interruptions</li> <li>· Satisfaction with field service operations: 85%</li> <li>· Disconnection ratio for non-payment: Less than 3.8%</li> </ul> <p><u>Service Guarantees:</u></p> <p>Another feature includes a \$50 cash back guarantee if the company misses a service-call appointment.</p>

Performance Standards?	Service Guarantees?	Utility / State	Service Quality Initiatives
Yes	No	Wisconsin	<p>Wisconsin regulators on 11/4/97 approved WP&amp;L's three-way merger with Interstate Power Company and IES Industries. Noting that the merger "could have an adverse effect on the quality of electric service provided by WP&amp;L," the merger agreement included these requirements:</p> <p><u>Performance Standards:</u></p> <ul style="list-style-type: none"> <li>· WP&amp;L must file reports annually of information regarding service quality, beginning on April 15, 1998, and every year thereafter by the same date.</li> <li>· SAIFI and CAIDI indices must be reported</li> <li>· Disclose total number of customer interruptions and the customer minutes of interruption totaled for each forced outage greater than or equal to five minutes in duration, including storm outages</li> <li>· Average daily call wait time for calls received on WP&amp;L's customer service/billing</li> <li>· Average number of days between receipt of complete service applications and energization of new facilities to serve new customers for all new extensions of service, with a separate average calculated for each month and including all extensions energized during the calendar month.</li> </ul> <p>Total number of written and telephone customer complaints received in the areas of safety, billing, outages, power quality, customer property damage, and other areas, by month filed.</p>

## Sources

- Arizona Public Service: Internet site:  
<http://customer.apsc.com/servicecommit/default.asp>
- Pacific Gas & Electric: CPUC Staff contact  
PG&E Performance Standards (chapter 5), direct testimony,  
filed 1998
- San Diego Gas & Electric: California PUC Decision 94-08-023
- Southern California Edison: Application No. 97-12-047, Exhibit No. SCE-1, California PUC,  
12/97  
Internet site: [http://www.sce.com/onlinesca/index\\_ns.htm](http://www.sce.com/onlinesca/index_ns.htm)
- Public Service Colorado: Public Service Company of Colorado, Electric Rates:  
Performance-Based Regulatory Plan Adjustment, 11/97
- Illinois: Rules adopted by Illinois Commerce Commission 6/2/96,  
Dockets 98-0036 and 98-005
- Commonwealth Edison: Rules adopted by Illinois Commerce Commission 6/2/98,  
Dockets 98-0036 and 98-005  
  
Internet site: [http://www.ucm.com/news/comed/display.asp?a-ComEd&rec\\_id=30](http://www.ucm.com/news/comed/display.asp?a-ComEd&rec_id=30)
- Iowa: Conversation with contact at Iowa Utilities Board
- Kansas: "What Customers Demand: Quality of Service in the Electric  
Utility Industry in Texas," by LBJ School of Public Affairs,  
University of Texas at Austin, 8/97
- Central Maine Power: Service quality standards approved by Maine PUC in 1/95  
Internet site: <http://www.cmpco.com/services/csg.html>
- Maine Public Service: Profit-sharing plan approved by Maine PUC in 11/95
- Boston Edison: Massachusetts (Boston Edison): DPU/DTE 96-23 (issued  
1/28/98)
- Com/Electric: Internet site:  
<http://www.comelectric.com/corp/news/srvcexcl.htm>
- Mississippi Power: Quality of Service Standards – Survey Results of Other State  
Commissions, Utah Division of Public Utilities, 11/6/96
- Kansas City Power & Light: Internet site: <http://144.73.70.215/forhome/promise.htm>
- Montana Power: Internet site: <http://www.mtpower.com/utility/CustomerService/ServiceGuarantees.htm>
- New Jersey: Phone conversation with NJ Board of Public Utilities staff  
member Brian Bean

Public Service Electric & Gas: "Service Guarantees" brochure produced by PSE&G

Niagara Mohawk Power: "PowerChoice" settlement agreement between Niagara Mohawk and NYPSC, Section 6.0, 9/25/97  
<http://www.nimo.com/customerservice/svcguarantee.htm>

Consolidated Edison: Settlement agreement between Consolidated Edison and NYPSC, Appendix G, 8/19/97  
ConEdison Info Paper on Customer Operations, Vol. 6, No. 5, 9/95

Rochester Gas & Electric: Settlement agreement between RG&E and NYPSC, Schedule G, 10/24/97  
Internet site: <http://www.rge.com/olcguarantee.html>

Orange & Rockland: Settlement agreement between Orange & Rockland and NYPSC, 12/31/97  
<http://www.oru.com/2.1html>

Central Hudson Gas: Settlement Agreement between Central Hudson and NYPSC, 1/2/98

NYSEG: Internet site:  
<http://www.nyseg.com/nysegweb/main.nsf/85256143006653ae85255534006047>

Ohio: Conversation with Ohio PUC staff member Mac Wagner  
Ohio PUC news release, 7/22/98  
Ohio Electric Service and Safety Standards (to be effective 7/1/99)

Oklahoma Gas & Electric: Internet site: <http://www.oge.com/>\*

PacifiCorp: PacifiCorp Oregon AFOR order, 5/5/98

Portland General Electric: Oregon PUC, UM 814: Proposed Stipulations for Service Quality  
Measures, 4/29/97

Duquesne Light: <http://www.dqe.com/indexdl.html>

Pennsylvania Power & Light: Staff contact at Pennsylvania PUC  
Tentative Order in Docket No. M-0099 on Reliability Benchmarks and Standards  
Internet site: <http://www.ppl-inc.com/welcome/index.html>

Texas: Texas PUC docket 18249

Central & Southwest: Internet site: <http://www.csw.com/Customers/default.htm>

Puget Sound Energy: PBR mechanism adopted in merger proceeding, docket UE-960195

Wisconsin: Wisconsin (WP&L): Docket No. 6680-UM-100 (issued 11/4/97)

## Appendix 2

**Service Guarantees  
 List of Utilities Contacted Via Internet Home Page**

Company Name		
1 Pacific Gas & Electric Co.		no web details
2 Southern California Edison Co.	XX	<a href="https://www.sce.com/onlineca/index_ns.htm">https://www.sce.com/onlineca/index_ns.htm</a>
3 Florida Power & Light Co.		no web details
4 Commonwealth Edison Co.	XX	<a href="http://www.ucm.com/news/comed/display.asp?a=ComEd&amp;rec_id=30">http://www.ucm.com/news/comed/display.asp?a=ComEd&amp;rec_id=30</a>
5 Consolidated Edison Co. of New York, Inc.		info provided by fax
6 Texas Utilities Electric Co.		no web details
7 Detroit Edison Co.		no web details
8 Virginia Electric & Power Co. (Virginia Power)		no web details
9 Public Service Electric & Gas Co.		no web details
10 Duke Energy Corp.		no web details
11 Georgia Power Co.		no web details
12 Consumers Energy Co.		no web details
13 Houston Lighting & Power Co.		no web details
14 Niagara Mohawk Power Corp.	XX	<a href="https://www.nimo.com/customer/service/svcguarantee.htm">https://www.nimo.com/customer/service/svcguarantee.htm</a>
15 PECO Energy Co.		no web details
16 PacifiCorp		no web details
17 Florida Power Corp.		no web details
18 Alabama Power Co.		no web details
19 Northern States Power Co.		no web details
20 PP&L, Inc.	XX	<a href="http://www.ppl-inc.com/welcome/index.html">http://www.ppl-inc.com/welcome/index.html</a>
21 San Diego Gas & Electric Co.		no web details
22 PSC of Colorado		no web details
23 AmerenUE		no web details
24 Carolina Power & Light Co.		no web details
25 Baltimore Gas & Electric Co.		no web details
26 Connecticut Light & Power Co.		no web details
27 Long Island Lighting Co.		no web details
28 Wisconsin Electric Power Co.		no web details
29 Jersey Central Power & Light Co.		no web details
30 Ohio Edison Co.		no web details

Company Name		
31 Massachusetts Electric Co.		no web details
32 Appalachian Power Co.		no web details
33 Puget Sound Energy, Inc.		no web details
34 New York State Electric & Gas Corp.	XX	<a href="http://www.nyseg.com/nysegweb/main.nsf/85256143006653ae8525553400604">http://www.nyseg.com/nysegweb/main.nsf/85256143006653ae8525553400604</a>
35 Cleveland Electric Illuminating Co.		no web details
36 Arizona Public Service Co.	XX	<a href="http://customer.apsc.com/servicecommit/default.asp">http://customer.apsc.com/servicecommit/default.asp</a>
37 Oklahoma Gas & Electric Co.	?	<a href="http://www.oge.com/">http://www.oge.com/</a> *
38 Potomac Electric Power Co.		no web details
39 Portland General Electric Co.		no web details
40 Ohio Power Co.		no web details
41 Boston Edison Co.		no web details
42 PSI Energy, Inc.		no web details
43 West Penn Power Co. (Allegheny)		no web details
44 MidAmerican Energy Co.		no web details
45 Entergy Gulf States, Inc.		no web details
46 Central Power & Light Co.		no web details
47 Entergy Louisiana, Inc.		no web details
48 Entergy Arkansas, Inc.		no web details
49 Cincinnati Gas & Electric Co.		no web details
50 Columbus Southern Power Co.		no web details
51 Duquesne Light Co.	XX	<a href="http://www.dqe.com/indexdl.html">http://www.dqe.com/indexdl.html</a>
52 Pennsylvania Electric Co. (GPU)		no web details
53 Illinois Power Co.		no web details
54 Indiana Michigan Power Co.		no web details
55 Central Maine Power Co.	XX	<a href="http://www.cmpco.com/service/csg.html">http://www.cmpco.com/service/csg.html</a>
56 Tampa Electric Co.		no web details
57 Nevada Power Co.		no web details
58 South Carolina Electric & Gas Co.		no web details
59 Dayton Power & Light Co.		no web details
60 PSC of Oklahoma	XX	<a href="http://www.csw.com/Customer/default.htm">http://www.csw.com/Customer/default.htm</a>
61 Atlantic City Electric Co.		no web details
62 Metropolitan Edison Co. (GPU)		no web details
63 Kentucky Utilities Co.		no web details
64 Delmarva Power & Light Co.		no web details



Company Name			
65 Kansas City Power & Light Co.	XX	<a href="http://144.73.70.215/forhome/promise.htm">http://144.73.70.215/forhome/promise.htm</a>	no web details
66 Indianapolis Power & Light Co.			no web details
67 Southwestern Electric Power Co.			no web details
68 Northern Indiana Public Service Co.			no web details
69 PSC of New Hampshire			no web details
70 Wisconsin Power & Light Co.			no web details
71 Entergy Mississippi, Inc.			no web details
72 Southwestern Public Service Co.			no web details
73 Potomac Edison Co.			no web details
74 Wisconsin Public Service Corp.			no web details
75 UtiliCorp United, Inc.			no web details
76 Idaho Power Co.			no web details
77 Louisville Gas & Electric Co.			no web details
78 AmerenCIPS			no web details
79 Monongahela Power Co. (Allegheny)			no web details
80 PSC of New Mexico			no web details
81 Rochester Gas & Electric Corp.	XX	<a href="http://www.rge.com/olcguaran/ee.html">http://www.rge.com/olcguaran/ee.html</a>	no web details
82 Gulf Power Co.			no web details
83 IES Utilities, Inc.			no web details
84 KPL, A Western Resources Company			no web details
85 Narragansett Electric Co.			no web details
86 Commonwealth Electric Co.	XX	<a href="http://www.comelectric.com/corp/news/srvcxcl.htm">http://www.comelectric.com/corp/news/srvcxcl.htm</a>	no web details
87 Tucson Electric Power Co.			no web details
88 United Illuminating Co.			no web details
89 Washington Water Power Co.			no web details
90 Toledo Edison Co.			no web details
91 Sierra Pacific Power Co.			no web details
92 El Paso Electric Co.			no web details
93 KGE, A Western Resources Company			no web details
94 Montana Power Co.	XX	<a href="http://www.mtpower.com/utility/CustomerService/ServiceGuarantees.htm">http://www.mtpower.com/utility/CustomerService/ServiceGuarantees.htm</a>	no web details
95 Hawaiian Electric Co., Inc.			no web details
96 Central Hudson Gas & Electric Corp.			no web details
97 CLECO Corp.			no web details
98 Texas-New Mexico Power Co.			no web details

Company Name		
99 Northern States Power Co. Wisconsin		no web details
100 Orange & Rockland Utilities, Inc.	XX	<a href="http://www.oru.com/2.1.html">http://www.oru.com/2.1.html</a>
101 Western Massachusetts Electric Co.		no web details
102 Central Illinois Light Co.		no web details
103 Eastern Edison Co.		no web details
104 Entergy New Orleans, Inc.		no web details
105 Mississippi Power Co.		no web details

### Comparison of Proposed and Existing Service Standards

Standard	Proposed for PacifiCorp	Idaho Existing	Oregon Existing <sup>1</sup>	Utah Existing	Wyoming Existing
SAIDI	10% improvement	None	Standard equals three year weighted average of historical performance	None	None
SAIFI	10% improvement	None	Standard equals three year weighted average of historical performance	None	None
MAIFI	5% improvement	None	Standard equals three year weighted average of historical performance	None	None
Worst Performing Circuits	20% improvement	None	None	None	None
Supply Restoration	80% of customers within 3 hours	None	None	None	None
Telephone Service Levels	80% within 30 seconds	None	None	None	None
Commission Complaint Resolution	Resolve 90% within 30 days	None	Customer "At Fault" complaint frequency standard	None	None
Customer Guarantees	Eight separate guarantees with associated payment to customers for failure to meet standard	None	None	None	None

<sup>1</sup> Adopted in OPUC Order No. 98-191

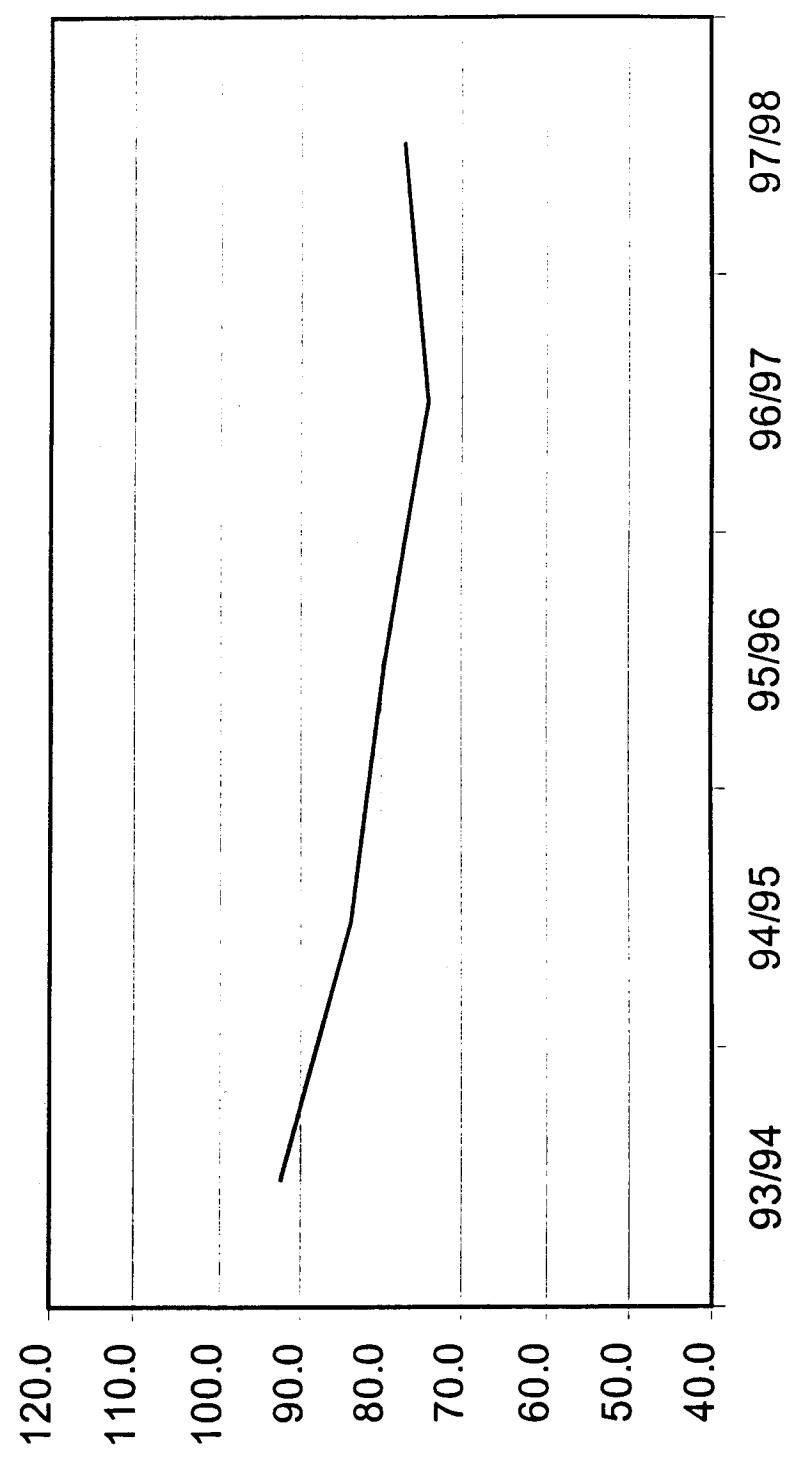
## Performance Standards

Standard	Clarification
System Availability (SAIDI)	SAIDI will exclude extreme events (storms). This allows measurement of the underlying performance of the asset base.
System Reliability (SAIFI)	SAIFI will exclude extreme events
Momentary Interruptions (MAIFI)	MAIFI will exclude extreme events
Worst Performing Circuits	CPI will exclude extreme events. It will also exclude instances where the company is delayed due to the company's inability to obtain the appropriate planning consents.
Supply Restoration	Restoration time will exclude extreme events. It will also exclude situations where a customer agrees to remain without power or where PacifiCorp is unable to restore supply due to problems with the customer's facility, or where PacifiCorp does not have access.
Telephone Service Levels	Telephone service levels will be defined as percent of calls answer within targeted time frame. Telephone service levels will be measured from the time the customer selects a menu option and is placed in queue until a CSE or interactive voice response (IVR) unit answers the call.
Commission Complaint Resolution	The company may request an extension of time to respond to a complaint, which may be granted by Commission Staff. Business days are defined as Monday through Friday excluding company holidays. Business hours are defined as 8:00 a.m. to 5:00 p.m.

## Customer Guarantees

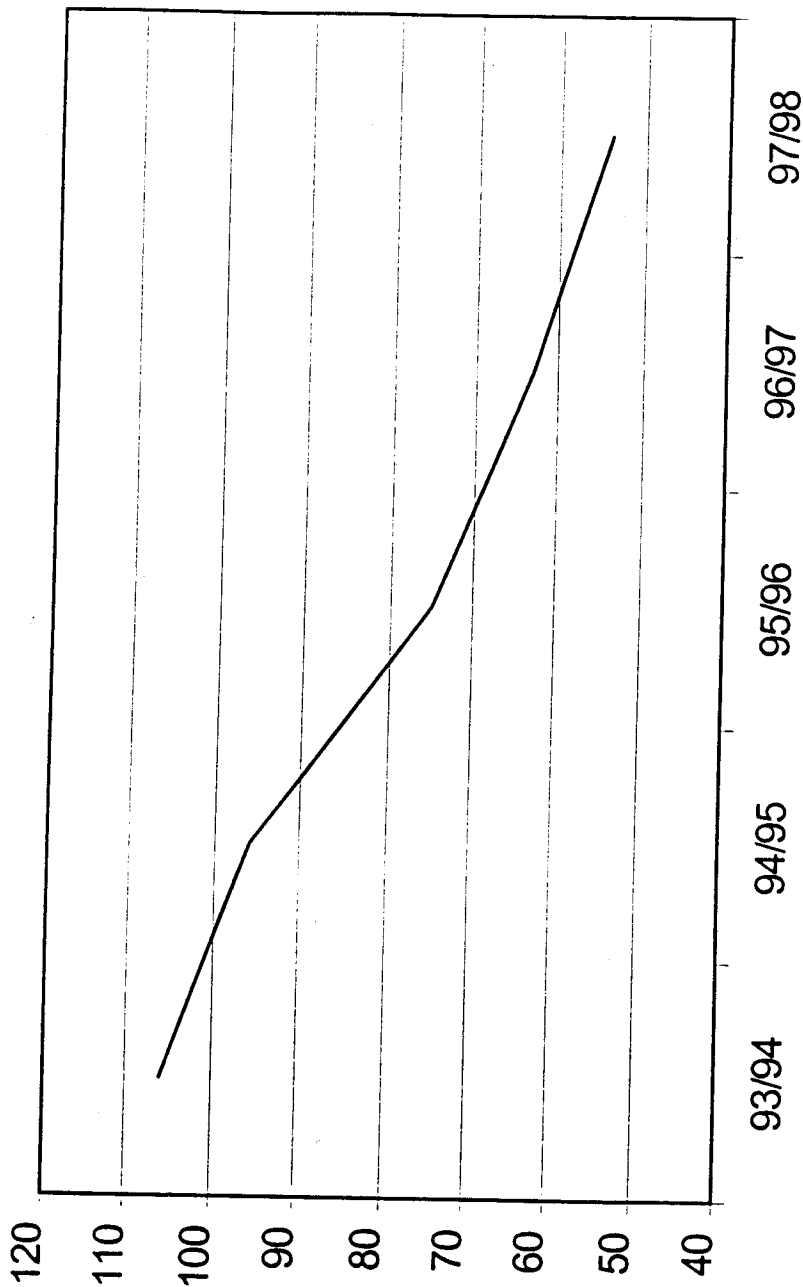
Standard	Clarification
Restoring Your Supply	Guarantee does not apply if any one of the following occur: 1) Extreme events, 2) Strikes, 3) There are safety-related issues, 4) Customer has agreed to remain without power, or 5) Problems exist with the customer's facility.
Appointments	Guarantee does not apply if any one of the following occur: 1) Extreme events, 2) Strikes, 3) Major system outages, 4) Customer is out when PacifiCorp calls, 5) Customer cancels the appointment, or 6) PacifiCorp cancels the appointment and provides you with at least 24 hours notice.
Switching on the Customer's Power	Guarantee does not apply if any one of the following occur: 1) Extreme events, 2) Strikes, 3) Major system outages, 4) Customer is out when PacifiCorp calls, or 5) There are safety-related issues.
Estimates for Providing a New Supply	Guarantee does not apply if any one of the following occur: 1) Extreme events, 2) Strikes, 3) Major system outages, 4) Customer is out when PacifiCorp calls, 5) Customer cancels the appointment, 6) PacifiCorp cancels the appointment and provides you with at least 24 hours notice, or 7) Customer has not supplied all the necessary information so PacifiCorp can provide the estimate.
Response to Bill Inquiry	Working days are defined as Monday through Friday excluding company holidays.
Problems with Your Meter	Guarantee does not apply if any one of the following occur: 1) Extreme events, 2) Strikes, 3) PacifiCorp personnel do not have access to the customer's meter, 4) Meter tests shall be limited to no more frequently than once every 12 months.
Planned Interruptions	Guarantee does not apply if any one of the following occur: 1) Extreme events, 2) Strikes, 3) Major system outages, or 4) There are safety-related issues.
Power Quality Complaints	Working days are defined as Monday through Friday excluding company holidays.

## Underlying SAIDI: Scotland



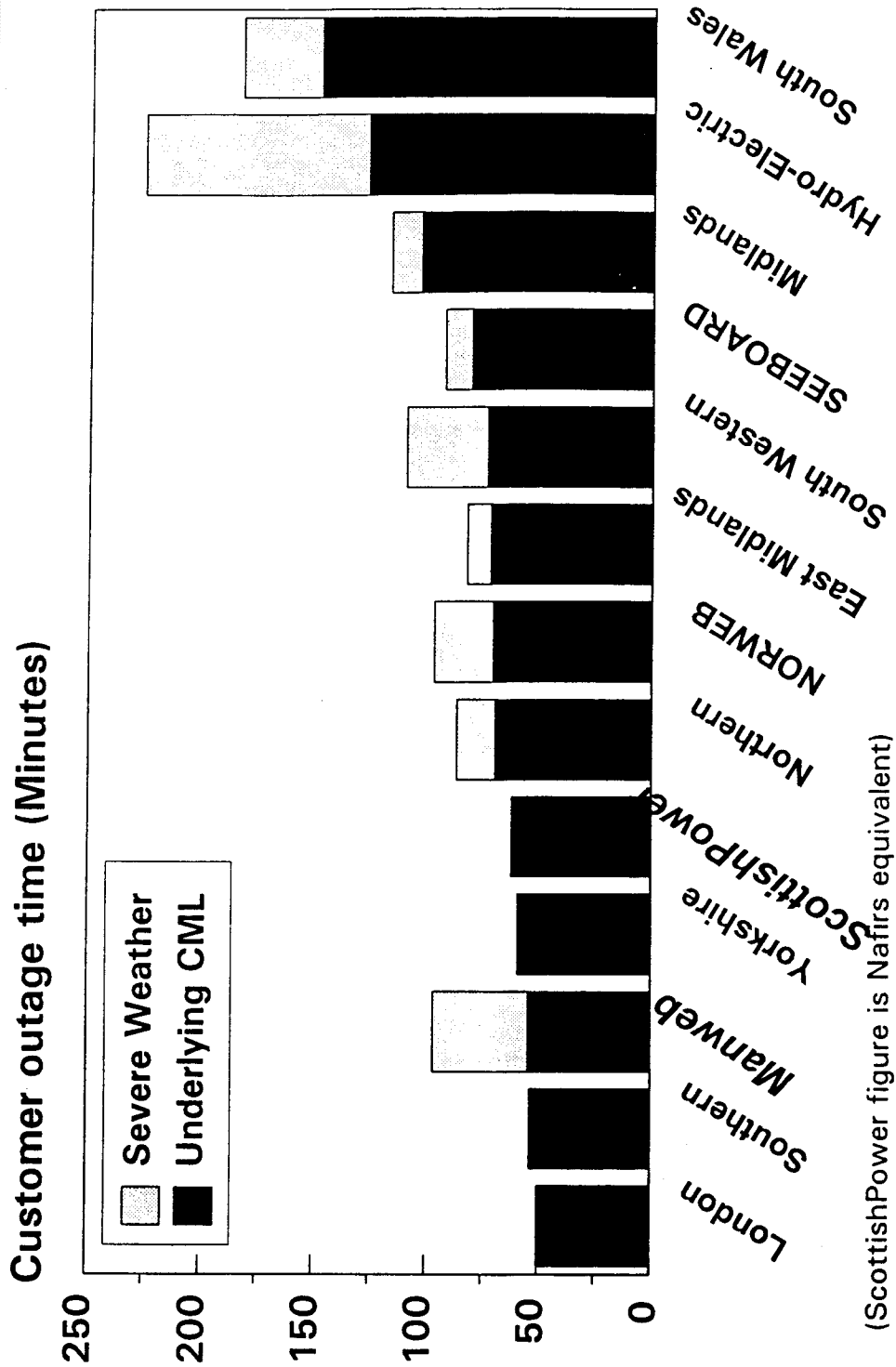
The main measure of system performance in the UK is Customer Minutes Lost (CML). This is calculated exactly the same as SAIDI in the USA. This measure is published separately by ScottishPower for both the Manweb and the ScottishPower operations. Over recent years ScottishPower has specifically invested in Quality of Supply initiatives, aimed at improving overall CML. The benefits of these investments are shown in the performance trends in recent years and are set to achieve the targets we published of reducing CML by around 20% by year 2000.

## Underlying SAIDI: Manweb



ScottishPower has been consistently in the upper quartile of electricity utilities on system performance. When the merger with Manweb was completed we inherited a company not focused on quality of supply and not driving investment towards customer service. Since implementing ScottishPower policies in Manweb, the underlying availability of supply has improved by 48%. We have since moved Manweb to be 3<sup>rd</sup> in the UK in underlying performance. While we do not expect to be able to deliver the same level of improvement to PacifiCorp operations we will apply ScottishPower policies to maximise system performance, and will commit to reduce SAIDI by 10%.

# 1997/98 Performance Benchmarking



(ScottishPower figure is Nafirs equivalent)

Source: Quality of Supply Reports filed with OFFER, 1997/98



Quality of Supply Report  
1997/1998



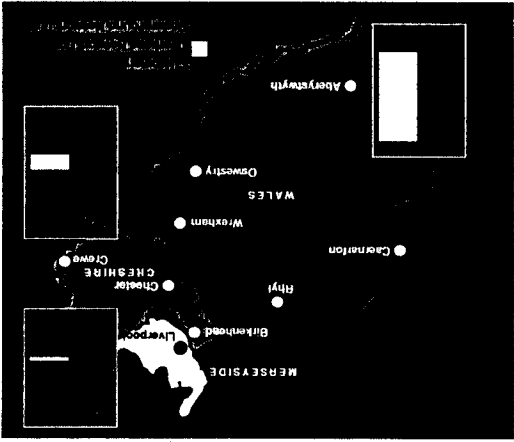
**Manweb**

A ScottishPower Company



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- 16 **Regional performance**
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- 21 **Capital spending**
- 25 **Glossary**



# Message from Bill Landels

Managing Director,  
Manweb.

Our fourth Quality of Supply report reviews the quality of electricity supply we delivered to our customers between 1 April 1997 and 31 March 1998. It includes our recent progress and gives details of the improvements we will be making up to the year 2000. We also examine our past and future capital investments which are aimed at improving the availability, security and quality of service.

Last year was another significant year at Manweb. During Christmas 1997, our region suffered hurricane-force winds of 110 miles per hour. We are deeply disappointed by the effect of the storm causing such widespread disruption to our customers. The storm also distorted the real improvements which we are otherwise continuing to deliver in the performance of our network. We did, for instance, achieve our best ever record in 1997/1998 in one of our main areas for measuring performance. Our underlying customer minutes lost (CML) for each connected customer was 54 minutes and is the result of a team effort within Manweb to reduce the amount

of electricity interruptions. However, the total figure was 96 minutes, with the effects of hurricane-force winds at Christmas alone contributing 42 minutes or 44% of that total.

The figures show the size of the task that faced our employees at what is a very special time of year. I want to take this opportunity to thank them for their magnificent efforts in carrying out repairs equal to two months work in just five days. We also recognised that the loss of electricity supplies at this time had a major effect on customers and so we made goodwill payments to



to all our customers, by carefully targeting investments in our distribution system. Much of this investment is aimed at rural areas and our initiatives are described in this report. We are working closely with our local communities and also upgrading urban networks, refurbishing and replacing equipment. We have good working relationships with manufacturers and encourage development of equipment and technology to deliver the best possible value for money. An important advantage to Manweb of belonging to a major multi-utility like ScottishPower is that we can adopt best practice from other areas into this region. In the coming year we will introduce tried and tested techniques, for example the way in which calls from customers are dealt with and how we respond to incidents. This report provides a clear overview of our electricity network operations. If you have any questions or comments about its content please contact either me or your local Regional Manager. Details of how to contact us are on the back cover of this report.

those without electricity for more than 24 hours in this instance. We treated all requests for these payments individually and sympathetically. We have learnt lessons from the emergency at Christmas and these were put into practice when parts of the region were covered by a foot of snow in April. Although severe weather once again affected electricity supplies, no customer was without power for more than 24 hours. We are now working hard to identify where we can make further improvements to cope with severe weather which we regard as the major obstacle to providing a consistent supply of electricity to our customers. To achieve a consistently high quality of electricity supply to customers, our aim is to reduce our underlying CML by around 30% from the 1994/1995 levels by the year 2000. Our performance figures for 1997/1998 show that we are progressing towards that target. We also aim to deliver excellent customer service. We are committed to improving the reliability of our network, and the quality of supply we provide

# Quality of supply developments

## Market research

Customers tell us through our research that reliability and availability of supply is most

important to them. If their electricity supply is

interrupted for any reason, they expect us to deal

with it promptly. Short interruptions of a few

seconds are inconvenient but most of our

customers prefer them to longer interruptions.

Customers on our urban networks are generally

satisfied with the quality of supply we provide.

This section describes some of the developments

we are introducing to improve all areas of our

service and the reliability of our supply.

## Network management

When power supplies are disrupted, it is essential

that our customers can:

▶ contact us easily;

▶ tell us about their circumstances; and

▶ have information about the action we are

taking.

Our 24-hour emergency service line is now

available on **0845 272 2424**. Our aim is to deal

This section describes some

developments we are introducing

to improve all areas of our service

and reliability.

with calls quickly and efficiently to make sure

customers are given accurate up-to-date

information. We are always reviewing the level of

service we provide, particularly in emergency

situations, and we are looking to best

practice solutions.

How long any interruption lasts depends on how

quickly our field staff can deal with the problem.

Last year, over 83% of our customers affected

by faults had their electricity supply restored

within three hours and this includes the effect of

the Christmas storm. Without the effects of the

storm, the underlying figure of 89.4%

shows a good performance during normal

day-to-day conditions.

## Manweb power warden scheme

One initiative we are trying with local

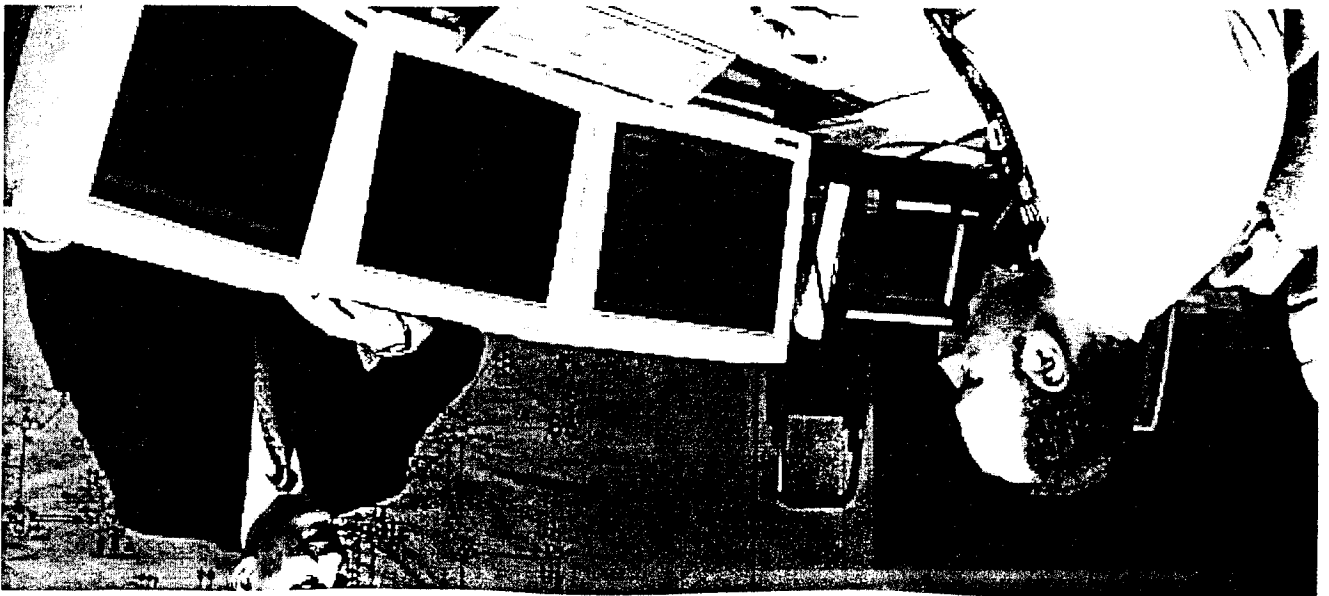
community and parish councils in north

Shropshire will help us improve

communications and customer service.

Under the Manweb Power Warden Scheme,

community representatives have volunteered to



work closely with us and Shropshire County

Council's Emergency Planning Officer.

These wardens will become the contact point

of their community if there is a loss of

electricity supply in severe weather and they

will have direct access to our emergency team

at Wrexham. If this pilot scheme is successful

we aim to extend it into other communities.

### 'TRIP' project

We are also making a substantial investment in

advanced computer systems to improve our

fault handling. The project is named after the

three related computer systems known as

TroubleCall, ICOND and Prosper (TRIP).

TroubleCall manages customer calls by

establishing network links to give an estimation

of the extent of a fault. Single losses of supply

need the services of an electrician whereas

widespread loss of supply may need linemen

or engineers, or both.

TroubleCall helps us send the correct repair

crews to the fault.

We have developed a new computer system,

ICOND (Integrated Control and Operation

Network Diagram) which links each customer

to the high-voltage substation providing their

electricity supply. The computer shows the

supply network displaying the status of the

system and all the alarms we receive from our

substations. The information supports

TroubleCall by helping us to quickly identify the

faulty sections of our network. This new

system works with the existing Network

Management System which provides remote

control of high-voltage switches at around 600

substations throughout our network.

Our faults database, Prosper, improves our

ability to target our initiatives at areas with

unreliable supplies. All network faults are

logged in this computer system and data

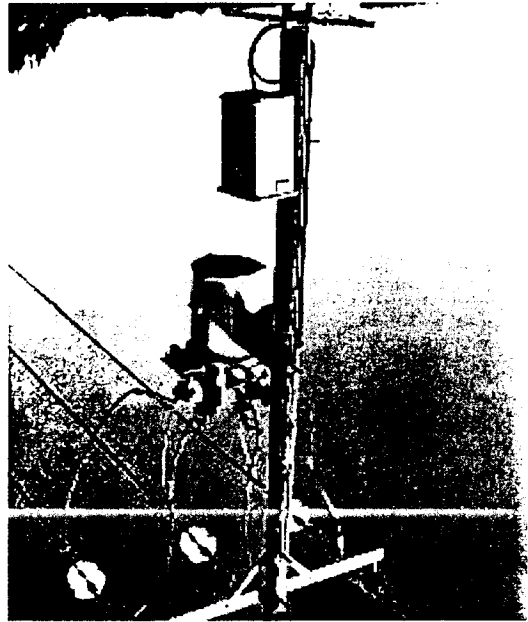
analysis identifies the worst served networks

for improvements.

These projects will begin delivering greater

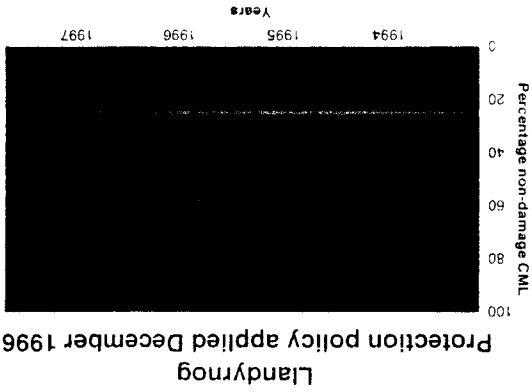
improvements to the reliability and quality of

supply to our customers early in 1999.

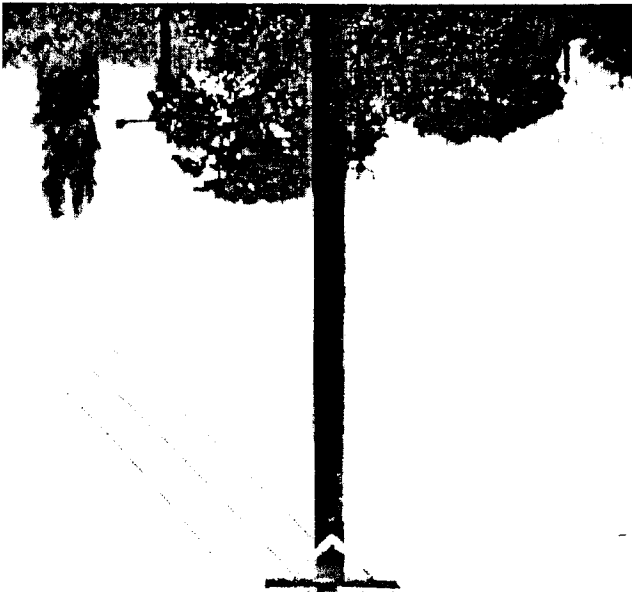


**Overhead line protection policy**

We have improved 110 circuits on our 11,000 volt system, supplying approximately 48,000 customers, to the Overhead line protection policy which aims to reduce losses of supply due to faults. The policy co-ordinates recent technological advances in overhead line protection equipment to the benefit of our rural customers. Overhead lines often experience a temporary fault, perhaps due to lightning, birds or windblown debris. Older protection systems would disconnect the line, even though they were not damaged, until our staff arrived to switch the line back on. The new equipment includes automatic reclosing circuit breakers and they have improved the reliability of supplies to rural customers by removing most of these long disconnections.

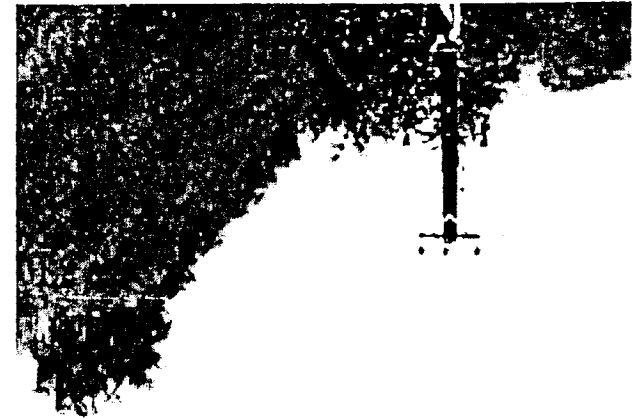


We have already identified performance improvements in those circuits first upgraded at the end of 1996. The graph shows the improvement in CML due to non-damage faults after we applied the overhead protection policy. This program will continue in 1998/1999.



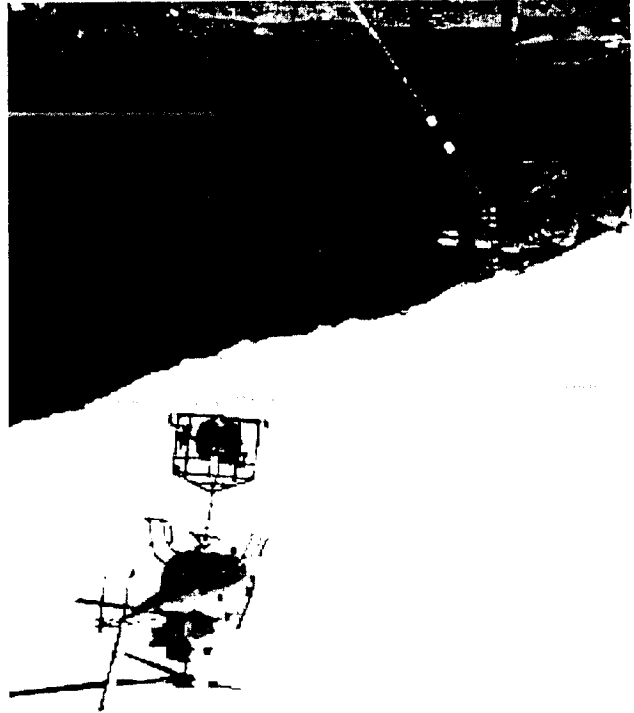


Most of our existing 11,000 volt lines were built between 1950 and 1960 and the line strength was not designed to cope with the storms of recent years. As we rebuild our overhead lines, this policy will greatly improve our network performance in severe weather. However, the stronger construction lines will not completely remove the possibility of damage from hurricane force winds or windblown debris. The programme will take many years to complete and we will ask the Office of Electricity Regulation (OFFER) to agree to its future funding. In 1997/1998, we rebuilt or refurbished more than 660 kilometres of 11,000 volt overhead lines in areas including Gwyddelwern, Liangefni and Prees. The trial which we carried out last year involving 11,000 volt covered conductor lines has been successful and this type of line design is included within the reconstruction policy. We will use it in selected areas where there is a clear need, for example, woods, forests and river crossings. Pages 18 and 19 include some of the circuits which will benefit from this policy.



### Reconstructing overhead lines

We developed the overhead line reconstruction programme from our analysis of system failures during the storms of November and December 1996. The events of Christmas 1997 reinforced our belief that we are adopting the correct policy.



## Low-voltage overhead line

reconstruction

In 1997/1998, we rebuilt or refurbished more than

20 kilometres of low-voltage overhead lines within villages. Locations include Marchwiel, Grestford

and Minera. In storm conditions, the number of low-voltage overhead line faults is a lot more than

those of high-voltage lines. The effect of storms shows that some lines withstand severe weather

better than others. Aerial bundled conductor lines perform much better than open-wire systems and

this lesson has been taken on board.

During 1998/1999, we will carry out low-voltage reconstruction work in several villages including

Deinolen, Brymbo and Beddgelert.

The programme to rebuild overhead lines to

improve our customers' quality of supply

depends significantly on landowner permission

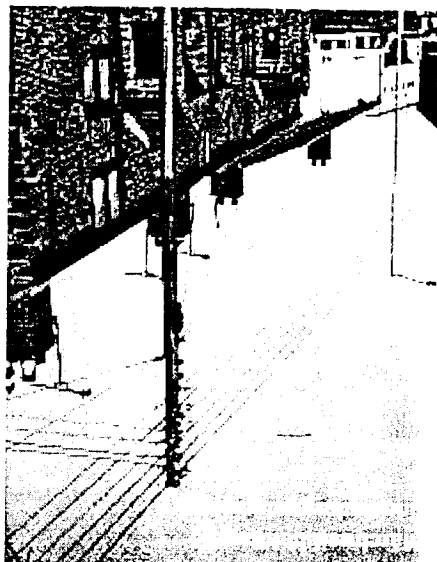
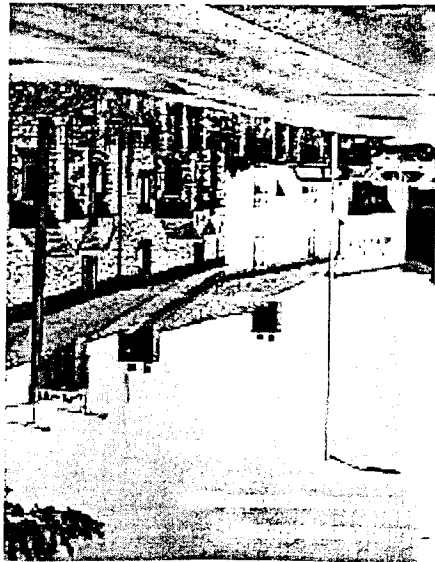
and planning authority approval. Progress can

often be held up by negotiations with landowners

for replacing routes and for land access. We

continue to try to find appropriate cost-effective

methods to improve the quality of supply to our



## Automation

rural customers while dealing with the needs of landowners and local environment.

We supply rural villages, often far from our main

substations, by an 11,000 volt overhead line.

incidents on the high voltage lines which cause

damage to our equipment can result in the supply

to the village being lost until staff arrive to

isolate the problem and restore supplies.

However, many villages have an alternative

supply available in the form of a second

high-voltage overhead line. This system detects a

loss of supply to the village and, having checked

that the incident is not within the village network,

signals to pole top switches to operate and

restore supply to the village. This takes 30 to 60

seconds compared to the 2 hours it would take

for our staff to carry out the work on site.

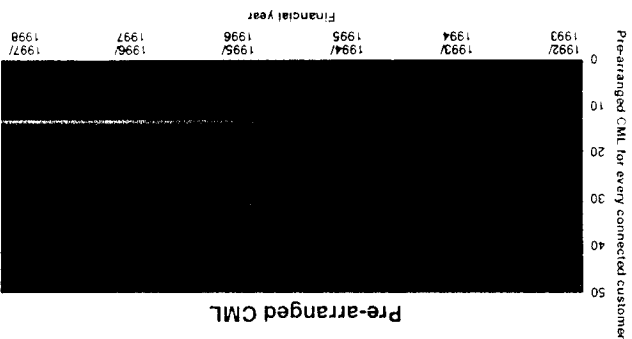
Technical difficulties prevented progress on our

automation proposals for 1997/1998. An

automation programme begins in 1998/1999 and

the villages targeted include Trelewyd and

Glan Conwy.



Pre-arranged CML

Manweb and ScottishPower lead the way in applying outage-free techniques for live work on the 11,000 volt overhead line system. We introduced the techniques in 1993 as part of our policy to improve our service by avoiding having to disconnect customer supplies for routine maintenance work. This has resulted in a drop of 73% from 1992/1993 figures to 12.6 minutes, due to planned interruptions. The downward trend continues as shown in the graph. Our increased use of generators also reduces the interruption of supply due to our routine work.

**Planned work**

Transients are short-term supply interruptions lasting less than one minute but usually for 10 seconds. Interruptions are caused by the operation of automatic switches on the 11,000 volt network which disconnect faulty lines. After a suitable time intended to allow the cause of a transient fault to clear, the switch closes automatically to restore supply. More than 60% of incidents on 11,000 volt overhead lines cause no damage to our equipment and allow us to quickly restore supplies. We can pick up limited data on transient interruptions from a System Control and Data Acquisition (SCADA) system recording switch operations in our main substations. Some transients on the network are protected by pole-mounted switches which are distant from our

**Transients**



main substations. So that we can get accurate data about customers affected by these

transients we have installed power outage

detectors (POD) in some customers homes for a

trial. These devices detect loss of supply and

report it through the customer's phone line to a

central computer system in our Wrexham office.

The computer system provides a useful database

that analyses circuit performance for both

long-term and short-term interruptions.

Some customers have helped us with the trials

but we are aware some customers may resist if

we install such devices on a wider basis. There

have also been technical problems with the new

equipment and the connections we need within

the customer's home. As an alternative, we are

developing an expert system to give the same

information on transients using a monitoring

technique that we already use for monitoring the

quality of power.

We will report the results of these developments  
in future issues of our quality of supply reports.



electronic devices should ask for guidance from

equipment suppliers on what voltage dips the

equipment can ride-through and how it should be

protected.

Voltage dips particularly affect our major process  
and service industry customers who are

concerned about losing many hours of production  
because of the effect of supply disturbances

which last less than one second. The Manweb

area has one of the highest concentrations of

manufacturing industry in the UK. To make sure

we detect the cause and effect of voltage dips,

some of which happen outside our area, we have

created a network of power-quality monitors.

Our monitoring equipment produces power-quality

reports that show how many voltage dips

happen, how long they last and how severe they

are. We use these to make sure we deliver

high-quality supplies and to help customers to

understand their own protection needs. We

expanded the network coverage during

1997/1998 and continue to do so.

## Power-quality monitoring

Voltage dips happen on all power systems

because of system incidents, for example cable

damage and lightning. Computers, process control

equipment and power electronics have made

customers more aware of these voltage dips.

Modern equipment should be designed to

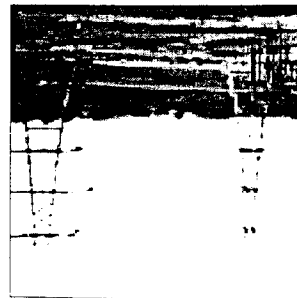
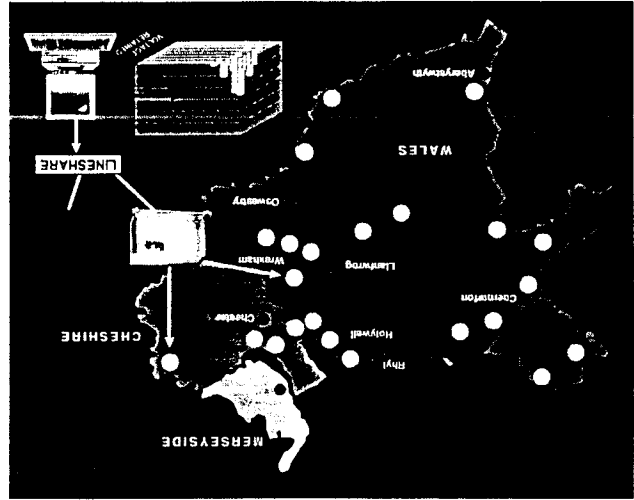
ride-through (carry on working) many of these

disturbances and European law exists to guide

equipment manufacturers in the types of power

quality problems which exist on a public supply

system. Customers who rely on modern



# System performance

## Company targets

Our goal is to deliver excellent customer service and to make sure that our customers receive a continually high quality of supply. We have system performance targets to demonstrate this commitment, the most notable of which are as follows:

- ▶ By the year 2000, we aim to reduce the total underlying CML for every connected customer by 30% compared to 1994/1995 to between 65 and 75 minutes.
  - ▶ By the year 2000, we aim to reduce the total underlying customer interruptions to between 50 and 60 for every 100 connected customers.
  - ▶ By the year 2000, no more than 1% of our customers will experience an average of four long interruptions a year due to unplanned incidents.
  - ▶ From April 1998, we aim to restore supplies to over 90% of our customers within 3 hours.
- These targets are consistent with regional performance in line with the following tables.

## Availability

Region	Customer minutes lost for every connected customer by the year 2000
Merseyside	10 to 12
Cheshire	42 to 50
Wales	170 to 200

## Security

Region	Interruptions for every 100 connected customers by the year 2000
Merseyside	7 to 9
Cheshire	35 to 42
Wales	125 to 150

This report shows that we are well on the way to achieving these targets with our system performance continuing the improving trend of previous years. We expect our later investments to carry on delivering improvements to individual areas but as we target the worst performing circuits first, these initiatives will have a smaller effect on company figures.

We will continue to make sure that our customers get the highest possible quality of supply.

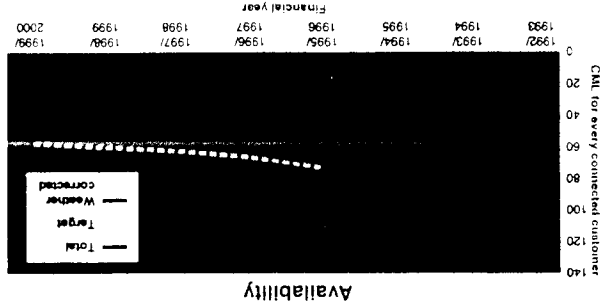
# System performance 1997/1998

## Main highlights

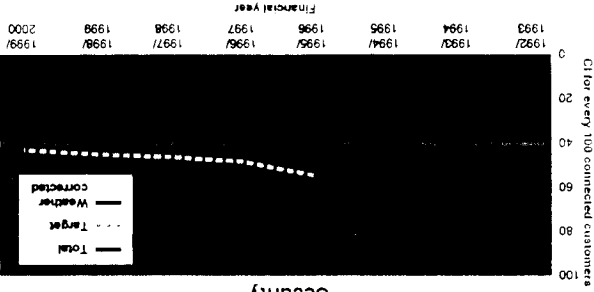
- ▶ Customer minutes lost for every connected customer was 96.7 minutes (42.5 minutes were due to the Christmas storm).
- ▶ Customer interruptions for every 100 connected customers were down 9% on 1996/1997 from 57.2 minutes to 51.9 minutes.
- ▶ Pre-arranged customer minutes lost for every connected customer was down 22% on 1996/1997 from 16.1 minutes to 12.6 minutes.

## Availability

Over the last five years the underlying availability of supply has improved by 48%. The following graphs show actual figures and also the underlying performance where the effects of severe weather are not included. This graph



## Security



## Security

Over the last five years the effect on the underlying security of supply, measured in CI, has improved by 32%. The graph shows the improvement we have made and demonstrates our underlying performance is near the lower limit of our year 2000 target.

shows the improvement and that our underlying performance is below the lower limit of our year 2000 target. Whilst we continue to focus on cost-effective CML reductions, the emphasis of our work is now shifting towards improving our network to cope with severe weather. This is being achieved by our reconstruction policies described earlier in this report.





staff were repairing faults, compared to the 61

normally on standby duties.

Our Call Centre handled over 70,000 calls during the next four days and our response was

hindered by a failure to a main British Telecom

system which prevented us from receiving many

calls in the early part of the storm. Many of our

staff gave up their Christmas holiday to respond

to the emergency.

Our emergency procedures had been tested

during an exercise in November and that

rehearsal was beneficial.

Most of the faults were due to falling trees and

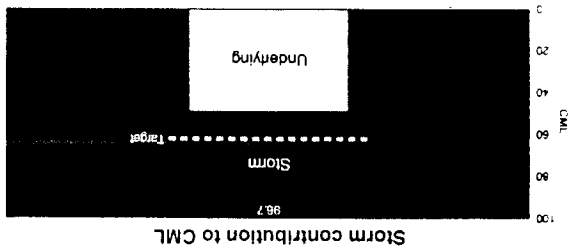
we are continuing to have discussions with

environmental agencies and landowners about

programmes to clear trees in order to reduce the

potential disruption to electricity supplies in any

future storms.



## Christmas hurricane

Weather reports on Christmas Eve had predicted

gusts of wind of 45 to 55 mph but later this was

amended to the strength of a hurricane.

However, by then, the storm had already struck

and was wreaking havoc on the overhead line

system with gusts of over 100mph.

In total, more than 115,000 customer

interruptions happened during the storm. At the

peak of the storm in the early evening of

Christmas Eve, over 45,000 customers were

without power. By midnight on Christmas Day,

that figure was reduced to around 11,000 and to

around 3,000 by midnight on Boxing Day. We

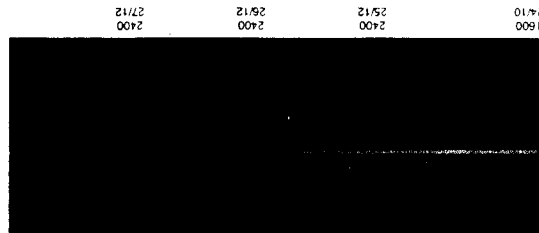
drafted in extra staff from across the UK on

Christmas Day to add to the Manweb staff who

responded superbly to the emergency. At the

height of the repair work, over 600 operational

Customers of supply - Thousands







### Voltage complaints

Domestic customers make up most of our 1.38 million customers and we deliver the supply at 230 volts. European laws require this voltage to be between minus 6% (216.2 volts) and plus 10% (253 volts). We design our networks to maintain supply voltage within this range under normal circumstances. However, for example due to increased power demand on our network, customers may complain to us about problems related to voltage.

During 1997/1998, we investigated 788 complaints. We found 351 were valid and took action to sort out the problem. To make sure we deal with these problems quickly we have a target to sort out 95% of confirmed voltage complaints within six months. During 1997/1998 we dealt with 97.1% of confirmed problems and we are now correcting the rest.

From 1998/1999, we have agreed with OFFER to tighten our target so that we sort out 100% of any complaints within six months and we intend to improve our performance further and meet this target.

The storm accounted for 44% of our annual CML and 14% of Customer Interventions. The effect of the storm is removed from the figures, the underlying CML figure at 54.2 minutes is the lowest we have ever achieved.

The fault statistics show the enormous task facing our emergency repair crews and helps to show why it took up to four days to restore supplies in some instances. Finding and repairing the 11,000 and 33,000 volts faults would restore the power to most of our customers but with more than 2000 faults on low-voltage distribution lines, we had to find and repair each one before all customers were restored.

Voltage	CML	CI	Faults
33,000 volts	1.4	0.9	14
11,000 volts	36.5	6.9	489
Low voltage	4.5	0.2	2000 plus
<b>Total</b>	<b>42.4</b>	<b>8</b>	<b>2500 plus</b>

The actual number of incidents on the low-voltage network was more than 2000 although, for reporting purposes, faults were grouped together for computer processing and the number of faults entered to the system was 584.

# Regional performance

## Availability

For the second year in 1996/1997, Merseyside Region was acknowledged by OFFER as providing the most secure and available supplies in the UK.

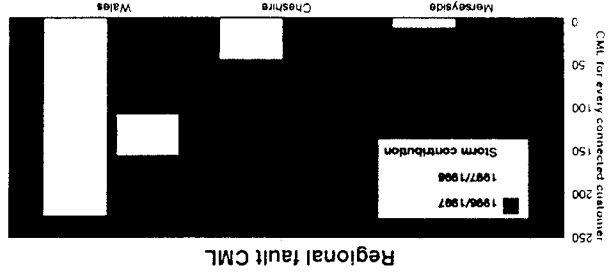
The Merseyside Region provides very secure and reliable supplies to more than 500,000 customers and has been recognised by OFFER as

providing the most reliable supplies of any operating area in the UK.

The customer minutes lost for every connected customer in Wales Region would have shown a

17% improvement on 1996/1997 figures had it not been for the Christmas storm which can be

seen from the chart. The storm accounted for 60% of that region's yearly CML.



**Security**  
Generally, our rural customers are least well served and this is demonstrated by the results

Wales Region achieved a 25.6% reduction in pre-arranged

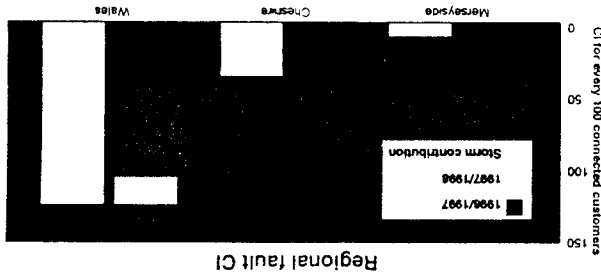
customer minutes lost between 1996/1997 and 1997/1998.

for the mostly rural Wales Region. It is for this

reason that we target the majority of our

investments which are aimed specifically to

improve the quality of supply in the rural areas.



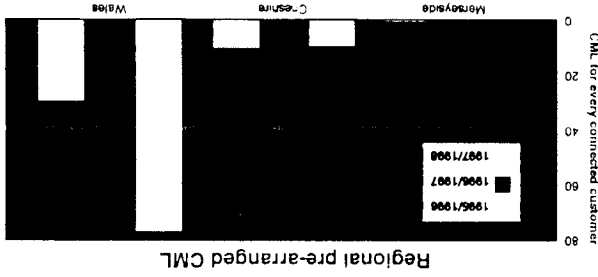
## Pre-arranged CML

The improvement due to our investments in

outage-free working can be seen in the graph.

The Wales Region shows a 25% reduction in CML

due to pre-arranged supply interruptions.



Update on 1997/1998 quality of supply circuits

Region	Circuit	Proposed work	Status
Wales	Ederm, Morta Nefyn, Nefyn	Automatic reclosing system	Complete
Wales	Grig Fawr, Bryniau, Gwaenyssgor	Automatic reclosing system	Complete
Wales	Llanasa, Trelogan, parts of Trelawnyd and Wittford	Refurbishment and Automatic reclosing system	Complete
Wales	Carmel, Talysarn	Automatic reclosing system	Complete
Wales	Hope, Caerwile, parts of Penyford	Automatic reclosing system	Complete
Wales	Llanddiniol, Llangwryfion, parts of	Refurbishment and Automatic reclosing system	Refurbishment Complete. OHP scheduled July 98.
Wales	Caerfellio, Bryngwran	Automatic reclosing system	Complete
Wales	Llywernog, Ponteryyd, Ystumteun, Ysbyty Cynfyn, Devils Bridge, Pwll Peirian, Cwmystwyth, Chapel Trisant, Mynydd Bach	Refurbishment and Automatic reclosing system	Complete
Wales	Gwespwr, Pen-y-Ffordd, Ffynonngroew, Mostyn, Glan-y-Don, Rhewl Mostyn	Refurbishment and Automatic reclosing system	Complete
Wales	Abersoch, Mynytho	Refurbishment and Automatic reclosing system	Complete
Wales	Whitchurch, Broughall, Ash, Ightfield, Calverhall, Cloverley, Lees Head	Automatic reclosing system	Complete
Wales	St Martins, Gobowen, Weston Rhyn, Westons Rhyn, Chirk Bank	Refurbishment and Automatic reclosing system	Complete
Wales	Llanillin, Llangedwyn, Llanrhaeadr	Refurbishment and Automatic reclosing system	Complete
Wales	Rhoslan, Bryncir, Garn Dolbermaen	Refurbishment and Automatic reclosing system	Complete
Cheshire	Scholar Green	Automatic reclosing system	Complete
Cheshire	Wincham, Pickmere	Automatic reclosing system	Complete
Cheshire	Whitegate, Marton	Automatic reclosing system	Complete
Wales	Llanaber, Talybont (Gwynedd)	Automatic reclosing system	Complete
Wales	Dolgarrrog, Eglwysbach, Taly-Cain, parts of Tyn-y-Groes and Glan Conwy	Automatic reclosing system	Complete
Wales	Parts of Llanannan, Blychau, Nantglyn, Groes, Denbigh Moors	Automatic reclosing system	Complete
Wales	Pant-y-mwyn, Cilcain, Hendre, parts of Loggerheads	Automatic reclosing system	Complete
Wales	Llangaflo, Brynisiemyn, Llanedon, Llanddaniel	Automatic reclosing system	Complete
Wales	Cefnmeinadog, parts of St. Asaph, Trehan, parts of Denbigh	Automatic reclosing system	Complete
Wales	Ruthin, Rhewl, Llanrhaeadr	Automatic reclosing system	Complete
Cheshire	Norley & Hatchmere Villages	Automation	Complete

# Areas we will target in 1998/1999

ScottishPower, B. Moir, p.20  
 Ex.SP\_(BM-5), No.98-2035-04

Region	Circuit	Customer	Customer	Number of	Proposed work
		hours lost	interruptions	incidents	
Cheshire	Bretton Heath	1204	228	2	Refurbishing an overhead line and installing an automatic reclosing system
Cheshire	Moulton, Davenham	2509	1297	2	Refurbishing and underpinning an overhead line and installing an automatic reclosing system
Cheshire	Lostock, Wincham	1085	816	1	Refurbishing an overhead line and installing an automatic reclosing system
Cheshire	High Legh, Arley	765	414	3	Installing an automatic reclosing system
Cheshire	Ashley, Tatton	1392	689	9	Installing an automatic reclosing system
Cheshire	Kinsley Heath	1260	766	7	Installing an automatic reclosing system
Cheshire	Audlem	663	446	3	Installing an automatic reclosing system
Cheshire	Hankelow	425	376	3	Installing an automatic reclosing system
Cheshire	Buertton, Bridgemere,	213	150	2	Installing an automatic reclosing system
Cheshire	Doddington	935	336	4	Installing an automatic reclosing system
Cheshire	Tetton, Warringtonham	1437	702	3	Installing an automatic reclosing system
Cheshire	Wettenhall, Church Minshull	177	128	4	Installing an automatic reclosing system
Cheshire	Aston	576	509	1	Installing an automatic reclosing system
Cheshire	Clotton, Hargrave	866	774	2	Installing an automatic reclosing system
Cheshire	Eton, Leighton	637	181	2	Installing an automatic reclosing system
Cheshire	Sandbach	845	571	1	Installing an automatic reclosing system
Cheshire	Leighton, Warringtonham,	599	436	5	Installing an automatic reclosing system
Cheshire	Church Minshull	702	447	2	Installing an automatic reclosing system
Wales	Gelli Gynan	845	305	6	Installing an automatic reclosing system
Wales	Graig Quarry	305	447	2	Installing an automatic reclosing system
Wales	Brymbo	3044	2440	2	Reconstructing a low-voltage overhead line
Wales	Hope, Penyffordd,	5744	508	3	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Abermorddu, Gwyddelwern	679	88	2	Installing an automatic reclosing system and automatic reclosing system
Wales	Cross Lanes	1076	262	4	Installing an automatic reclosing system
Wales	Eyton	666	83	2	Installing an automatic reclosing system
Wales	Padeswood	1601	819	4	Installing an automatic reclosing system
Wales	Maenan Abbey	1261	1052	2	Installing an automatic reclosing system
Wales	Taly-Bont	9440	5206	8	Installing an automatic reclosing system
Wales	Pentfoelias, Penmachno,	2786	1247	8	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Bryn Rhedyn, Crows Nest, Hendre	6874	437	3	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Gellifor, Plas yn Rhos	4294	2306	2	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Greenfield, Holywell, Millwr	4623	1331	6	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Egthwysbach, Graig, Tal y Cafn				

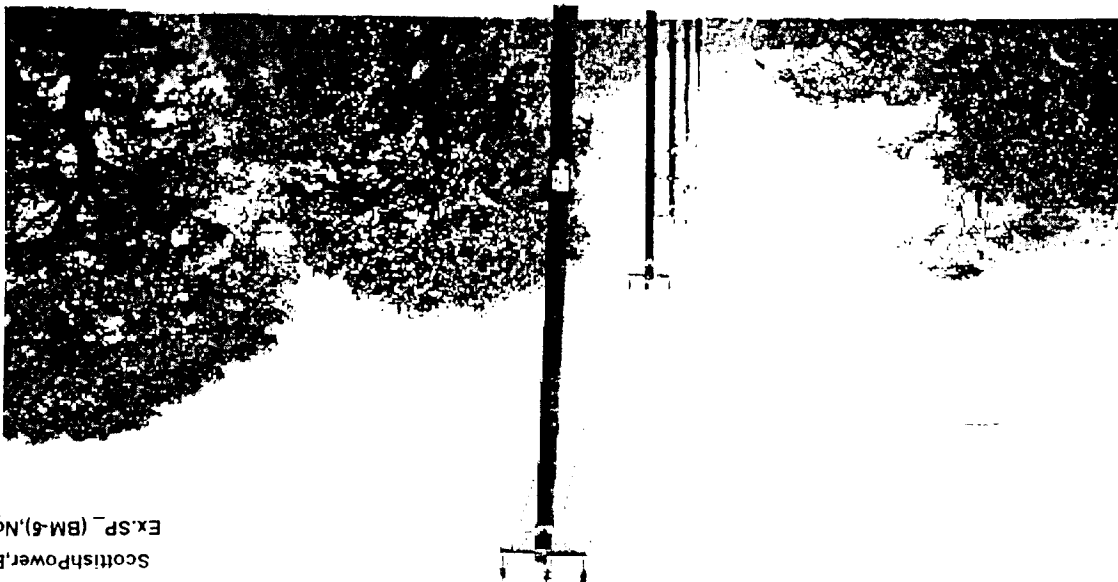


Figure 1: A utility pole with multiple cross-arms and insulators, standing in a wooded area with trees in the background.

Region	Circuit	Customer hours lost	Customer interruptions incidents	Number of Proposed work	Description
Wales	Llanhaearn, Rhewl	4081	576	9	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Kerry	2437	1336	8	Installing an automatic reclosing system
Wales	Rhewl	1831	353	7	Installing an automatic reclosing system
Wales	Ruthin, Lanferres	1251	261	6	Installing an automatic reclosing system
Wales	Efailnewydd, Rhyd y Clafdy	3144	1081	5	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Rachib, Llanllechid	14619	1248	4	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Bethesda	4833	3474	5	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Tregarth, Sling, Rhwlas	3801	3313	4	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Braichmelyn, Gerlan, Fachwen, Deiniolen	8948	1401	3	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Rhosyfran, Rhospordfan, Groesion	3649	1666	4	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Llanellian	2927	1800	2	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Amwch	2947	1998	4	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Nantlle, Carmel	2845	1942	6	Reconstructing an overhead line and installing an automatic reclosing system
Wales	Mona	1085	816	1	Installing an automatic reclosing system
Wales	Deiniolen	684	505	3	Reconstructing a low-voltage overhead line
Wales	Beddgelert	1407	1672	2	Installing an automatic reclosing system
Wales	Bryncrug				Installing an automatic reclosing system

# System performance statistics

Table 1 Customer numbers			
Merseyside	Cheshire	Wales	Company
506,000	484,000	392,000	1,382,000
Number of customers			
Table 2 Security Number of supply interruptions for every 100 connected customers due to the following.			
4.86	5.42	7.88	5.91
0.29	14.59	66.80	24.17
4.29	7.02	19.16	9.46
0.09	2.95	9.96	3.89
4.67	24.56	95.92	37.52
1.04	7.56	17.89	8.10
10.57	37.54	121.69	52.00
0.11	5.02	12.47	5.34
10.68	42.56	134.16	57.34
0.21	2.93	25.38	8.30
10.47	39.63	108.78	49.04
Total corrected for severe weather events			
Correction for extreme weather events			
5.80	7.10	23.80	11.38
0.70	22.00	159.90	53.35
6.00	8.50	20.60	11.01
0.10	2.00	10.40	3.69
6.80	32.50	191.00	68.05
1.10	2.70	11.40	4.58
13.70	42.40	226.10	84.07
0.20	10.00	31.90	12.63
13.90	52.30	258.00	96.70
0.60	10.60	135.90	42.50
13.30	41.70	122.10	54.20
Total corrected for severe weather events			
Correction for extreme weather events			
0.93	1.84	5.48	2.54
Confirmed number of voltage complaints for every 10,000 connected customers			
Table 4 Voltage complaints			
Confirmed number of voltage complaints for every 10,000 connected customers			

# Capital Spending

## Actual and planned investment for a five-year period (1995/1996 to 1999/2000)

In October 1995, OFFER announced that, in setting our price control, they had assumed we would need to spend £400.7m on the distribution network during the five years from 1995/1996 to 1999/2000.

## OFFER's published price control assumptions (1997/1998 prices)

Load related	£163.6m
Non-load related	£238.6m
<b>Total</b>	<b>£402.2m</b>

By integrating Manweb into the ScottishPower group we have already changed how we spend our capital to provide better outputs and delivered a range of efficiency improvements to benefit our customers. These are as follows:  
We have:  
▶ developed new, more cost-effective designs, materials and techniques;  
▶ installed new information technology systems

which provide more detailed operational information about our network and allow us to prioritise and target investment more effectively; and  
▶ improved work management systems and working practices.  
We will continue to improve efficiency and we have planned further savings for the future. We will achieve:

- ▶ cost savings through buying goods at better prices;
- ▶ cost reductions by using computer technology and improving our working methods as much as possible; and
- ▶ targeted investment by detailed monitoring of the condition and performance of our assets.

A part of the non-load related spending is specifically available for initiatives to improve power quality. As a result of our efficiencies, we have been able to spend more on initiatives to improve power quality than was allowed by OFFER in the price control review.

## Reasons for investing in the network

► Load-related spending is necessary to meet

customer requests for:

- new connections;
- increased supply; and
- extra power demand which requires the distribution network to be reinforced.

► We base our predictions for future spending on

local economic trends, customer requirements and movements in the areas of changing

demand for power. This demand may not

happen in the future and our predictions depend

on constant review and updating.

► Most of the non-load related investment

programme is directed towards maintaining the distribution network. We need to spend money

in order to maintain safe supplies to customers

and meet our obligation to make sure our

staff and the public are safe. We will also meet

environmental law.

## Manweb's network capital spending (1997/1998 prices)

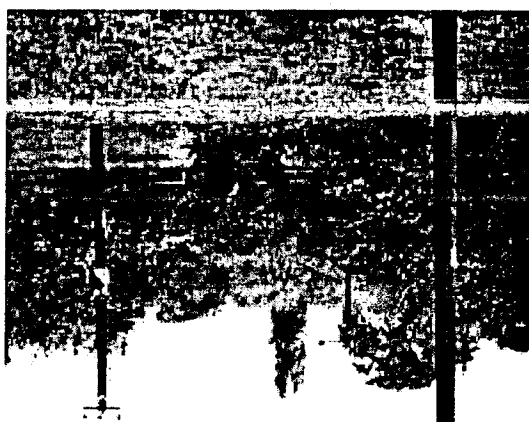
1995/1996/1997/1998/1999/2000	Planned spending	Actual spending	Total
£23.3m	£30.4m	£37.3m	£31.1m
£38.6m	£34.6m	£36.0m	£40.0m
£191.2m	£42.0m	£40.0m	£191.2m
£61.9m	£65.0m	£73.3m	£71.1m
£345.2m	£73.9m	£73.9m	£345.2m

Load related £23.3m £30.4m £37.3m £31.1m £154.0m  
 Non-load related £38.6m £34.6m £36.0m £40.0m £191.2m  
 Total £61.9m £65.0m £73.3m £71.1m £345.2m

During 1997/1998 we increased non-load related

investment which showed our commitment on

quality of supply improvement initiatives.



This investment has clearly improved our

performance and this is demonstrated throughout

this report.

We have continued to invest in the Network

Management System and the information provided

allows us to manage our assets and spending on

quality of supply initiatives effectively.

Against the background of cost savings, we have

set our capital spending projections as follows.

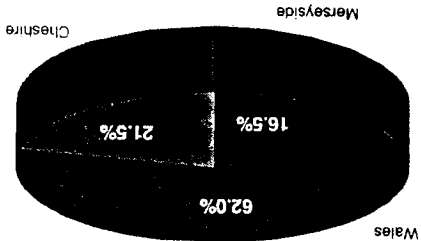


## Our achievements in 1997/1998 and the work planned during 1998/1999

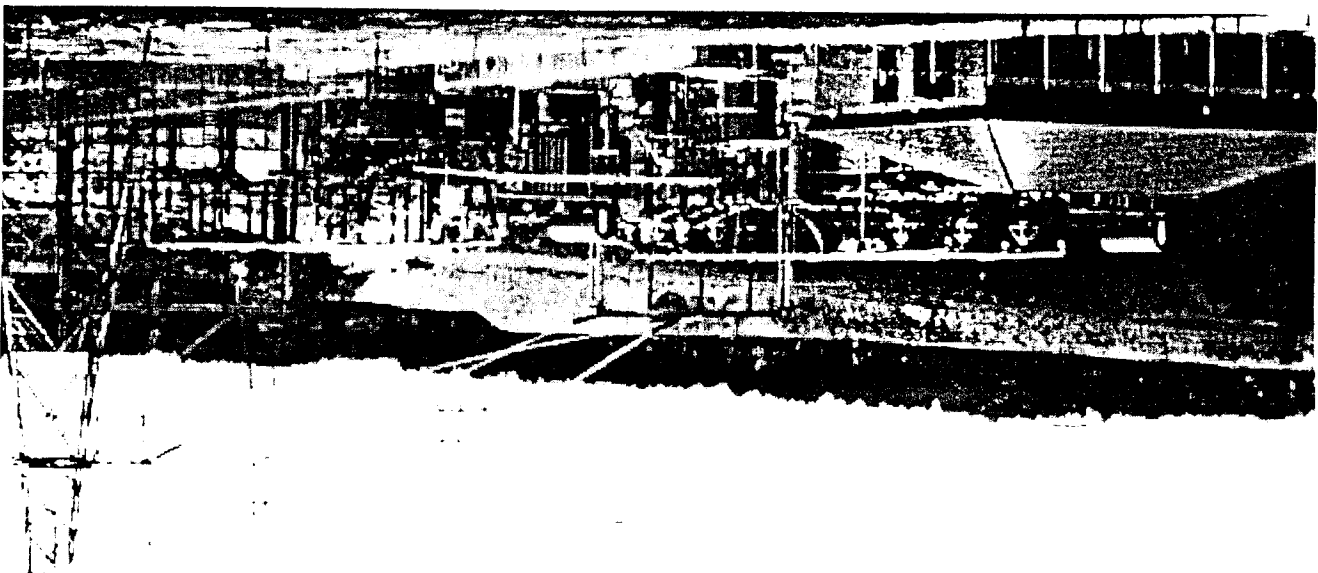
- ▶ replaced or refurbished more than 9,600 domestic services;
  - ▶ replaced more than 7,600 domestic cut-outs; and
  - ▶ invested in environmental improvements and became the first electricity company to receive an award for environmental management systems.
- in 1997/1998 we have made significant progress with our programme of work to replace inadequate network assets which are no longer reliable. During 1997/1998 we:
- ▶ invested more than £100,000 every day to make sure that we maintained supply to our existing customers;
  - ▶ provided more than 12,100 new housing connections;
  - ▶ provided more than 350 industrial and commercial connections;
  - ▶ installed more than 170MVA of extra transformers to meet increased requirements for customer demand;
  - ▶ rebuilt or refurbished more than 50km of 33kV overhead line;
  - ▶ rebuilt or refurbished more than 660km of 11kV overhead line;
  - ▶ rebuilt or refurbished more than 100km of LV overhead line;
  - ▶ rebuilt or refurbished more than 20km of village LV overhead line;

This chart shows the capital spending profile for each customer across the three Manweb Regions and our commitment to investments for improving the quality of supply in our rural areas. We will continue this programme of work during 1998/1999 and we will report on our progress in next year's quality of supply report.

in tables 1 and 2, we show a selection of major projects (each costing more than £100,000) which we completed during 1997/1998 and have planned for 1998/1999.



1997/1998 Non-load capital spending for every customer



**Table 2: Examples of major projects planned during 1998/1999**

Region	Project description
Cheshire	New supply for Bridgewater Paper.
Cheshire	Rebuilding Hartford bulk supply point.
Cheshire	Upgrade the supply to British Gypsum, Runcorn.
Cheshire	New primary substation at Cacao Barry, Chester.
Cheshire	Hooton Park Bulk supply point upgrading.
Merseyside	Rebuilding Widnes, Speke, Halewood, Rainhill 132kV overhead line.
Merseyside	New supply for North West Water, Widnes.
Wales	Rebuilding the 11kV overhead line network in the Gwyddelwern area.
Wales	Rebuilding the 11kV overhead line network in the Llangefni area.
Wales	Rebuilding the 11kV overhead line network in the Preses area.
Wales	Rebuilding Wem 33kV substation.
Wales	Rebuilding Efailnewydd to Pwllheli 11kV overhead line.
Wales	Rebuilding the Legacy to Oswestry 132kV overhead line.

**Table 1: Examples of major projects completed during 1997/1998**

Region	Project description
Cheshire	Rebuilding Hartford bulk supply point.
Cheshire	Upgrade the supply to British Gypsum, Runcorn.
Cheshire	New primary substation at Cacao Barry, Chester.
Cheshire	Hooton Park Bulk supply point upgrading.
Merseyside	Rebuilding Widnes, Speke, Halewood, Rainhill 132kV overhead line.
Merseyside	New supply for North West Water, Widnes.
Wales	Rebuilding the 11kV overhead line network in the Gwyddelwern area.
Wales	Rebuilding the 11kV overhead line network in the Llangefni area.
Wales	Rebuilding the 11kV overhead line network in the Preses area.
Wales	Rebuilding Wem 33kV substation.

**Availability** A measure of the time the supply is not available. This is generally expressed as the average number of minutes for every connected customer the supply is **not** available.

**Automation** The automatic alteration of the system to restore supplies.

**CHL** Customer hours lost

**CI** Customer interruptions

**CML** Customer minutes lost. This is generally expressed as the average number of minutes for every connected customer the supply is **not** available.

**Extra high-voltage (EHV)** Operating at more than 22,000 volts but less than 132,000 volts. This usually refers to 33,000 volts.

**Incident** An event which causes an uncontrolled flow of electrical current followed by supply disconnection.

**High-voltage (HV)** Operating at more than 1000 volts but less than 22,000 volts. This usually refers to 11,000 volts.

**Kilovolt (kV)** 1000 volts

**Load-related work** Necessary work to meet changes in the power needs of a network.

**Non-damage incident** An incident which causes no permanent damage to equipment and so no repairs need to be carried out.

**Non-load related work** Necessary work to keep the network reliable and to improve its performance.

**Outage** A loss of electricity supply.

**Outage free** Methods of carrying out work on 11,000 volt equipment without interrupting supplies to customers.

**Overhead protection policy** Using electronically-controlled links and automatic switches to restore supplies following an incident and, where necessary, disconnect damaged equipment leaving the minimum number of customers without supply.

**Pre-arranged** We use this term to refer to planned interruptions in supplies to customers where we contact the affected customers at least five days beforehand.

**Refurbishment** Replacing equipment which is no longer reliable.

**Security** We use this term to refer to the number of supply interruptions. We usually measure these as the number of supply interruptions for every 100 customers.

**Substation** Premises containing either one or more transformers or switchgear.

**Switchgear** Automatic or manual mechanical devices for controlling the flow of electrical energy into a circuit or item of equipment.

**Transient interruptions** Interruptions to customers supplies which last less than 60 seconds but usually for about 10 seconds.

**Underlying performance** A way of measuring the performance of the system which does not include the effects of exceptionally severe events. This removes the variations caused by severe weather.

**Voltage dip** A sudden, but temporary, lapse in the voltage.

# How to contact us

If you have any questions or comments please contact the

Regional Manager at your local regional office.

To find the correct regional office please refer to the map on

page 1 and write to one of the addresses below.

Manweb plc, Wales Region,

Pentre Bychan, Wrexham LL14 4DU

Manweb plc, Cheshire Region,

Prenton Way, Birkenhead L43 3ET

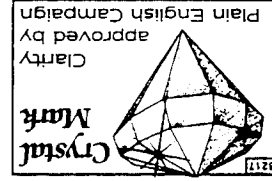
Manweb plc, Merseyside Region,

Lister Drive, Liverpool L13 7HJ

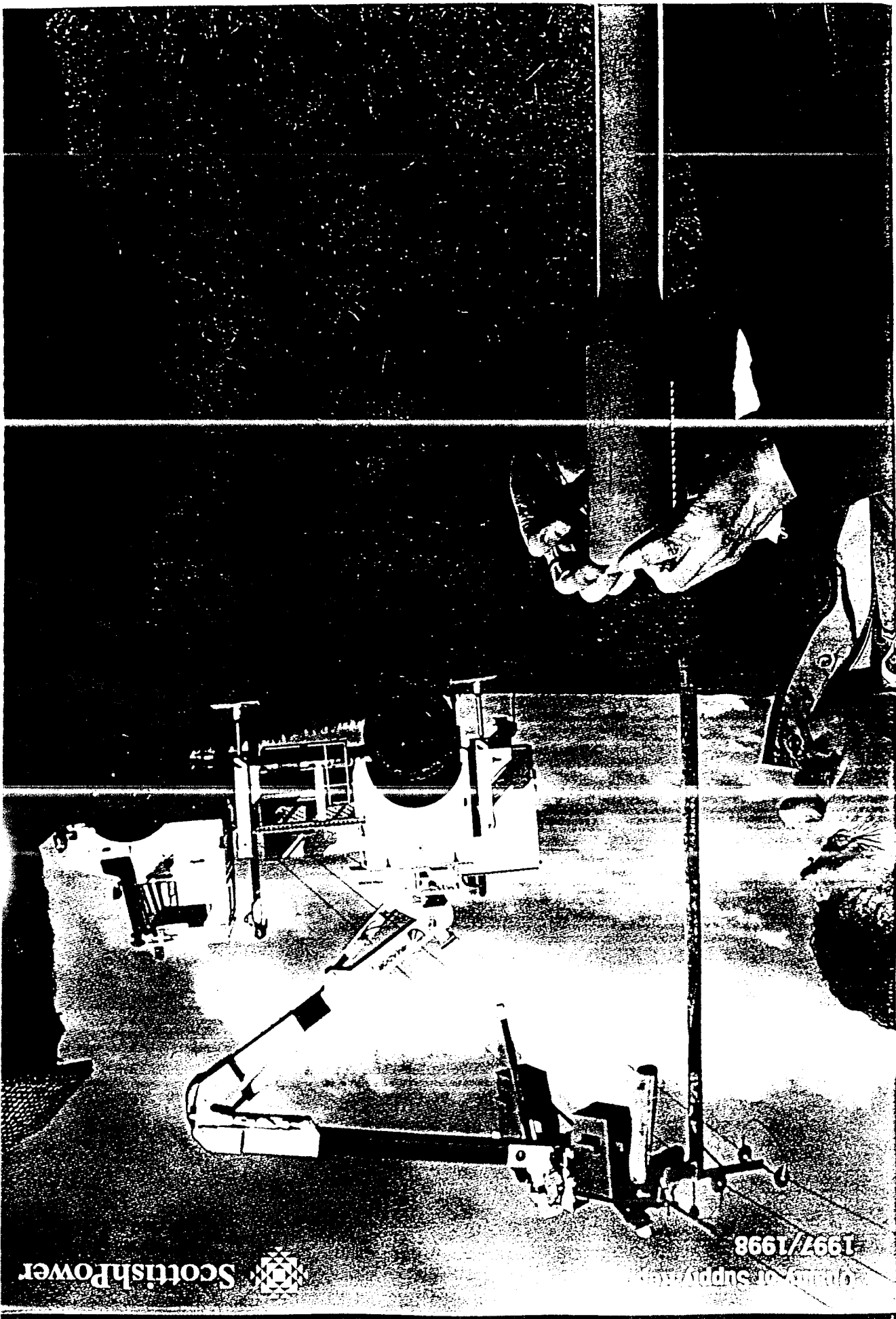
Alternatively contact:

Bill Landels, Managing Director, Manweb plc,

Manweb House, Chester Business Park, Chester CH4 9RF



A summary of this report will also appear on our  
Internet web-site at [www.scottishpower.plc.uk](http://www.scottishpower.plc.uk)



ScottishPower

1997/1998

Company of Supply

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1	Message from Alan Richardson
2	Quality of supply developments
10	System performance
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13	Regional performance
16	System performance statistics
17	Capital spending

# Report highlights

## Company profile

▶ Customer minutes lost for each connected customer (CML) due to pre-arranged interruptions continued to fall to 29% of 1992/1993 figures.

▶ Fault interruptions – we reconnected 88% of customers within 3 hours.

▶ After the December 1996 storm, we rebuilt damaged overhead lines using stronger materials.

▶ In April 1997, we commissioned a new incident recording and customer monitoring system to provide more accurate incident reporting.

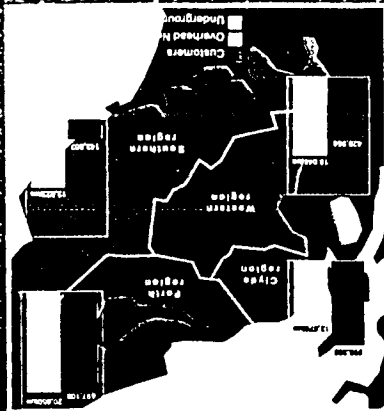
▶ Customer minutes lost for each connected customer (CML) due to pre-arranged interruptions continued to fall to 29% of 1992/1993 figures.

▶ Fault interruptions – we reconnected 88% of customers within 3 hours.

▶ After the December 1996 storm, we rebuilt damaged overhead lines using stronger materials.

▶ In April 1997, we commissioned a new incident recording and customer monitoring system to provide more accurate incident reporting.

of the Clyde and Forth valley to the exposed and sparsely-populated areas of the Borders and Dumfries and Galloway. We are now restructuring our regional boundaries and we have shown details at the end of this report.



Scottish Power Southern Region Manager, Gordon Christie MBE (left of picture), explains five working methods to a Landowner. Gordon Christie received his MBE in the New Year Honours List for his services to customer relations and the electricity industry.

# Message

from

Alan

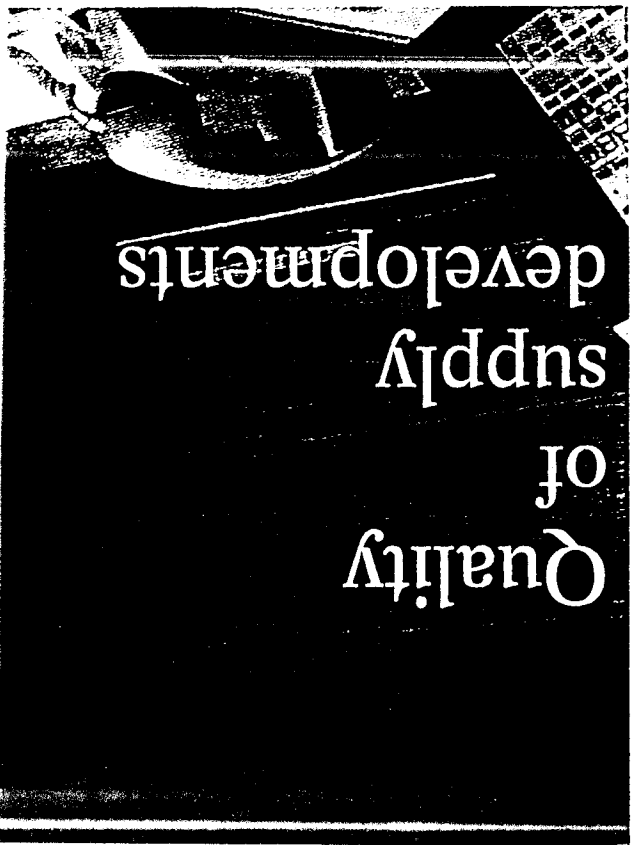
Richardson

Managing Director,

Power Systems.

This fourth 'Quality of supply' report reviews the quality of supply we delivered to our customers between 1 April 1997 to 31 March 1998 and shows our progress of recent years and the improvements we will deliver to our customers by the year 2000. We also examine our past and future capital investments which are aimed at improving the availability, security and quality of service our customers experience. Our aim is to provide a consistently high quality of electricity supply to our customers. By the year 2000, our target is to reduce customer minutes lost for every connected customer (CML) by around 20% from the 1991/1992 levels. Our performance figures for 1997/1998 show that we are progressing towards that target and we will continue to focus on system performance to make sure that we deliver the highest possible quality of supply to our customers. We also aim to deliver excellent customer service. We are committed to improving the reliability of our network and our quality of supply through carefully targeted investments in the distribution system. Much of this investment is targeted towards our customers in the rural areas (the countryside) and our initiatives are described in this report. However, we are upgrading urban networks (towns and cities) with programmes to refurbish buildings and replace switchgear. We have good working relationships with manufacturers and encourage development of equipment and technology to deliver the best possible benefits to our customers at acceptable cost. Early in 1997, we introduced two new computer systems - **Prosper** and **TroubleCall**. This improves our response to a customer's loss of supply and provides accurate data on our network. The data provided by these systems will make sure that our respond efficiently to losses of supply and that our quality of supply improvement programmes are targeted at our worst served customers. This report provides a clear overview of our electricity network operations. If you have any questions or comments about its content, please contact either me or the Regional Manager at your local regional office. You will find details of how to contact us on the back cover of this report.





service we provide to our customers, particularly in emergency situations, and we are looking to best practices.

Since opening the £5m **Power Systems**

**Management Centre (PSMC)** in January 1996,

we have extended the system to our regional

centres to give us greater flexibility in managing

our network. The PSMC includes a control room

with a modern computerised network

management system to control all network

operations and a dispatch centre where

dedicated staff co-ordinate the response of our

emergency repair teams.

How long a power failure lasts depends on how

quickly our field staff can correct the problem.

During 1996/1997, we restored power to 88% of

our customers affected by faults within three

hours, which was more than our target of 80%.

We aim to further improve our performance in

this area and we will continue to improve our

This section describes some developments we are introducing to improve all areas of our service and reliability.

### Market research

Customers tell us through our research that reliability and availability of supply is most

important to them. If their electricity supply is

interrupted for any reason, they expect us to deal

with it promptly. Short interruptions of a few

seconds are inconvenient but most of our

customers prefer them to longer interruptions.

Customers on our urban networks are generally

satisfied with the quality of supply we provide.

### Network management

When power supplies are disrupted, it is essential

that our customers can:

contact us easily;

tell us about their circumstances; and

have information about the action we are

taking.

Our 24-hour service line is available on

0845 27 27 999. Our aim is to deal with calls

quickly and efficiently to make sure that

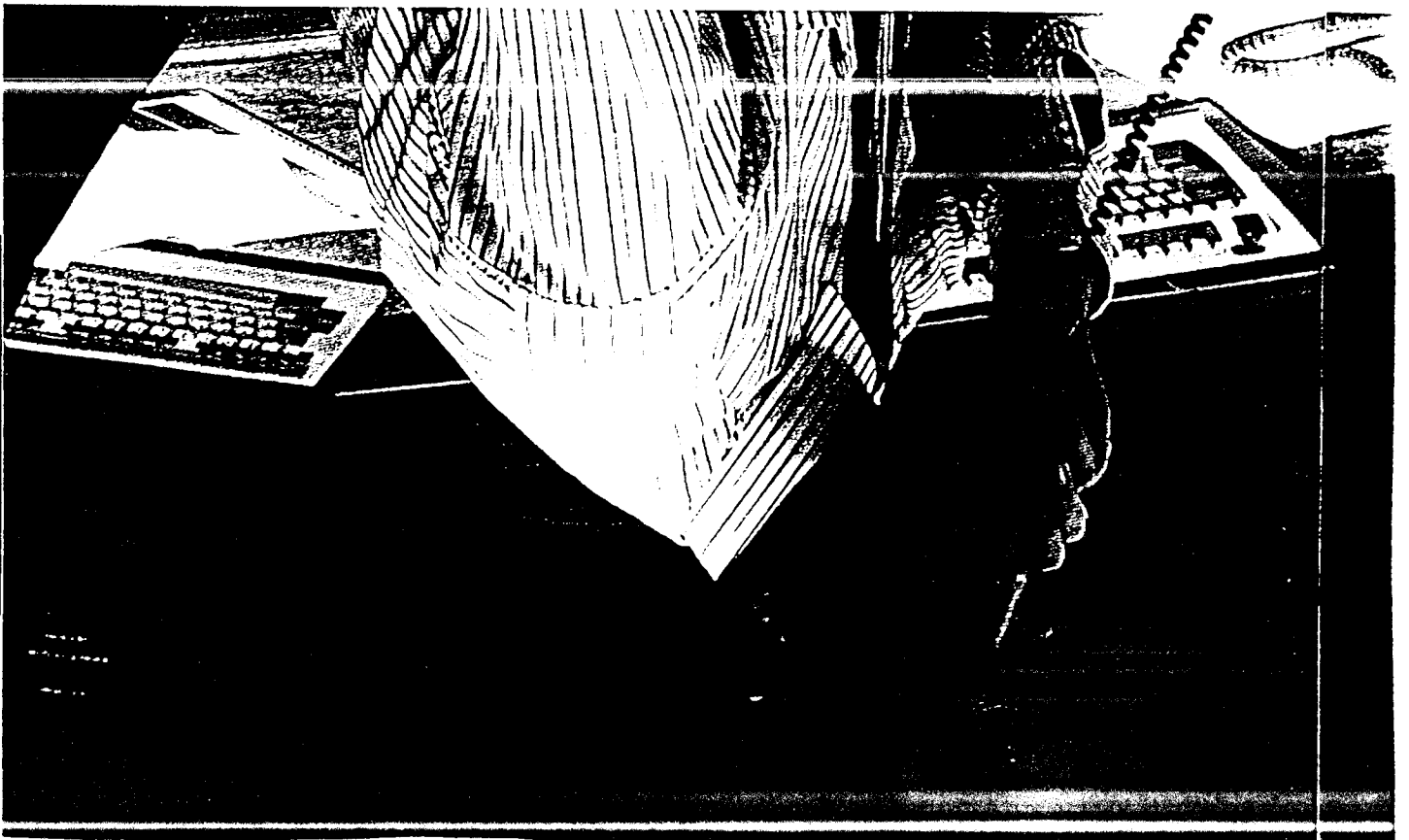
customers are given accurate up-to-date

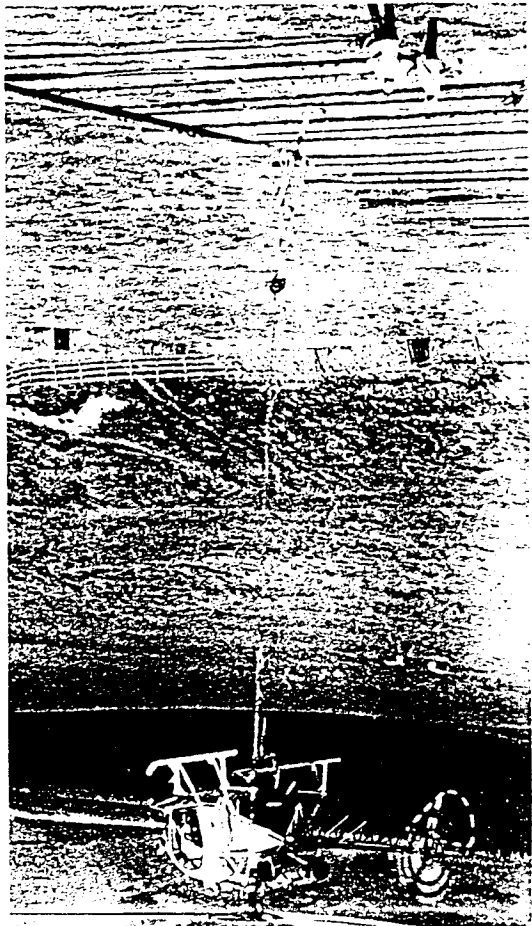
information. We are always reviewing the level of



customer service to make sure that we beat our new target of 85%. To improve our ability to accurately record incidents and identify those customers who suffer repeated interruptions to their supply, we have developed **Prosper**. This is a new incident-recording and customer-monitoring system – at a cost of more than £500,000. We began to use this system at the beginning of April 1997 and the database analysis identifies the worst circuits for network improvements. The system uses accurate and consistent figures to show the number of customers affected by a fault. Before April 1997, the figures we entered into the computer fault-reporting system were our staff's best estimates. The customer numbers being reported now compared to the previous figures show a 21% increase due to the improved reporting systems. This directly affects our company OML figures for 1997/1998.

**Substation automation** System Control and Data Acquisition (SCADA) schemes provide the basis for reporting alarms and remote controlled equipment automatically. Our project to make all major substations in ScottishPower automatic began during 1997/1998 and now 30 substations have this facility. Our Power System Management Centre (PSMC) in Hamilton controls these substations and we aim to complete the remaining 289 sites by the beginning of 1999. Within the first three months of the programme, we have already used this technology to restore supply to more than 3,000 customers, approximately one hour faster than would have been possible without the new equipment. Alarms from the substations alerted us to the customers without power before we received calls at the call centre.

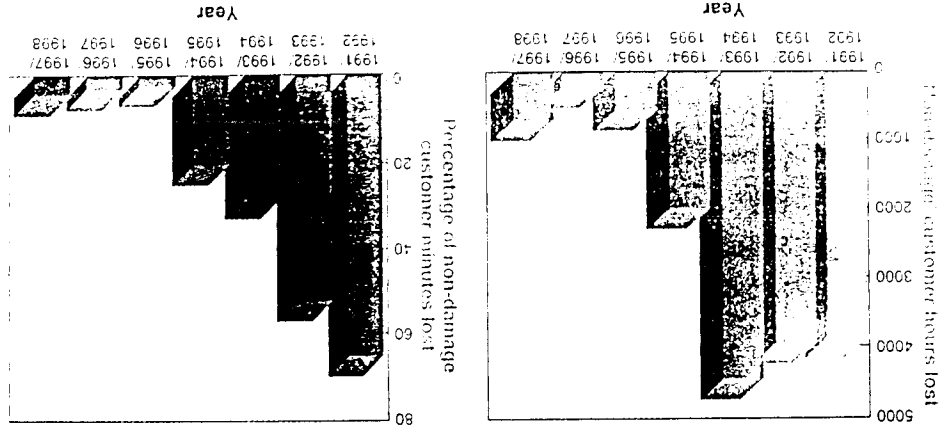




### Overhead line protection policy

The overhead line protection policy, which started in 1993/1994, continues to provide benefits to our rural networks and we have improved 234 circuits throughout ScottishPower. The policy co-ordinates recent technological advances in overhead line protection equipment to the benefit of our rural customers. Overhead lines often

### Overhead protection – applied to Dalbeattie Primary 1993/1994



experience a temporary fault, perhaps due to lightning, birds or windblown debris. Older protection systems would disconnect the line, even though they were not damaged, until our staff arrived to switch the line back on. The new equipment has improved the reliability of supplies to rural customers by removing most of these long disconnections. The graph shows the improvement in customer minutes lost due to non-damage faults after we applied the overhead protection policy during 1994/1995.

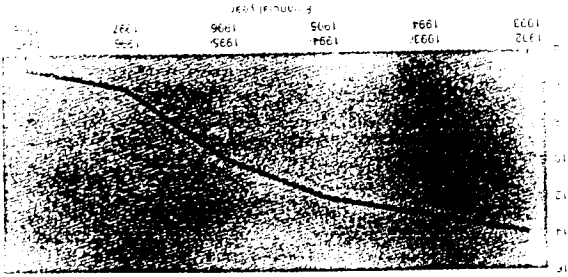
## Reconstructing overhead lines

We developed our overhead line reconstruction programme from our analysis of system failures during the storms of November and December 1996.

Most of our existing 1,000 volt lines were built between 1950 and 1960 and the line strength was not designed to cope with the storms of recent years. As we rebuild our overhead lines, this policy of stronger construction will greatly improve our network performance in severe weather. However, the stronger construction lines will not completely remove the possibility of damage from hurricane force winds or windblown debris. The rebuilding programme will take many years to complete and we will ask the Office of Electricity Regulation (OFFER) to agree to its future funding.

During 1996/1997, we successfully carried out a trial of 11,000 volt covered conductor lines near Stranraer. This type of line design is included within the reconstruction policy. We will use it in

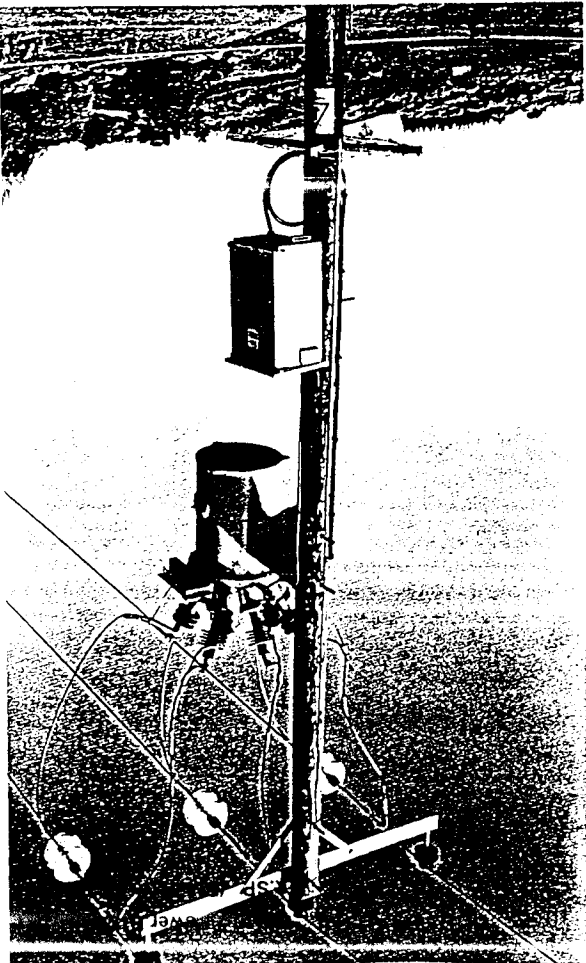
selected areas where there is a clear need, for example woods, forests and river crossings. The programme to rebuild overhead lines to improve our customers quality of supply depends significantly on landowner permission and planning authority approval. Progress can often be held up by negotiations with landowners for replacing routes and for land access. We continue to try to find appropriate cost-effective methods to improve the quality of supply to our rural customers while dealing with the needs of landowners and the local environment. An example of our environmental care is when we diverted an 11,000 volt line being rebuilt in the Ettrick Valley of Borders Region after the storms of December 1996. We identified part of the original route as being a site for Millennium funding to restore a natural wetland, so we diverted the new route around the wetland by consulting with Forest Enterprise to create a route hidden from the roadside by trees.



Pre-arranged customer minutes lost

ScottishPower and Manweb lead the way in applying outage-free techniques for live work on the 11,000 volt overhead line system. We introduced these working practices as part of our policy to improve service by not disconnecting customer supplies for routine maintenance work. Our efforts have resulted in a 65% drop in CML due to planned interruptions from 1992/1993 to the 1997/1998 level of 4.9 CML.

### Planned work



### Automation

We supply rural villages, often far from our main substations, by an 11,000 volt overhead line. Incidents on the high-voltage lines which cause damage to our equipment can result in the supply to the village being lost until staff arrive to isolate the problem and restore supplies. However, many villages have an alternative supply available in the form of a second high-voltage overhead line. This system detects a loss of supply to the village and, having checked that the incident is not within the village network, signals the pole top switches to operate and restore supply to the village. This takes 30 to 60 seconds compared to the two hours it would take for our staff to carry out the work on site.

During 1997/1998, further schemes were installed for Johnstonebridge in Dumfries and Galloway and at Broughton, Tweedsmuir and Stirling near Biggar. Schemes planned for 1998/1999 will benefit Dairymple and Hollybush in Ayrshire and Dolphinton in Lanarkshire.

## Transients

Transients are short-term supply interruptions

lasting less than one minute but usually for about 10 seconds. Interruptions are caused by the

automatic operation of switches on the 11,000

volt network which disconnect faulty lines. After a suitable time, intended to allow the cause of a

temporary fault to clear, the switch closes

automatically to restore supply. More than 60% of incidents on 11,000 volt overhead lines cause

no damage to our equipment and allow us to

quickly restore supplies.

We can pick up limited data on transient

interruptions from a System Control and Data

Acquisition (SCADA) system recording switch

operations at our substations. Some transients

on the network are protected by pole-mounted

switches which are distant from our main

substations. So that we can get accurate data

about customers affected by these transients we

have installed power fall monitors (PFM) in some

customers' homes for a trial. These devices

detect loss of supply and report it through the

customer's phone line to a central computer

system. The computer system provides a useful

database that analyses circuit performance for

both long-term and short-term interruptions.

Some customers have helped us with the trials

but we are aware some customers may resist if

we install such devices on a wider basis. There

have also been technical problems with the new

equipment and the connections we need within

the customer's home. As an alternative, we are

developing an expert system to give the same

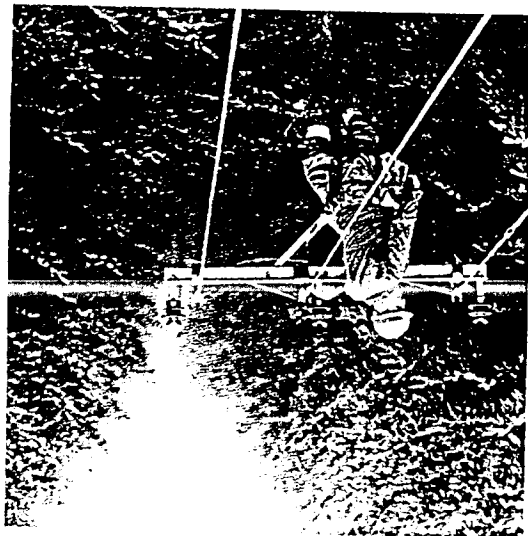
information on transients using a monitoring

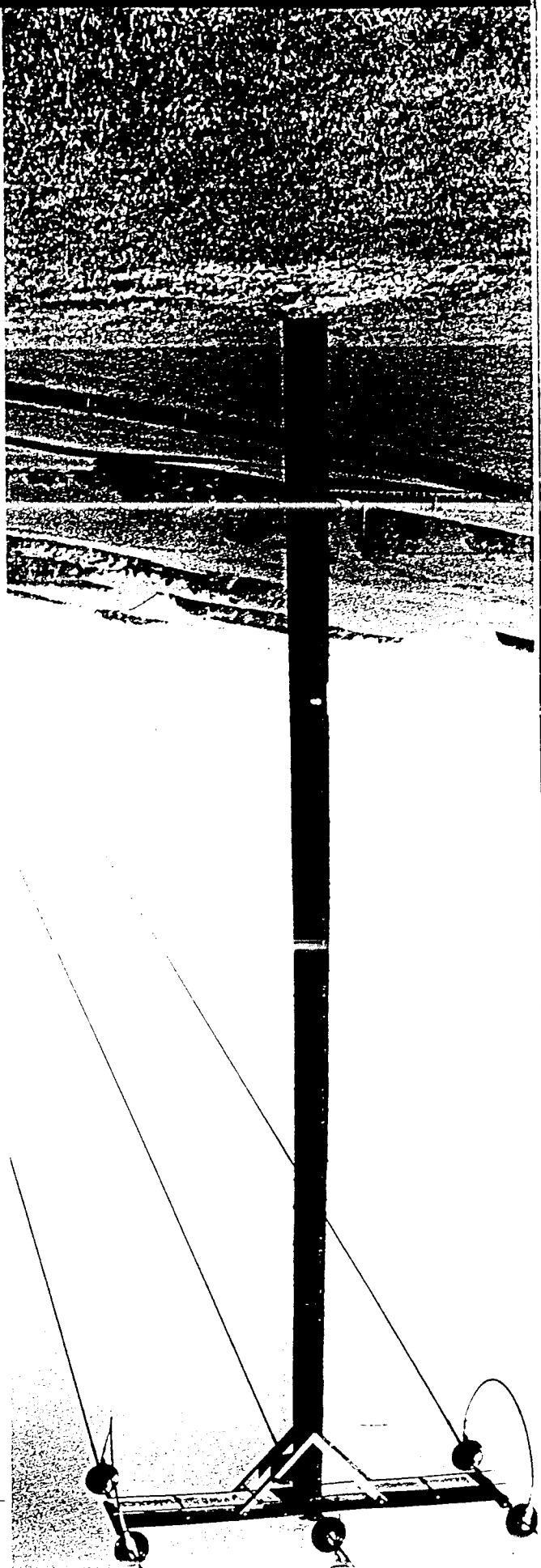
technique that we already use for monitoring

power quality.

We will report the results of these developments

in future issues of our quality of supply reports.





### Power-quality monitoring

Voltage dips happen on all power systems because of system incidents, for example cable damage and lightning. Computers, process control equipment and power electronics have made customers more aware of these voltage dips. Modern equipment should be designed to ride-through (carry on working) many of these disturbances and European law exists to guide equipment manufacturers in the types of power quality problems which exist on a public supply system. Customers who rely on modern electronic devices should ask for guidance from equipment suppliers on what voltage dips the equipment can ride-through and how it should be protected. Voltage dips particularly affect major process and service industry customers who are concerned about losing many hours of production because of the effect of supply disturbances which only last less than one second. The ScottishPower area has one of the highest

customers to understand their own protection needs. We have started to expand the network coverage during 1997 and continue to do so.

### Customer service systems

'Prosper', installed in April 1997, is our new

faults database which improves our ability to

focus on our customers when we target our

quality of supply improvement initiatives. All

network faults are logged in this computer

system and we can identify the worst-served

networks to allow us to focus on areas where we

can improve.

The 'TroubleCall' system manages the calls we get from customers reporting loss of supply and automatically identifies the extent of a fault.

Single losses of supply need the services of an electrician whereas widespread loss of supply

may need linesmen or engineers, or both.

TroubleCall helps our staff to send the correct repair crews to the fault. The system is designed to make sure all our customers receive a

high-quality response.

number of electronics manufacturing industries in

Europe, for example nearly 4% of all European

PCs are manufactured here. To make sure we

detect the cause and effect of voltage dips,

some of which happen in England or North

Scotland, we have created a network of

power-quality monitors.

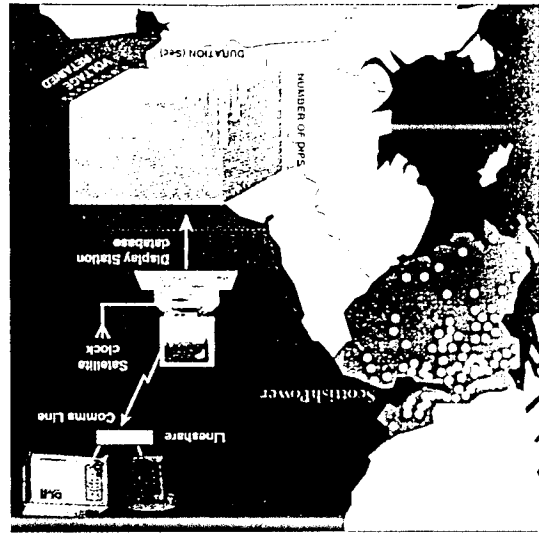
Our monitoring equipment produces power-quality

reports that show how many voltage dips

happen, how long they last and how severe they

are. We use this information to make sure we

deliver high-quality supplies and to help



# System performance

Our goal is to deliver excellent customer service and to make sure that our customers receive a continuously high quality of supply.

## Company targets

The Prosper effect, as mentioned earlier in this report, has moved our targets to a new level and trend graphs are established to let us compare years. We have tightened our targets for 1999/2000, the most notable of which are as follows:

By the year 2000, we aim to reduce the total underlying CML for every connected customer by 20% compared to 1991/1992 to between 65 and 75 minutes.

By the year 2000, we aim to reduce the total underlying customer interruptions to between 55 and 65 for every 100 connected customers.

By the year 2000, we aim to target improvements to those customers who experience more than an average of three unplanned incidents in each separately protected section of high-voltage network used to provide their supply.

## Availability

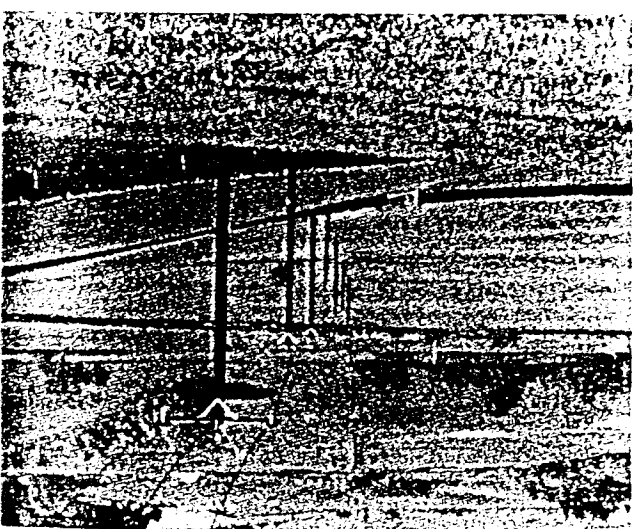
From April 1998, we will restore supplies to over 95% of our customers within 3 hours. These are consistent with regional performance targets in line with the tables below.

Customer minutes lost for every connected customer by the year 2000	
Clyde	45 to 52
Forth	70 to 85
Western	72 to 87
Southern	175 to 210

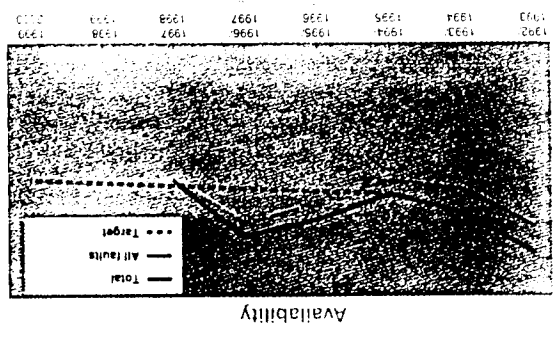
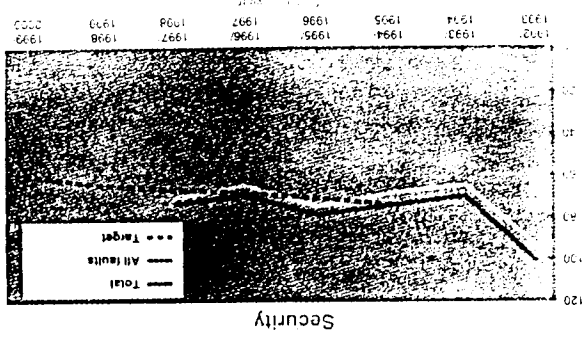
## Security

Interruptions for every 100 connected customer by the year 2000	
Clyde	38 to 43
Forth	65 to 78
Western	56 to 65
Southern	127 to 150

We will continue to review the targets to make sure that our customers get the highest possible quality of supply.







Over the last five years the security of supply from unplanned interruptions continues a trend towards our year 2000 target. In 1997/1998 we experienced several faults where large numbers of customers lost supply for a short period. This is reflected in this years increase in the number of customers interrupted.

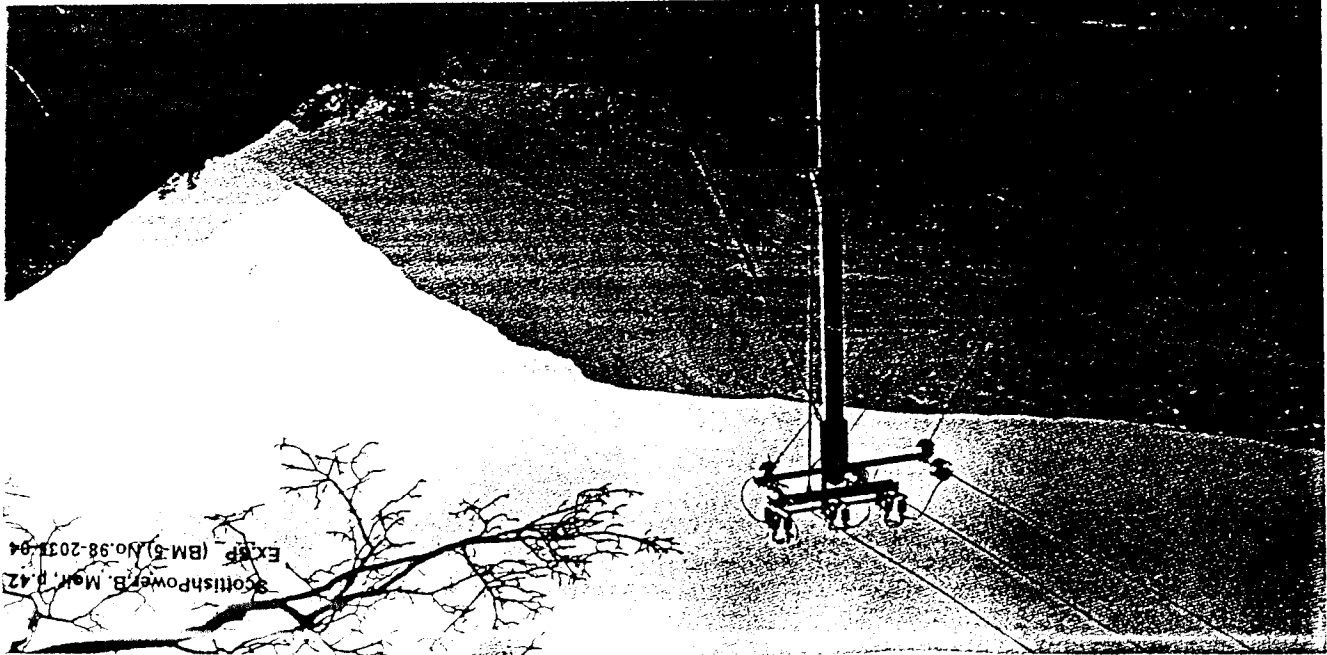
**Security**

The distribution network continues to deliver improved CML performance. Customer interruptions continue to fall. This graph shows the effects of the storms of recent years and shows the underlying CML figures meeting with trends towards our year 2000 target. The figures for 1997/1998 confirm the trend towards the targets set for the year 2000.

**Availability**

**Main improvements**





### Quality of service

As soon as we are aware that an incident has happened which disrupts supply to customers we respond as quickly as possible. To help us monitor how quickly we respond, we record the time it takes to restore supply to each customer. We have a target to restore 80% of supplies within three hours and 99% of supplies within 24 hours. During 1997/1998 we beat both these targets by restoring 88.1% within three hours and 99.98% of all supplies within 24 hours. As stated earlier, we have tightened our target for forthcoming years.

### Significant events

In April 1997 there was a problem with the generating station at Tongland which resulted in over 11,000 customers in Dumfries and Galloway being without power for up to 8 hours. This contributed 2.5 minutes to the Company CML and appears under 'Other systems' in the table of performance statistics.

Last year we investigated 1042 complaints. We found 444 were valid and took action to sort out the problem. We have dealt with 416 of these complaints and the rest are still being looked at.

From 1998/1999, OFFER has set a standard that asks us to deal with every valid complaint within six months. We will take appropriate steps to review our complaint handling procedures and we aim to meet this target.

### Voltage complaints

(See table 4 on page 16 of this report.)

Domestic customers make up the majority of our 1.8 million customers and we deliver the supply at 230 volts. European law requires this voltage to be between minus 6% (216.2 volts) and plus 10% (253 volts). We design our networks to maintain supply voltage within this range under normal circumstances. However, due to increased power demand on our network, customers may complain to us about problems related to voltage.

# Regional performance

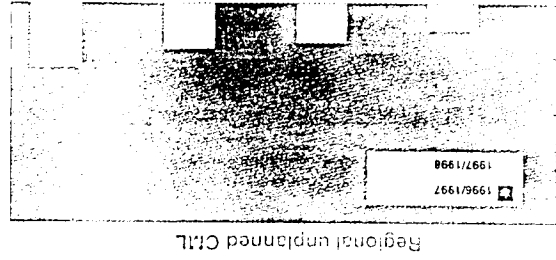
## Main improvements

- 1- Planned CML continues to fall.
- 2- Networks continue to deliver secure supplies.
- 3- Pre-arranged CML continues to fall.



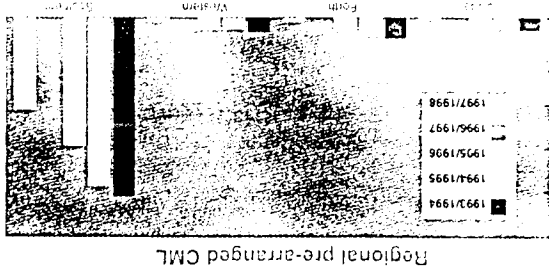
## Customer minutes lost for every connected customer (CML)

The regional performance has improved and the chart shows the figures for this year compared to the same figures for last year.



## Pre-arranged CML

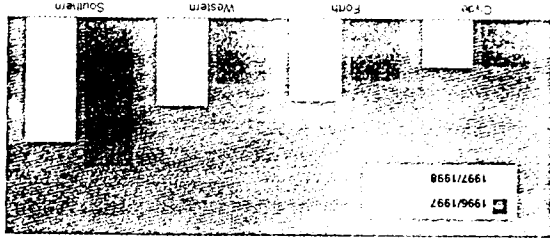
In aiming to improve customer service and reduce the effects of our work on the network, you can clearly see the effect on pre-arranged CML from the graph.



We aim to meet our target for the year 2000.

The customer interruptions show a small increase in Western and Forth Regions where we have been aware of a significant number of faults affecting a larger number of customers than would be normal.

## Customer interruptions (CI)



Update on 1997/1998 quality of supply circuits

Region	Circuit	Proposed work	Status
Southern	Selkirk to Etrick Bridge, Deloraine,	Line rebuild and overhead protection policy	Complete
Southern	Tushelaw, Etrick	Overhead protection policy	Complete
Southern	Duns Castle, Borthwick Quarry, Hardens,	Overhead protection policy	Complete
Southern	Gavinton, Polwarth	Line rebuild and refurbishment	Complete
Southern	Denholm to Bonchester Bridge, Fodderlee,	Line rebuild and refurbishment	Complete
Southern	Bedrule	Overhead protection policy	Complete
Southern	Chapel on Leader, Birkenaide, Blainslie	Overhead protection policy	Complete
Forth	Cowstrandburn, Kinnedar, Saline, Steelend	Overhead protection policy	Complete
Forth	Kingston, Brownrigg, Whitekirk, Leuchie,	Overhead protection policy	Complete
Forth	Rhodes Holdings, Newmains	Overhead protection policy	Complete
Forth	Longniddry, Gosford, Aberlady	Overhead protection policy	Complete
Clyde	Clynder, Rosneath, Kilcreggan	Overhead protection policy	Complete
Southern	Crossmichael, Laureston	Line rebuild	Complete
Southern	Boreland, Sibbaldie, Millbank	Overhead protection policy	Complete
Southern	Holywood	Line rebuild	Complete
Southern	Lochfoot, Shawhead	Line rebuild	Complete
Southern	Stair Glen, Manochiead, Leathills,	Line rebuild	Complete
Southern	Enterkinfoot, Durisdeer	Line rebuild and overhead protection policy	Complete
Southern	Tarf to Bridge of Dee	Line rebuild and overhead protection policy	Complete
Southern	95% of the work is complete. We have had delays due to site access conditions. We aim to complete in July 1998	Overhead protection policy	Complete
Western	Killoch Colliery, Drongan, Ochiltree rural	Overhead protection policy	Complete
Western	Part of Troon and Barassie, Dundonald rural,	Overhead protection policy	Complete
Southern	Symington rural	Line rebuild and refurbishment	Complete
Southern	Bigger to Drumeller, Tweedsmuir, Kindledores	Line rebuild and refurbishment	Complete
Western	Corra Linn to Towers, Rigside, Lanark and Douglas rural area	Line rebuild	Complete
Western	Towers to Ponell, Lanard and Douglas rural area	Line rebuild	Complete
Western	Part of Kirkinlloch, Low Moss Prison	Overhead protection policy	Complete
Western	Forth, Tarbrax, Braehead	Overhead protection policy	Complete
Forth	Sauchie, parts of Alloa	Overhead protection policy	Complete
Forth	Ecclesmachan, parts of Broxburn and Dechmont	Overhead protection policy	Complete

Areas we will target in 1998/1999

Region	Circuit	Customer hours lost	Customer interruptions	Number of incidents	Proposed work
Southern	Johnstonebridge	481	183	2	Installing an automatic reclosing system
Southern	Moffat	1014	237	2	Installing an automatic reclosing system
Southern	Gatehead, Drybridge	616	439	5	Installing an automatic reclosing system
Southern	New Cumnock	1500	285	4	Installing an automatic reclosing system
Southern	Annbank, Joppa	1638	963	6	Installing an automatic reclosing system
Southern	Coylton	908	1095	5	Installing an automatic reclosing system
Southern	Ochiltree	631	415	4	Installing an automatic reclosing system
Southern	Cumnock, Skares	609	249	6	Installing an automatic reclosing system
Southern	Durrisdeer,	4,061	1,929	8	Phase 2 of reconstructing an overhead line
Southern	Wanlockhead, Leadhills	8,690	4,001	16	Phase 2 of reconstructing an overhead line
Southern	Crossmichael, Laureston	4368	1346	6	Reconstructing an overhead line and building a link line
Southern	Old Dailly to Barr	1575	497	4	Overhead line reconstruction
Southern	Lethanhill to Dalmeilington				Installing cable to remove a low-voltage overhead line
Southern	West Linton	4397	1329	7	Network automation
Southern	Dairymple	803	567	3	Installing an automatic reclosing system
Clyde	Ballicreston	508	270	2	Installing an automatic reclosing system
Clyde	Lanark	6824	2840	4	Installing an automatic reclosing system
Clyde	Corra Linn, Lanark	1656	1035	4	Installing an automatic reclosing system
Clyde	Milton of Campsie	1888	1139	10	Installing an automatic reclosing system
Clyde	Netherton	1904	1144	2	Installing an automatic reclosing system
Clyde	Kirkfieldbank	1209	611	5	Installing an automatic reclosing system
Clyde	Milton of Campsie	6828	1555	4	Installing an automatic reclosing system
Clyde	Kirkintilloch	2183	956	8	Installing an automatic reclosing system
Clyde	Glasford	2404	607	5	Installing an automatic reclosing system
Clyde	Dolphinton	6278	1676	14	Network automation
Clyde	Law				Installing cable to remove a low-voltage overhead line
Clyde	Glasford				Installing cable to remove a low-voltage overhead line
Clyde	Twechar				Installing cable to remove a low-voltage overhead line
Forth	Norham, Ladykirk	1170	835	3	Installing an automatic reclosing system
Forth	Hownam	223	100	3	Installing an automatic reclosing system
Forth	Ayton	695	207	2	Installing an automatic reclosing system
Forth	Newmill	3108	1045	5	Installing an automatic reclosing system
Forth	West Linton, Lamancha	895	344	7	Installing an automatic reclosing system
Forth	Stow	784	407	3	Installing an automatic reclosing system
Forth	Pease Bay, Cockburnspath	4682	1173	6	Installing an automatic reclosing system
Forth	Damhead Holdings	1194	446	3	Installing an automatic reclosing system
Forth	Nine Mile Burn Village	2163	781	4	Installing an automatic reclosing system
Forth	Garleton, Ballencreiff	2500	1544	7	Installing an automatic reclosing system
Forth	Lennoxton	995	643	7	Installing an automatic reclosing system
Forth	Torrance	7325	4440	4	Installing an automatic reclosing system
Forth	Shieldhill	3687	1803	3	Installing an automatic reclosing system
Forth	Queenzieburn	1484	959	8	Installing an automatic reclosing system
Forth	Ladybank	1120	1090	6	Installing an automatic reclosing system
Forth	Collessie	1351	409	4	Installing an automatic reclosing system
Forth	Cambusbarron	1440	545	4	Reconstructing an overhead line
Forth	East and West Saltoun	6251	3386	5	Reconstructing an overhead line
Forth	Longnewton, Longyester	5869	3546	12	Reconstructing an overhead line
Forth	Arncroach, Largoward	1224	504	7	Reconstructing an overhead line
Forth	Stow	784	407	3	Network automation

# System performance statistics

**Table 1 Customer numbers**

Number of customers

Company	Number of customers
Clyde	590,500
Forth	697,108
Western	428,966
Southern	143,803
Company	1,860,237

**Table 2 Security**  
Number of supply interruptions for every 100 connected customers due to the following:

	Clyde	Forth	Western	Southern	Company
(a) Distribution faults	9.4	7.0	7.7	6.3	7.9
Low-voltage (including services)	1.2	18.7	18.3	53.1	15.7
High-voltage overhead	23.1	22.0	24.2	19.0	2.7
High-voltage underground	6.4	12.4	16.0	21.0	12.0
High-voltage other	30.7	53.1	58.5	93.1	50.4
High-voltage total	4.4	14.0	10.8	14.1	10.2
Extra high-voltage	44.5	74.1	77.0	113.5	71.0
Total from faults	1.0	1.3	0.9	13.8	2.0
(b) Planned outages	45.5	75.4	77.9	127.3	73.0
Total from all causes (a)+(b)					

**Table 3 Availability**  
Number of supply minutes lost for every connected customer due to the following:

	Clyde	Forth	Western	Southern	Company
(a) Distribution faults	10.8	8.7	9.5	10.6	9.7
Low-voltage (including services)	2.3	19.7	22.4	63.1	18.2
High-voltage overhead	22.8	24.7	28.4	13.2	24.0
High-voltage underground	6.3	11.0	14.4	21.6	11.1
High-voltage other	31.4	55.4	65.2	97.9	53.3
High-voltage total	4.0	7.7	7.0	12.7	6.8
Extra high-voltage	46.2	71.8	81.7	121.2	72.4
Total from faults	1.1	2.7	1.9	40.7	5.0
(b) Planned outages	47.3	74.5	83.6	161.9	77.4
Total from all causes (a)+(b)					
Confirmed number of voltage complaints for every 10,000 connected customers	0.03	3.0	4.1	4.1	2.4

**Table 4 Voltage complaints**

# Capital Spending

Actual and planned investment for a five-year period (1995/1996 to 1999/2000)

In October 1995, OFFER announced that, in setting our price control, they had assumed we would need to spend £443.5m on the distribution network from 1995/1996 to 1999/2000.

## OFFER's published price control assumptions (1997/1998 prices)

Load related	£239.3m
Non-load related	£204.2m
<b>Total</b>	<b>£443.5m</b>

A part of the non-load related spending is specifically available for quality improvement initiatives. As a result of efficiencies, we have been able to spend more on quality improvement initiatives than we were allowed by OFFER in the price control review. This focused investment has clearly improved our performance and this is demonstrated throughout this report.

We have already delivered a range of efficiency improvements to benefit our customers. These are as follows:

- developed new, more cost-effective designs, materials and techniques;
- installed new information technology systems which provide more detailed information about our network and allows us to prioritise and target investment more effectively; and
- improved work management systems and practices.

We will continue to improve efficiency and we have planned further savings for the future. We will achieve the following:

- Save costs through buying goods at better prices;
- Reduce costs by using computer technology as much as possible and improving our working methods.

Target investment by monitoring the condition and performance of our assets.

**Reasons for investing in the network**

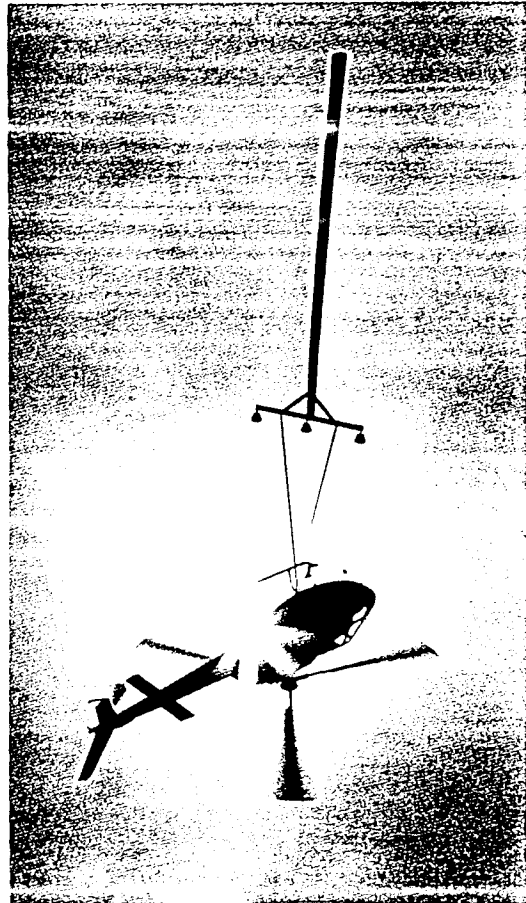
Load-related spending is necessary to meet customer requests for:

- new connections;
- increased supply; and
- extra power demand which requires the distribution network to be reinforced.

We base our predictions for future spending on local economic trends, customer requirements

and movements in the areas of changing demand for power. This demand may not happen in the future and our predictions depend on constant review and updating.

Most of the non-load related investment programme is directed towards maintaining the distribution network. We need to spend money in order to maintain safe supplies to customers and to meet our obligation to make sure our staff and the public are safe. We will also meet environmental law.



Against the background of cost savings, we have set our capital spending projections as follows:

**ScottishPower's network capital spending (1997/1998 prices)**

	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Load related	£45.8m	£43.2m	£43.1m	£47.3m	£47.6m	£227.0m			
Non-load related	£40.0m	£38.4m	£39.8m	£35.5m	£36.8m	£190.5m			
Total	£85.8m	£81.6m	£82.9m	£82.8m	£84.4m	£417.5m			

We have seen a growth in the number of requests for new connections in certain areas, particularly in Forth Region. This, together with new business projects, which we expect to begin in 1998/1999 and major reinforcement projects has resulted in an overall decrease in load-related investment compared with last year's projections. During 1997/1998 we increased non-load related investment which showed our commitment to quality of supply improvement initiatives.



### Our achievements in

### 1997/1998 and the work planned during 1998/1999

In 1997/1998 we have made significant progress with our programme of work to replace inadequate network assets which are no longer reliable. During 1997/1998 we:

invested more than £100,000 every day to make sure that we maintained supply to our existing customers;

provided more than 19,000 new housing connections;

installed more than 180MVA of extra transformers to meet increased requirements for customer demand;

rebuilt or refurbished more than 100km of 33kV overhead line;

rebuilt or refurbished more than 450km of 11kV overhead line;

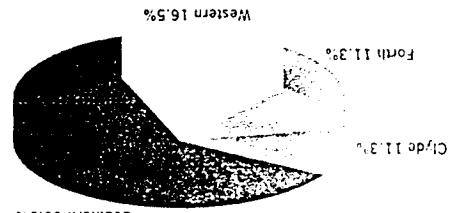
installed more than 90km of underground cable;

replaced or refurbished more than 5000 domestic connections;

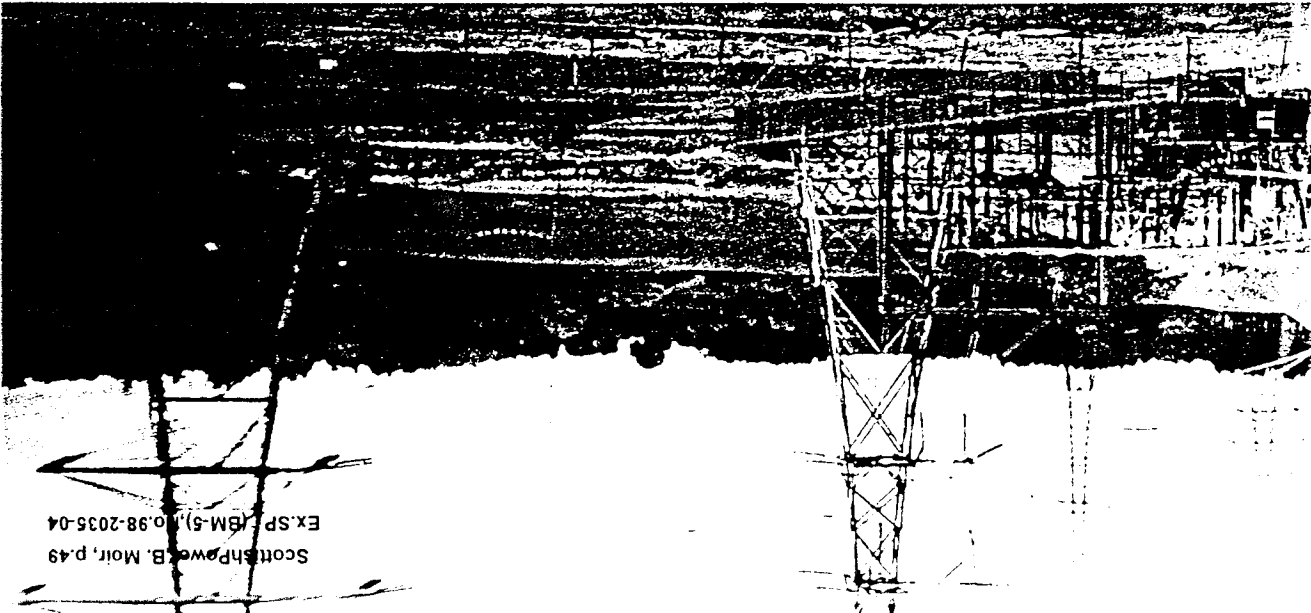
replaced switchgear at more than 450 distribution substations; and

spent more than £350,000 on installing anti-oil pollution at transmission substations.

2007, 1998 Non-head capital spending for every customer



This chart shows the capital spending profile for each customer across the four ScottishPower Regions and our commitment to investments for improving the quality of supply in our rural areas. We will continue this programme of work during 1998/1999 and we will report on our progress in next year's quality of supply report. In tables 1 and 2, we show a selection of major projects (each costing more than £100,000) which we completed during 1997/1998 and have planned for 1998/1999.



ScottishPower, B. Moir, p.49  
EX.SP. (BM-5), No.98-2035-04

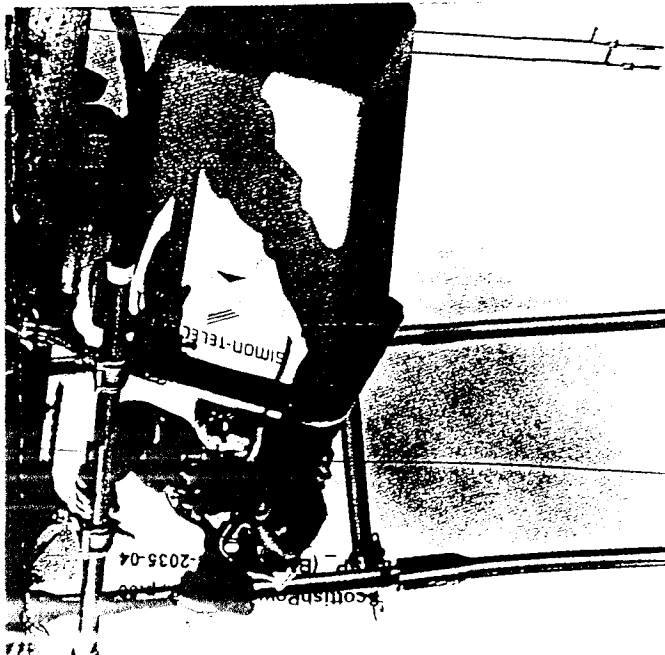


Table 2: Examples of major projects planned during

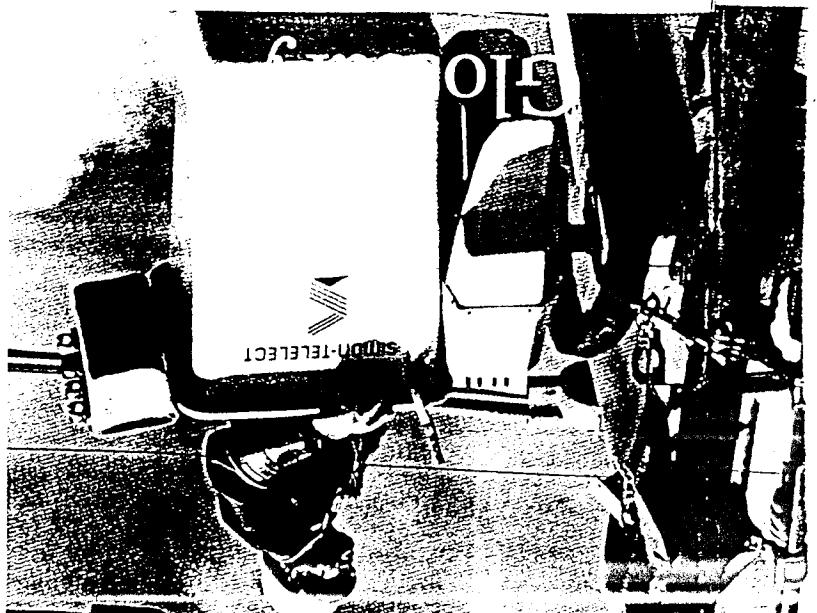
1998/1999

Region	Project description
Clyde	New supply for Braehead Capital Shopping Centre, Braehead.
Clyde	Reinforcing a 33kV network in Inverclyde Area, Greenock.
Clyde	Replacing 11kV switchgear at Blackhall Street primary substation.
Forth	Reinforcing a 33kV network in the Stirling area.
Forth	Upgrade primary switchgear to supply Thistle Court, Edinburgh.
Forth	Reinforcing an 11kV network in Blackwood area, Cumbernauld.
Southern	Reinforcing an 11kV overhead line network from Ettrick to Yarrow.
Southern	Reinforcing an 11kV network from Lockerbie to Lochmaben.
Southern	Replacing 11kV switchgear at Marchmount primary substation.
Southern	Rebuilding an 11kV overhead line network from Hawick to Robertson.
Southern	Rebuilding an 11kV overhead line network from Leadhills to Enterkinfoot.
Western	New supply for Shanks & McEwan windfarm at Greengairs.
Western	Replacing 11kV switchgear at Allbank primary substation.
Western	Replacing 11kV switchgear at Kirkintilloch primary substation.

Table 1: Examples of major projects we completed during

1997/1998

Region	Project description
Clyde	Replacing 33kV Switchgear at West George Street substation.
Clyde	Reinforcing an 11kV network in Inverclyde Area, Greenock.
Clyde	New supply to Killermont Science Park.
Forth	Reinforcing Calais primary substation.
Forth	Reinforcing a 33kV network from Gleniston to Inverkeithing.
Forth	Reinforcing an 11kV network from Siamannan to Muckraw.
Southern	Replacing 11kV switchgear at Cargenbridge primary substation.
Southern	Rebuilding a 33kV overhead line from Newton Stewart to Gatehouse.
Southern	Upgrade the supply to ICI, Dumfries.
Southern	Replacing an 11kV overhead line from Selkirk to Ettrick.
Southern	Replacing an 11kV overhead line from Penpont to Dalpeadar.
Western	Replacing 33kV switchgear at Newarthill grid supply point.
Western	New supply for Chunghwa, Mossend, Bellshill.
Western	New supply to Egger Chipboard, Barony, Auchinleck.



Availability A measure of the time the supply is not available. This is generally expressed as the average number of minutes for every connected customer the supply is not available.

Automation The automatic alteration of the system to restore supplies.

CHL Customer hours lost

CI Customer interruptions

CMIL Customer minutes lost. This is generally expressed as the average number of minutes for every connected customer the supply is not available.

Extra high-voltage (EHV) Operating at more than 22,000 volts but less than 132,000 volts. This usually refers to 33,000 volts.

Incident An event which causes an uncontrolled flow of electrical current followed by supply

disconnection.

High-voltage (HV) Operating at greater than 1000 volts but less than 22,000 volts. This usually refers to 11,000 volts.

Kilovolt (kV) 1000 volts

Load-related work Necessary work to meet changes in the power needs of a network.

Non-damage incident An incident which causes no permanent damage to equipment and so no repairs need to be carried out.

Pre-arranged related work Necessary work to keep the network reliable and to improve its performance.

Outage from Methods of carrying out work on 11,000 volt equipment without interrupting supplies to customers.

Outage A loss of electricity supply.

Overhead protection policy

Using electronically-controlled links and automatic switches to restore supplies following an incident and, where necessary, disconnect damaged equipment leaving the minimum number of customers without supply.

Pre-arranged We use this term to refer to planned interruptions in supplies to customers where we

contact the affected customers at least five days

beforehand.

Refurbishment Replacing equipment which is no

longer reliable.

Security We use this term to refer to the number of supply interruptions. We usually measure these as the number of supply interruptions for every 100 customers.

Substation Premises containing either one or more transformers or switchgear.

Switchgear Automatic or manual mechanical devices for controlling the flow of electrical energy

into a circuit or item of equipment.

Transient interruptions Interruptions to customers supplies which last less than 60 seconds but usually for about 10 seconds.

Verifying performance A way of measuring the performance of the system which does not include the effects of exceptionally severe events. This

removes the variations caused by severe weather.

Voltage dip A sudden, but temporary, lapse in the voltage.

Wayleave A landowner's legal agreement to install and maintain our equipment.

# New regional structure

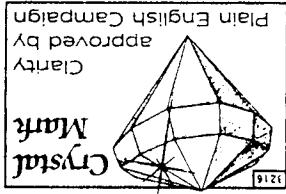
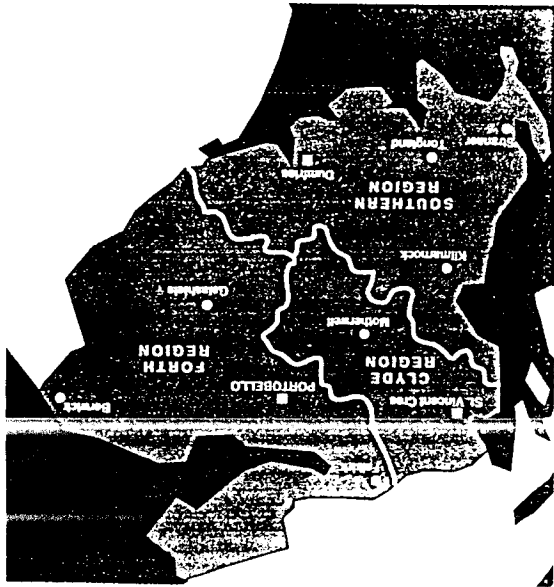
By the time you read this report we will have restructured our regions to meet our customer needs. The map shows the new boundaries for 1998/1999 with main offices in Glasgow, Portobello and Dumfries.

## How to contact us

If you have any questions or comments following your study of this report, please contact the Regional Manager at your local regional office. To find the correct regional office, please refer to the map and write to one of the addresses below.

Scottish Power plc  
 Clyde Region  
 St Vincent Crescent  
 10 Fishwives Causeway  
 Edinburgh EH19 1EP

Scottish Power plc  
 Southern Region  
 Leafield Road  
 Dumfries DG1 2DN



A summary of this report will also appear on our internet web-site at [WWW.scottishpower.plc.uk](http://WWW.scottishpower.plc.uk)

# Standards of service



**Manweb**

A ScottishPower Company

## Introduction

At Manweb we are committed to giving you the best possible service.

We promise you a guaranteed level of service for many of the things we do. If we fail to give this level of service we will pay you compensation.

**If we fail to meet guaranteed standards 2 and 5, you must claim inside a month.**

**For the other standards we will tell you automatically inside 10 working days if we think we have failed to meet our standards of service.**

If you need to make a claim, please write to us at the address given at the back of this brochure.

This brochure explains our standards of service for 1998 to 1999. It also lets you know how well we performed against our standards from 1997 to 1998, during which time we achieved over 99% of the service standards we guaranteed.

**You will notice that we have introduced a new guaranteed standard about faulty prepayment meters. We have called this guaranteed standard 11. We have also increased our targets for guaranteed standards 3, 4, 5, 6 and 7 and for overall standards 1, 2, 3, 5, 6, 7 and 8.**

During the last year we achieved accreditation from the International Standards Organisation for the way in which we monitor and report our standards of service.

If you would like details about any of the services we offer, please contact us on the numbers given at the back of this brochure.

**Bill Landels**

MANAGING DIRECTOR  
MANWEB

## Guaranteed standard 1

### Main fuse failure

If your main fuse fails and causes your electricity supply to go off, and you tell us between 7am and 7pm Monday to Friday, we will visit you inside 3 hours of you contacting us. If you contact us between 9am and 5pm Saturdays and Sundays, we will visit you inside 4 hours.

If we do not do this, we will automatically pay you £20.

#### April 1997 to March 1998

Number of fuse failures	Number of payments we made	Our success rate
2,173	0	100%

## Guaranteed standard 2

### Getting your supply back on

If you lose your electricity supply because of a fault in our system, we will try to put your supply back on as soon as possible. If we fail to do this inside 24 hours you can claim:

- ▶ £50 – if you are a domestic customer;
- ▶ £100 – if you are a business customer; and then
- ▶ £25 for each extra period of 12 hours you have had no electricity.

You can claim compensation by contacting us inside one month of the interruption.

#### April 1997 to March 1998

Number of customers off supply	Number of payments we made	Our success rate
578,988	2	99.99%

This standard does not apply when we have severe weather like the hurricane winds during Christmas 1997. During the storms over 100,000 customers lost supply. We had most customers back on supply inside 24 hours but almost 5,000 were off longer. This was because we had to repair major damage to our network.

### Guaranteed standard 3

## Connecting a new supply

If you ask us to connect a meter to supply electricity to a property, we will make an appointment and fit the meter:

- ▶ inside 2 working days for domestic customers; and
- ▶ inside 4 working days for business customers.

If we do not do this, we will automatically pay you £20.

We will always offer you a morning appointment between 8am and 1pm or an afternoon appointment between 12 noon and 5pm. We will give you a more specific time, inside a 2 hour time band, if you ask for one.

If we do not keep the agreed appointment, we will automatically pay:

- ▶ £40 to domestic customers; and
- ▶ £100 to business customers.

#### April 1997 to March 1998

Number of connections	Number of payments we made	Our success rate
522	0	100%

### Guaranteed standard 4

## Estimates for providing a new supply or moving a meter

If you write to us asking for a written estimate for a new supply or for moving the meter, we will give you the written estimate inside 5 working days (as long as we have all the information we need). If we have to change our mains network, we will give you the estimate inside 15 working days. If we do not do this, we will automatically pay you £40.

#### April 1997 to March 1998

Number of estimates we were asked for	Number of payments we made	Our success rate
6,228	0	100%

### Guaranteed standard 5

## Notice to interrupt your supply

If we need to turn your supply off for planned maintenance work or testing, we will give you at least 5 days notice.

If we do not do this, you can claim:

- ▶ £20 if you are a domestic customer; or
- ▶ £40 if you are a business customer.

You can claim compensation by contacting us inside one month of the interruption.

#### April 1997 to March 1998

Number of customers off supply	Number of payments we made	Our success rate
73,746	25	99.97%

### Guaranteed standard 6

## Voltage complaints

If you tell us about a problem with your supply voltage, we will either:

- ▶ make an appointment and visit you inside 7 working days; or
- ▶ explain the problem, in writing, inside 5 working days.

If we do not, we will pay you £20.

We will always offer you a morning appointment between 8am and 1pm or an afternoon appointment between 12 noon and 5pm. We will give you a more specific time inside a 2 hour time band, if you ask for one.

If we do not keep the agreed appointment, we will automatically pay you £20.

#### April 1997 to March 1998

Number of enquiries	Number of payments we made	Our success rate
734	0	100%

**Guaranteed standard 7**

**Faulty meters**

If you tell us that your meter is faulty, we will either:

- ▶ make an appointment and visit you inside 7 working days; or
- ▶ explain the problem, in writing, inside 5 working days.

If we do not, we will pay you £20.

We will always offer you a morning appointment between 8am and 1pm or an afternoon appointment between 12 noon and 5pm. We will give you a more specific time, inside a 2 hour time band, if you ask for one.

If we do not keep the agreed appointment, we will automatically pay you £20.

**April 1997 to March 1998**

Number of enquiries	Number of payments we made	Our success rate
2,289	0	100%

**Guaranteed standard 8**

**Questions about your electricity bill**

If you have a question about your electricity bill or whether we owe you a payment under our standards of service, we will contact you inside 5 working days. Where we confirm that you are entitled to a payment under our standards of service, or to a refund on your electricity account, we will make the payment to you within 5 working days. If you ask to change the way you pay us and we cannot agree to your request, we will tell you inside 5 working days. If we do not meet this timetable we will automatically pay you £20.

**April 1997 to March 1998**

Number of enquiries	Number of payments we made	Our success rate
199,129	1	99.99%

**Guaranteed standard 9**

**Appointments**

If we agree an appointment with you, whether over the telephone or in writing, we will do everything we can to keep it. We will always offer you a morning appointment between 8am and 1pm or an afternoon appointment between 12 noon and 5pm. We will give you a more specific time, inside a 2 hour time band, if you ask for one. If we cannot do this we will automatically pay you £20.

**April 1997 to March 1998**

Number of appointments	Number of payments we made	Our success rate
312,830	33	99.99%

**Guaranteed standard 10**

**Compensation payments**

In most cases you don't have to do anything. We will automatically pay the compensation by sending you a cheque. If we don't do this inside 10 working days of knowing about failure, we will automatically pay you another £20.

**April 1997 to March 1998**

Number of compensation payments we made	Number of extra compensation payments we made	Our success rate
61	1	98.36%

**Guaranteed standard 11**

**Faulty prepayment meters**

If your prepayment meter fails and causes your electricity supply to go off, and you tell us between 7am and 7pm Monday to Friday, we will visit you inside 3 hours of you contacting us. If you contact us between 9am and 5pm Saturdays and Sundays, we will visit you inside 4 hours. If we do not do this we will automatically pay you £20. This standard does not cover situations such as running out of meter cards. Such unnecessary visits will be charged for. This is a new standard from 1st July 1998 and therefore there are no figures available for April 1997 to March 1998.



## Exceptions

The compensation scheme does not apply if any one of the following stops us meeting our standards of service:

- ▶ severe weather;
- ▶ strikes;
- ▶ actions of other people;
- ▶ you ask for a service outside the timescales covered in this brochure;
- ▶ you are out when we call;
- ▶ you cancel the appointment; or
- ▶ we cancel the appointment and give you at least 24 hours notice.

**The services provided by our Contracting business are not covered by these standards.**

## How do we pay you if we don't meet our standards?

We will send you a cheque. Paying you compensation under the scheme does not mean we admit any liability, and it does not stop you taking further action.

## Do you need to claim?

You must claim inside a month if we fail to meet standards 2 and 5. For the other standards, we will pay you automatically inside 10 working days if we think we have failed to meet our standards of service. If we do not and your claim is valid you will get an extra payment of £20.

## Quality of supply report

We also produce a quality of supply report. This tells you how our distribution system performed. If you would like a copy please contact us. Our phone number and address are shown at the back of this brochure.

## How the standards are agreed

These standards have been agreed with the Director General of Electricity Supply. If you are not happy with our decision on these standards, you can write to or phone our Customer Relations Manager at:

Manweb plc, Customer Relations Office, Wrexham Road, Pentre Bychan, Wrexham LL14 4DU  
Phone: 0345 832465, Minicom: 0845 272 9696

If you are still not happy with our decision on these standards you can ask for advice from:

The Office of Electricity Regulation (OFFER)  
4th Floor, Hamilton House, Hamilton Place,  
Chester CH1 2BH  
Phone: 01244 320849, Minicom: 0345 697128

## Overall standards of performance

Other standards of service have been set which are called the 'overall standards of performance'. These show how well we work in essential areas of our business. The following pages show the standards for 1998 to 1999 and how we performed against our 1997/98 targets.

### Overall standard 1

## Putting a supply back on

If you have a power cut because of a fault or damage, we will put the supply back on to 90% of customers inside 3 hours and to 100% of customers inside 24 hours. (This standard applies from 1st April 1998.)

### April 1997 to March 1998

#### Supply back on in 3 hours

Our success rate 83.7%  
Our target 85%

#### Supply back on in 24 hours

Our success rate 98.4%  
Our target 99%



### Overall standard 2

## Voltage complaints

If your voltage is either higher or lower than the legal limits, we will sort out 100% of complaints inside 6 months. (This standard applies from 1st April 1998.)

**April 1997 to March 1998**

**Corrected in 6 months**

Our success rate  97.1%  
Our target  95%



### Overall standard 3

## New connections

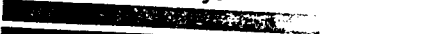

When we have all the information we need, we will fit a new low voltage service line inside 30 days for 100% of domestic customers, and inside 40 days for 100% of business customers. (This standard applies from 1st April 1998.)

**April 1997 to March 1998**

**Connected in 30 days**

Our success rate  100%  
Our target  98%

**Connected in 40 days**

Our success rate  99.8%  
Our target  99%



### Overall standard 4

## Putting a supply on after cutting it off

This only applies to supplies we cut off because you have not paid a bill. When you pay the amount you owe, or make an arrangement to pay, we will put your supply back on inside 24 hours.

**April 1997 to March 1998**

**Reconnected in 24 hours**

Our success rate  100%  
Our target  100%

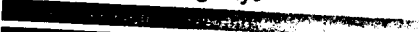

### Overall standard 5

## Moving a meter

If you have a low voltage supply, and ask us to move your meter, we will do this for 100% of our customers inside 15 working days. (This standard applies from 1st April 1998.)

**April 1997 to March 1998**

**Moved in 15 working days**

Our success rate  99.9%  
Our target  98%



### Overall standard 6

## Changing a meter

After you ask us to change the way we charge for your electricity, we will fit a suitable replacement meter for 100% of our customers inside 10 working days. (This standard applies from 1st April 1998.)

**April 1997 to March 1998**

**Changed in 10 working days**

Our success rate  100%  
Our target  95%


### Overall standard 7

## Reading meters

To find out how much electricity you have used we will read the meter of 100% of our customers at least once a year. (This standard applies from 1st April 1998.)

**April 1997 to March 1998**

**Read once a year**

Our success rate  98.1%  
Our target  98%



### Overall standard 8

## Letters

We will reply inside 10 working days to 100% of letters about our services.

**April 1997 to March 1998**

**Replied to in 10 working days**

Our success rate  100%  
Our target  100%

## How to get in touch with us

If you need to contact us phone us on:

**0845 272 1212**

if you are a residential customer;

**0845 272 9696**

if you are hard of hearing and have Minicom facilities;

**0845 272 3636**

if you are a business customer; or

**0845 272 2424**

for our 24-hour emergency service.

The phone numbers shown are for residential customer services in office hours (8am to 8pm Monday to Friday, 9am to 5pm Saturday); business customers in office hours (9am to 5pm Monday to Friday); and for emergency services, 24 hours a day. All calls are charged at local rates.

Staff who work outside the office hours shown above only deal with emergencies such as loss of supply. They do not deal with routine enquiries.

### Write to us at your nearest regional office:

Wales Region – Regional Manager, Manweb, Wales Region,  
Wrexham Road, Pentre Bychan, Wrexham, LL14 4DU.

Cheshire Region – Regional Manager, Manweb,  
Cheshire Region, Prenton Way, Birkenhead, L43 3ET.

Merseyside Region – Regional Manager, Manweb,  
Merseyside Region, Lister Drive, Liverpool, L13 7HJ.



Manweb plc, Registered Office, Manweb House, Chester Business Park,  
Wrexham Road, Chester CH4 9RF. Registered in England and Wales No. 2366937.



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CABINET OFFICE  
70 Whitehall, London SW1A 2AS  
Telephone: 071-270 0400

*Chancellor of the Duchy of Lancaster  
Minister of Public Service and Science*

Mrs H Joy  
Scottish Power plc  
Distribution/Supply Section  
Business Headquarters  
154 Montrose Crescent  
Hamilton M13 611

6 October 1993

Dear Mrs Joy

**CHARTER MARK 1993**

I am very pleased to be able to tell you that your organisation has been awarded a Charter Mark this year for excellence in the delivery of public services. Congratulations! The formal announcement of the winners will be made on 27 October.

There has been a lot of interest in the scheme this year. We received a total of 411 applications from all sectors of the public services. The standard of applications was very high; it is clear that much excellent work to transform service delivery is being done within public sector organisations throughout the United Kingdom.

We are holding a Winners Conference on Wednesday 27 October, at the Queen Elizabeth II Conference Centre in London, to celebrate the success of this year's Charter Mark winners. I very much hope that up to four people from your organisation will be able to attend.

Attached is a note about publicity arrangements for the Conference and announcement of the winners. You will see that we have appointed Crown Business Communications to help us with the arrangements for the Conference. They will be writing to you

CCULET/1

shortly giving more details about the Conference and the exhibition. It would be very helpful if you would help us to maintain the embargo on the news of your award until the day of the announcement.

I look forward to meeting you and others from your organisation on 27 October.



WILLIAM WALDEGRAVE

CCULET/1



**Southern  
Water**

A  ScottishPower Company

# NEWS RELEASE

ScottishPower, B. Moir, p.3  
Ex.SP\_ (BM-7), No.98-2035-04

Southern House Yeoman Road Worthing BN13 3NX • tel 01903 264444 • fax 01903 693068

**EMBARGO – NOT FOR USE BEFORE 00.01 HRS MONDAY DECEMBER 1**

Dec 1 1997

no. 216

## **FULL MARKS IN GOVERNMENT CHARTER AWARDS**

Southern Water is the only water company to win the Government's prestigious Charter Mark this year.

The company is one of two utilities to be given the 1997 "Award of Excellence" for service to the public.

Southern Water now joins only 912 other organisations in the whole of the UK to have the Charter Mark after becoming one of 365 winners out of 947 applicants this year.

Chairman and Chief Executive Mike Kinski said: "The award is a huge tribute to all our staff who have worked tirelessly during the past year to re-shape the business into an even more customer-orientated operation.

"Our four million customers can now be confident that they are receiving unrivalled service standards from a company that continues to strive to be best in its class."

The Charter Mark award follows the takeover of Southern Water by ScottishPower last year and subsequent re-focusing of the company to further improve customer service in all areas of the business.

Continues....\

**Southern Water news release no. 216 continues....\**

A new multi-million pound, state-of-the-art customer call centre is handling over 4,000 calls every day as the company serves its customers throughout Kent, Sussex, Hampshire and the Isle of Wight via nearly 22,000 miles of water mains and sewers.

The sale of 13 enterprise businesses and an exit from overseas work, completed during the year, is now allowing the company to concentrate solely on its water and wastewater operations in the South East of England where an enhanced Customer Charter, offering guaranteed standards above those required by industry regulator OFWAT, has been introduced.

And two recent reports from OFWAT also confirm that Southern Water:

- Has the lowest leakage level of the UK's major water and wastewater companies
- Is the only one of those major companies to achieve average or above average performance against all OFWAT's customer service standards.

Mike Kinski said: "I am delighted at the giant strides we have made and that this has been recognised by a team of independent Government assessors.

"They inspected nine key areas of our business, spent time with the company and also talked to customers and other organisations who deal with Southern Water before deciding we deserved the Government's award of excellence."

Criteria examined by the Charter Mark assessors included performance standards, information and openness, consultation and choice, courtesy and helpfulness, putting things right, value for money, user satisfaction, improvements in service quality and planned improvements.

And they concluded: "There were no major weaknesses in any of the criteria", describing the new customer call centre as: "A state of the art model of good practice which is enormously impressive, particularly in its ability to apply quality control and measure performance."

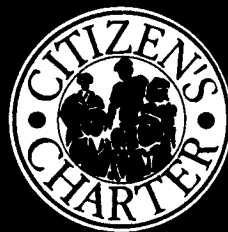
**CONTACT: Geoff Loader, Jane Gould 01903 264444**



Foreign &  
Commonwealth  
Office

# RAISING THE STANDARD:

BRITAIN'S CITIZEN'S CHARTER  
AND PUBLIC SERVICE REFORMS



RAISING THE STANDARD



RAISING THE STANDARD:  
BRITAIN'S CITIZEN'S CHARTER  
AND  
PUBLIC SERVICE REFORMS

FOREWORD: by the Prime Minister

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RAISING THE STANDARD:  
BRITAIN'S CITIZEN'S CHARTER  
AND  
PUBLIC SERVICE REFORMS



F O R E W O R D

Prime Minister Rt Hon John Major MP

*The Citizen's Charter is changing the face of public services in the United Kingdom. It has a simple but ambitious aim: to raise the standard of public services up to and beyond the best at present available and to make them answer better to the needs of ordinary people. It has six key principles - setting standards, information and openness, choice and consultation, courtesy and helpfulness, putting things right and value for money. These are being adopted throughout the public service.*

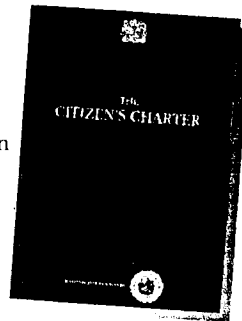
*The Charter initiative embraces greater competition, independent scrutiny of public services; greater accountability and openness and a programme of management change to improve our public services. It ensures that the needs and wishes of those who use these services come first.*

*This programme of reform is attracting interest around the world and is now being imitated by other governments. This booklet describes what we are doing, drawing on the support, skill and commitment of those who work in the public services. There is a good story to tell and I hope it will provide a model for action elsewhere.*

A handwritten signature in black ink, which appears to read "John Major". The signature is written in a cursive style and is located at the bottom center of the page.

# THE CITIZEN'S CHARTER

The Citizen's Charter was launched by the Prime Minister in July 1991 with the aim of raising the standard of public services by making them more responsive to the wishes and needs of users.



more state action, but a statement of the Government's belief in the right of citizens to be informed and choose for themselves.

The Citizen's Charter White Paper (Cm 1599) sets out the principles to be followed in the public service and a comprehensive programme of specific improvements to those services. In April 1992 the Prime Minister appointed a Cabinet Minister with responsibility for carrying the programme forward.

The Charter is based on the recognition that all public services are paid for by individual citizens, either directly or through their taxes. Citizens are entitled to expect high-quality services, responsive to their needs, provided efficiently at a reasonable cost. Where the state is engaged in regulating, taxing or administering justice, these functions too must be carried out fairly, effectively and courteously.

The Charter also recognises that those who work in the public sector are keen to improve the services that they provide and that they have the skills, dedication and enthusiasm to do so. What they have sometimes lacked is the freedom and the encouragement to try out new ideas.

The Citizen's Charter aims to give more power to the citizen. It is not a recipe for

The Charter programme is being pursued in a number of ways. The approach varies from service to service in different parts of the United Kingdom. The Charter is not a blueprint which imposes a uniform pattern on every service. It is a toolkit of initiatives and ideas to raise standards in the way most appropriate to each service.

**There are four main themes to the Charter strategy**

**QUALITY** - A sustained new programme for improving the quality of public services.

**CHOICE** - Choice, wherever possible between competing providers, is the best spur to quality improvement.

**STANDARDS** - The citizen must be told what service standards are and what he or she can do if those standards are not met.

**VALUE** - The citizen is also a taxpayer; public services must give value for money within the resources the nation can afford.

# THE CITIZEN'S CHARTER

## THE PRINCIPLES OF PUBLIC SERVICE

The Charter sets out a number of key principles all designed to take the idea of the 'customer', the consumer of public services, and make a reality of it in the day-to-day management and operating of those services. Every citizen is entitled to expect:

### *STANDARDS*

Setting, monitoring and publication of explicit standards for the services that individual users can reasonably expect. Publication of actual performance against these standards.

### *INFORMATION AND OPENNESS*

Full, accurate information readily available in plain language about how public services are run, what they cost, how well they perform and who is in charge.

### *CHOICE AND CONSULTATION*

The public sector should provide choice wherever practicable. There should be regular and systematic consultation with those who use services. Users' views about services, and their priorities for improving them, to be taken into account in final decisions on standards.

### *COURTESY AND HELPFULNESS*

Courteous and helpful service from public servants who will normally wear name badges. Services available equally to all who are entitled to them and run to suit their convenience.

### *PUTTING THINGS RIGHT*

If things go wrong, an apology, a full explanation and a swift and effective remedy. Well publicised and easy to use complaints procedures with independent review wherever possible.

### *VALUE FOR MONEY*

Efficient and economical delivery of public services within the resources the nation can afford. And independent validation of performance against standards.

## THE BEGINNINGS OF REFORM

By the early 1980s, the Government was seeking ways of improving the quality of public services without adding to their costs. Too often, public sector organisations seemed to deliver services that were designed to suit the providers rather than the recipients.

The need to address these problems had become one of the great challenges facing both the Government and public service managers. A series of major reforms were instigated, aimed at injecting greater economy, efficiency and effectiveness into the public services. These - the efficiency scrutinies, the Financial Management Initiative (FMI), and the Next Steps programme - provided the foundations from which the Citizen's Charter was launched.

## EFFICIENCY SCRUTINIES

Efficiency scrutinies were introduced by the Government in 1979. A scrutiny works by examining closely a single activity or function. It sets out to establish what actually happens; provide facts and figures that are soundly based; challenge assumptions that hold back fresh thinking and better use of resources; demonstrate that necessary change can be brought about; and achieve measurable improvements within 2 years.

Scrutinies are usually carried out within an individual government department. The terms of reference, action plan and implementation timetable are agreed with the Minister and the head of department. The resulting report aims to present specific, fact-driven recommendations with a time table for action. After two years the department produces an implementation report showing what has been achieved as a result. Scrutinies are a well proven way of focusing on action to exploit opportunities for real improvements. In recent years they have produced savings and benefits valued at around £200-£300 million annually.

# THE CITIZEN'S CHARTER

## FINANCIAL MANAGEMENT INITIATIVE

Another key reform was the introduction of the Financial Management Initiative (FMI) in 1982. The aim was to improve management in the Civil Service by ensuring that all managers knew what their objectives were and how their achievements would be assessed; had well defined responsibilities for making the best use of their resources; and the necessary information, training and advice to exercise their responsibilities effectively.

As a result of FMI, managers in government departments were for the first time given responsibility for managing their own budgets. Output was measured and the cost-effectiveness of their work evaluated. Managers became personally accountable for their work as each department was required to operate within a limit for its manpower and total running costs. This approach has underpinned subsequent reforms.

## NEXT STEPS

In February 1988 the Next Steps initiative was launched. This followed a report by the Prime Minister's Efficiency Unit entitled 'Improving Management in Government: the Next Steps'. The initiative is designed to improve management and the delivery of services to the public by creating Agencies to carry out the executive functions of government.

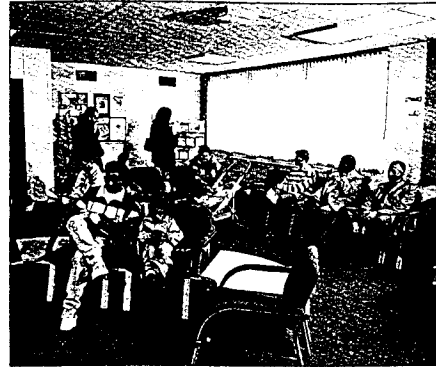
Each Agency publishes a Framework Document setting out the aims and objectives of the Agency, its financial and accounting arrangements and its approach to pay and personnel issues.

The main characteristics of Executive Agencies are that:

- they operate within a rigorous framework with clear targets which identify the task to be done, the results to be achieved and the resources to be provided;
- the day to day responsibility for running the organisation is delegated to a Chief Executive with personal responsibilities and managerial authority for the job to be done. The Chief Executive answers directly to a Minister.

# THE CITIZEN'S CHARTER

Each Agency also publishes an annual report and statement of accounts, along commercial lines, which sets out its achievements for the year. As a result more information about the activities of the executive work of government is being published. Parliamentary and public scrutiny of Agencies is better informed and more focused on results.



There have been significant improvements in services as a result of the Agency programme. For example: the waiting times for driving tests have been reduced from 13 weeks to less than six weeks, and the Passport Agency has improved its turn-round-time for processing applications from 24 to 7 days.



Some 76 Agencies have now been established and more than half of all civil servants, over 290,000 people, are now working in organisations operating on Next Steps lines.



## THE CITIZEN'S CHARTER

### REFORM AS PART OF THE CITIZEN'S CHARTER

The reforms of the 1980s were aimed - step by step - at getting public service delivery systems right. They reflected the Government's belief that the competitive market is the most efficient and responsive mechanism for providing goods and services.

As the Citizen's Charter makes clear, one way to achieve increased choice is to bring private sector disciplines to bear on the way public services are run. Privatisation is therefore a key approach wherever possible, with regulatory bodies where, because of the remaining element of monopoly, the public interest requires it. So far, 46 major activities and many smaller ones have been privatised, including the utilities.

An increasing range of services have been bought in from the private sector over many years. In November 1991 the Government's White Paper 'Competing for Quality' set out proposals for extending competition in the provision of services in both central government and the National Health Service.



In central government, all departments and agencies have been set targets for work to be market tested. The 1992/93 target amounts to a fifty-fold increase over previous targets for market testing. The new areas to be tested will cover a wide range of activities moving from traditional support services such as catering and cleaning to areas closer to the heart of government.

There is no presumption that these activities will be contracted out to private suppliers. The Government believes that the best in public services can match anything in the private sector. The objective is to promote fair competition so that the public services can achieve, everywhere, the best value for money for the customer and for the taxpayer.

These reforms have been about getting the internal organisation of public service right. With the advent of the Citizen's Charter the focus of the Government's programme of reform has turned to looking at the external face of the public services:

the relationship between public services and their users.

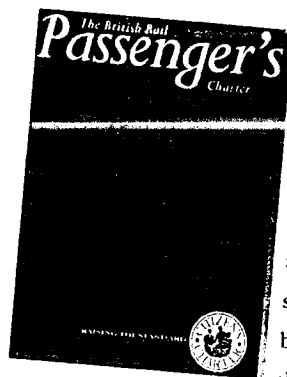


PRINCIPLES INTO PRACTICE

Putting the customer first is what the Citizen's Charter is all about. The Citizen's Charter principles being put into practice across all public services are:

STANDARDS

Since March 1992 **British Rail** have set performance standards for the reliability and punctuality of train services and published their performance against these each month.



**National Health Service** hospitals set maximum waiting times for admission.

INFORMATION AND OPENNESS

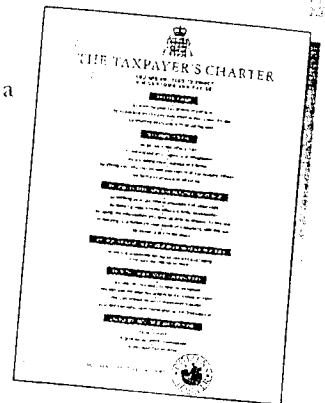
All the 76 **Next Steps Executive Agencies** publish annual reports of progress against published targets.

**Schools** now publish all their public examination results.

**Police** and **prison** inspectors' reports are published.

CHOICE AND CONSULTATION

The **Inland Revenue** has published a wide ranging survey of taxpayers' views of the service they receive and their ideas for improvements. The Revenue has also asked for taxpayers' views on how to improve its forms and leaflets.



COURTESY AND HELPFULNESS

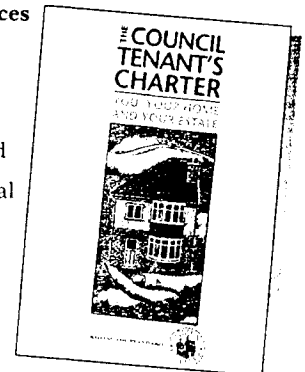
Many public servants now wear name badges. They include civil servants in, for example, the **Employment Service** and **Customs and Excise**, some police services and **fire brigades**. Whilst bodies such as the **Prison Service** and the **Post Office** are due to introduce name badges by 1993.

Many **Benefits Agency** offices have 'fast stream' reception points to answer simple enquiries quickly.

PUTTING THINGS RIGHT

**British Rail** pays compensation for failure to meet specified standards. The **gas, water, electricity** and **telephone services** do likewise.

The **Council Tenant's Charter** promises legislation which will extend the 'right to repair' so as to make local authorities pay directly for certain minor repairs to a tenant's home.



# THE CITIZEN'S CHARTER

## Implementing the Charter

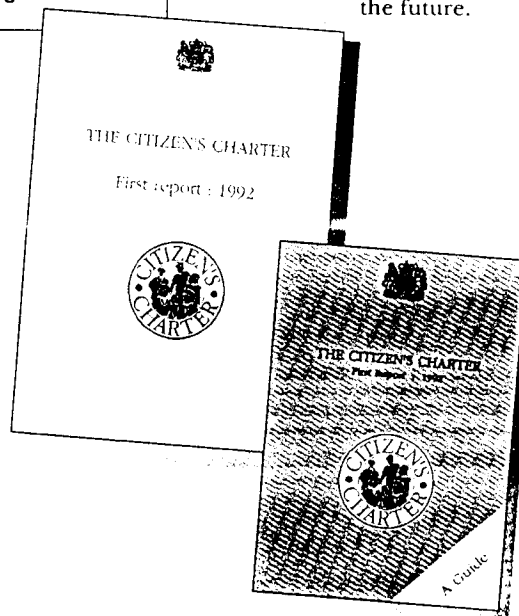
The range of mechanisms in the Charter covers;

- more privatisation;
- wider competition;
- further contracting-out;
- more performance-related pay;
- published performance targets-local and national;
- comprehensive publication of information on standards achieved;
- more effective complaints procedures;
- tougher and more independent inspectorates;
- better redress for the citizen when services go badly wrong.

## THE CITIZEN'S CHARTER ADVISORY PANEL

To advise him on the progress of the Citizen's Charter the Prime Minister has appointed a Panel drawn from business, consumer affairs and education under the chairmanship of Sir James Blyth (Chief Executive of Boots Company Plc). This Panel works with the Citizen's Charter Unit in the Cabinet Office and officials in all the Departments of State to implement and develop the Citizen's Charter programme. The Prime Minister holds regular Citizen's Charter Seminars, involving Advisory Panel Members and Cabinet Ministers and senior civil servants from each department, to report on progress to date and plans for the future.

The Citizen's Charter First Report 1992 was published on 25 November 1992.



## DELIVERING QUALITY AND CHECKING PROGRESS

### *PERFORMANCE AND PAY*

The ways in which people are paid can have a powerful effect on improving performance. Pay systems in the public sector need to make a regular and direct link between a person's contribution to the standards of service provided and his or her reward.

### *STRENGTHENED INSPECTION*

Inspectorates cover key areas of public service - police, prisons, schools, and social services. Their responsibility is to check that the professional services that the public receives are delivered in the most effective way possible and genuinely meet the needs of those whom they serve. In the past, inspectorates have often been staffed exclusively by members of the profession they oversee. Under the Citizen's Charter programme, the Government is opening up inspectorates to the outside world and making them more responsive to public concerns. Lay members are being appointed to work closely with

professional colleagues. The lay member's role will be to ensure professional expertise is balanced by the practical concerns of the general public.

Inspectorates will be expected to consult the public and to publish signed reports in plain language, to raise public awareness and inform policy, as well as bring pressure to bear on management.

#### **A start has been made for example with:**

- new contracts for family doctors, including payments for meeting targets;
- pay for general managers in the NHS is being linked to performance, notably for success in tackling waiting lists;
- pay for improved performance for school heads and deputies;
- extra payments for the best classroom teachers;
- performance related pay for most civil servants;
- Agency Chief Executives' pay related directly to performance, often under fixed contracts;
- bonuses for nationalised industry directors which depend on the industry meeting its service targets.

## PUBLISHED CHARTERS

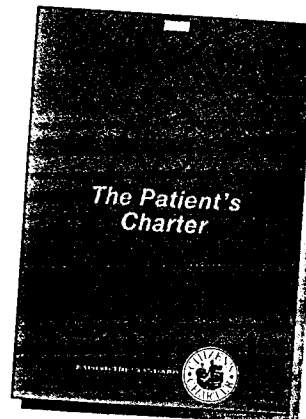
14

The following public bodies have published charters as part of the Citizen's Charter initiative:-

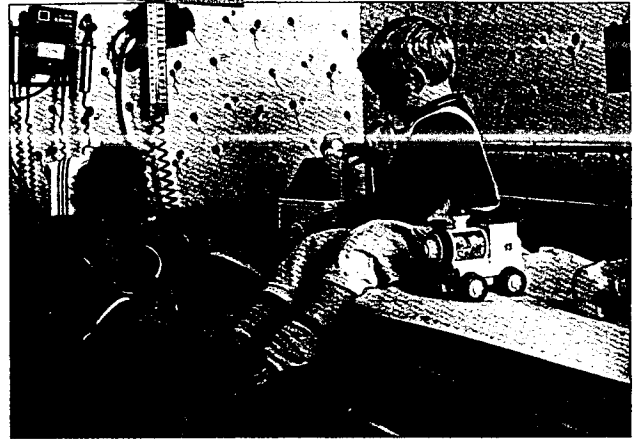
Passenger's Charter	British Rail
Taxpayer's Charter	HM Customs & Excise
Traveller's Charter	
Parent's Charter	Department for Education
Redundancy Payments Service Charter	Employment Department
Jobseeker's Charter	Employment Service
Tenant's Charter	Department of the Environment
Patient's Charter	Department of Health
Taxpayer's Charter	Inland Revenue
Courts Charter	Lord Chancellor's Department,
	Home Office & Crown Prosecution
	Service
London Underground Customer Charter	London Underground Limited
Benefits Agency Customer Charter	Social Security Benefits Agency
Contributor's Charter	Social Security Contributions Agency
Employer's Charter	
<b>Northern Ireland</b>	
Northern Ireland Charter	Department of Finance and Personnel, Northern Ireland
Northern Ireland Parent's Charter	Department of Education for Northern Ireland
Northern Ireland Charter for Patients and Clients	Department of Health and Social Services, Northern Ireland
Northern Ireland Tenant's Charter	Northern Ireland Housing Executive
Northern Ireland Railways Passenger's Charter	Northern Ireland Railways
Northern Ireland Charter for Social Security Agency Clients	Northern Ireland Social Security Agency
Northern Ireland Training and Employment Agency Customer's Charter	Training and Employment Agency Northern Ireland
<b>Scotland</b>	
Justice Charter for Scotland	Scottish Office
Parent's Charter for Scotland	
Patient's Charter for Scotland	
Tenant's Charter for Scotland	
<b>Wales</b>	
Parent's Charter for Wales	Welsh Office
Patient's Charter for Wales	
Tenant's Charter for Wales	

*THE PATIENT'S CHARTER*

The National Health Service Patient's Charter was launched in October 1991. The Charter sets out patients' rights and entitlements, including timed hospital appointments; a waiting time guarantee under which patients will be guaranteed



admission for virtually all treatments within two years of being placed on a waiting list by a consultant; the right for patients to have any complaint investigated, and to a full and prompt written reply from the Chief Executive or General Manager. A summary of the Charter was sent to every household in



England, and 900,000 copies of the full Charter have been supplied on request.

*FOR THE FUTURE :*

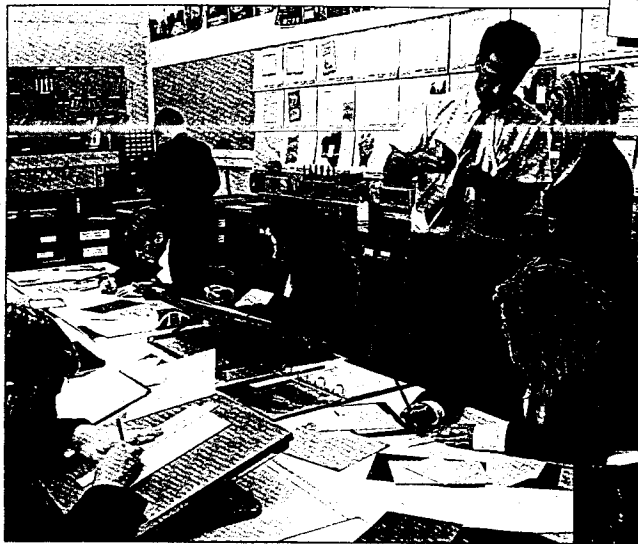
the Government intends to reduce waiting times still further and extend the Patient's Charter to cover general medical services such as General Practitioners.

## INDIVIDUAL SERVICE CHARTERS

16

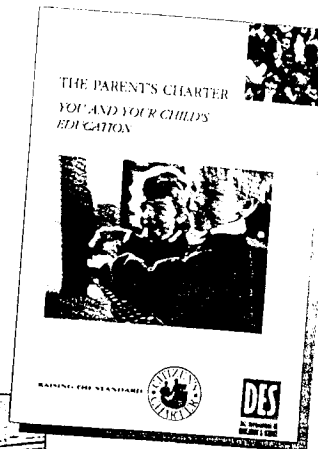
### *THE PARENT'S CHARTER*

The Parent's Charter, published in September 1991, provides parents with the information they need to exercise the new rights of choice, conferred on them by the Government, fully and effectively.



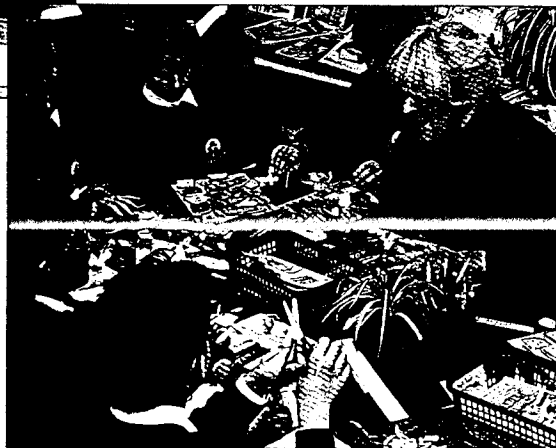
So far, over 16,000 schools - 64 per cent of the total - have asked for over 4 million copies. In addition, more than 70,000 individuals have ordered their own copies direct from the Department for Education. The large take-up demonstrates the extent of the demand for information about what is happening in British schools.

Parents now have a right to see governors' annual reports, which include



the exam results of their children's school. All parents will also receive an annual report on their child's progress; and tables comparing the exam results of

different schools will be published every year in local papers and placed in libraries, and will be made available to parents. From 1993, these comparative tables will include truancy figures and information on where pupils go when they leave school. National Curriculum test results will be published as soon as they become available.



### *FOR THE FUTURE*

**A Further and Higher Education Charter** will be published in early 1993 giving information about what services are on offer and about their quality, so that

both students and employers can make more informed choices. It is intended that the Charter will cover such matters as quality assessment of courses, membership of student unions and service standards for the payment of grants and loans, admissions systems and guidance on individual academic and career needs.

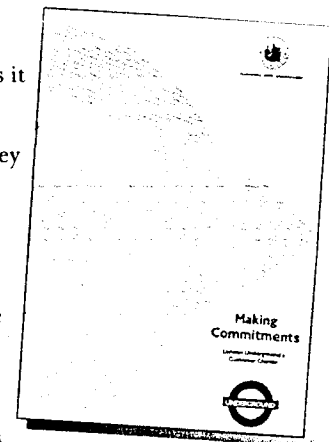


## *BRITISH RAIL PASSENGER'S CHARTER*

British Rail's Passenger's Charter was launched in March 1992. The Charter sets targets for the reliability and punctuality of each line, and contains a clear commitment to improving the quality of service, outlines provisions for compensation for inconvenience, the wearing of name badges and for performance related pay. British Rail are now publishing every four weeks up to date 'Track Record' figures on reliability and punctuality showing how individual groups of routes are performing. Standards will be reviewed annually, and the results are reflected in the rate of change of railway fares in different areas. From January 1993, discounts of 5% or 10% will be available to people who renew monthly or longer season tickets if British Rail fails by more than a small margin to meet the relevant punctuality or reliability standard - or both - over the course of the preceding year.

## *LONDON UNDERGROUND CUSTOMER CHARTER*

London Underground's Customer Charter commits it to providing a safe, quick, reliable, and value for money service. It includes a new refund scheme which entitles customers to a refund voucher if they have to wait on the platform for 20 minutes longer than advertised, or if the train in which they are travelling is delayed by more than 20 minutes. The scheme is advertised on posters at all stations.



## THE UTILITY COMPANIES

Some public services like gas, telecoms, electricity and water are now in the private sector and, because full competition will take time to develop or will always be limited, regulatory bodies have been set up to look after consumers' interests and encourage competition.

The Government's new Competition and Service (Utilities) Act 1992 provided new statutory powers for regulators to:

- set and monitor standards;
- help make customers aware of standards;
- provide for compensation where guaranteed standards are not met;
- improve complaints procedures.
- facilitate greater competition in the provision of water and sewerage services.





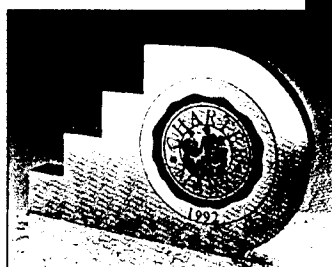
The Charter Mark scheme is a new award for excellence in delivering public services. It is open to public services whose whole or main purpose is to serve the public directly. Charter Mark award winners had to satisfy the judges - the Prime Minister's Citizen's Charter Advisory Panel - that they met the Citizen's Charter principles.

Some 300 public service organisations applied for the 1992 Charter Mark. Applications were received from organisations throughout the United Kingdom. All parts of the public sector were represented, from individual schools and hospitals to Next Steps Agencies, local authority services and the privatised utilities.

The first 36 Charter Mark awards were presented by the Prime Minister at a public ceremony in the Banqueting

House in London on 29 September 1992. The winners, ranged from electricity companies to a prison in Scotland and schools in Cornwall and Londonderry.

The award winners can use the Charter Mark on their products and equipment, on stationery, vehicles and promotional material for up to 3 years.



## SPREADING THE WORD SERVICE FOR THE CITIZEN IN THE 1990s

20

From its outset the Citizen's Charter concept - looking at services from the user's point of view - has attracted world interest. The Citizen's Charter Unit based in the Cabinet Office, has played host to Government Ministers, academics and officials from the European Community and from countries such as Sweden, Australia, Japan, India, Cyprus, Hungary, Canada, the United States and Brazil. Since the 1980s the Civil Service College has provided a wide range of courses on public sector reform for the

British civil servants and their foreign counterparts and also for members of the business community either from home or abroad. These courses now include sessions on the development and operation of the Citizen's Charter. Similarly the British Council, through its worldwide network of overseas offices which seek to promote Britain abroad, is providing information and briefing and, from time to time seminars, to those interested in learning more about Britain's public sector reforms.



## C O N C L U S I O N

ScottishPower.B. Moir, p.25  
Ex.SP\_(BM-7),No.98-2035-04

With the Citizen's Charter the British public service has embarked on one of the most ambitious programmes for radical reform in its long history. The principles that underlie it are not unique to the United Kingdom. Better, more responsive public services are the common goal of many governments across the world. We hope to see the international advance of reforms of the kind discussed in this booklet.

## FURTHER READING

### PUBLIC SERVICE REFORMS

*Efficiency and Effectiveness in the Civil Service.*  
(1982)  
ISBN 0 10 186160 HMSO

*Making Things Happen: A Report to the Prime  
Minister on the Implementation of Government  
Efficiency Scrutinies.* (1985)  
ISBN 0 11 430009 7 HMSO

*Improving Management in Government: The Next  
Steps* (1988)  
ISBN 0 11 430026 7 HMSO

*Making the Most of Next Steps. Efficiency Unit  
Report to the Prime Minister* (1991)  
ISBN 0 11 430055 0 HMSO

*Office of the Minister for the Civil Service: A Force for  
Improvement in the UK Civil Service* (1991)  
ISBN 0 7115 0223 4

*Setting up Next Steps: A short account of the origins,  
launch and implementation of the Next Steps Project  
in the British Civil Service.* (1991)  
ISBN 0 11 430056 9 HMSO

### CITIZEN'S CHARTER

*The Citizen's Charter* (1991)  
ISBN 0 10 115992 7 HMSO

*Competing for Quality: Buying better public services*  
(1991)  
ISBN 0 10 117302 4 HMSO

*The Citizen's Charter First Report: 1992*  
ISBN 0 10 121012 4 HMSO

16113

**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

In the Matter of the Application of PacifiCorp  
and Scottish Power plc for an Order  
Approving the Issuance of PacifiCorp  
Common Stock

Docket No. 98-2035-04

RECEIVED

FEB 26 9 11 AM '99

UTAH PUBLIC  
SERVICE COMMISSION

**PacifiCorp**

**Direct Testimony of Richard T. O'Brien**

**February 26, 1999**

## INTRODUCTION

1 Q. Please state your name and business address.

2 A. My name is Richard T. O'Brien. My business address is 825 N.E. Multnomah,  
3 Portland, Oregon.

4 Q. By whom are you employed and in what position?

5 A. I am employed by PacifiCorp as Executive Vice President and Chief Operating  
6 Officer.

7 Q. Please summarize your education and business experience.

8 A. I received a bachelor's degree in economics from the University of Chicago and a  
9 law degree from Lewis and Clark College, Northwestern School of Law. From  
10 1983 to 1993 I served in various financial positions at NERCO, a former mining  
11 and resource development subsidiary of PacifiCorp. In 1993 I was appointed  
12 Vice President of Corporate Finance of PacifiCorp and in 1995 was appointed  
13 Senior Vice President and Chief Financial Officer. I was appointed to my current  
14 positions in 1998.

15 Q. What position will you hold with PacifiCorp after the transaction with Scottish  
16 Power plc ("ScottishPower") is closed?

17 A. I will be the President and Chief Operating Officer of PacifiCorp.

## 18 TESTIMONY SUMMARY

19 Q. What is the purpose of your direct testimony in this proceeding?

20 A. The purpose of my testimony is to explain why PacifiCorp decided to pursue a  
21 transaction with ScottishPower and why we believe that the proposed transaction  
22 is in the public interest.

1 In summary, we decided to pursue the transaction with ScottishPower because we  
2 believe a combination with ScottishPower will enable PacifiCorp to become a top  
3 performing utility quicker, more fully and with a higher degree of certainty than if  
4 we were to attempt it alone. Our combination with ScottishPower is in the public  
5 interest because:

- 6 • The combination with ScottishPower will result in a financially stronger  
7 company than PacifiCorp standing alone;
- 8 • ScottishPower will add significantly to PacifiCorp's ability to improve its  
9 reliability, system operations and customer service;
- 10 • ScottishPower and PacifiCorp together will produce greater efficiencies.  
11 innovations and cost savings in PacifiCorp's operations;
- 12 • ScottishPower has demonstrated its commitment to employees and the  
13 communities it serves and will enhance PacifiCorp's efforts in these areas; and
- 14 • ScottishPower will complement and strengthen PacifiCorp's efforts in  
15 environmental stewardship and the development and marketing of green  
16 power.

17 In addition, ScottishPower will commit to a comprehensive set of system  
18 performance standards and customer service guarantees that address our  
19 customers' most important service quality and customer service concerns. These  
20 standards will set a new benchmark for U.S. utilities.





1 existing stockholders of PacifiCorp will control approximately 36% of the  
2 common stock of HoldCo.

3 Q. Please describe the stock issuance associated with this transaction.

4 A. To accomplish the transaction, PacifiCorp will issue new common stock to  
5 facilitate the merger of Merger Sub with and into PacifiCorp. Under the  
6 Amended Agreement, upon the closing all shares of PacifiCorp common stock  
7 will be canceled and retired, and PacifiCorp will issue new common stock to an  
8 entity wholly-owned by HoldCo. PacifiCorp will thereafter continue to exist as  
9 an indirect, wholly-owned subsidiary of HoldCo and will be an affiliate of  
10 ScottishPower.

#### 11 REASONS FOR THE TRANSACTION

12 Q. Why did PacifiCorp enter into this transaction with ScottishPower?

13 A. We entered into this transaction because we believe a combination with  
14 ScottishPower represents the best and quickest way for PacifiCorp to achieve its  
15 objectives of providing top quality service to its customers and a reasonable return  
16 to its shareholders. We are also persuaded that a combination with ScottishPower  
17 would be in the best interests of our employees and the communities we serve.

18 Q. Please explain your objective of becoming a top quality electric service provider.

19 A. We have been convinced for several years that in order to prosper in the changing  
20 domestic electricity markets, a utility's services and costs must meet world class  
21 standards. Business customers are becoming global in their operations and will  
22 expect world class performance from their electricity suppliers. Suppliers who do  
23 not meet these expectations will not succeed.

1 Providing world class performance does not mean that PacifiCorp must become  
2 global in scope. Instead, it requires that PacifiCorp provide a level and quality of  
3 service that is on a par with the best electric service providers in the world, and  
4 that it accomplish this objective without compromising its low prices.

5 Our pursuit of a combination with The Energy Group was done to a significant  
6 degree for the purpose of aiding us in our effort to become a world class electric  
7 service provider. When it became apparent that transaction could not be done, or  
8 could only be done at too high a cost, we abandoned it in favor of focusing on our  
9 core electricity business in the western United States. We were prepared to try to  
10 become a top performing electric service provider entirely on our own. We  
11 recognized the difficulty of this task and understood that it would require many  
12 years to accomplish.

13 Despite our decision to focus on our core electricity business, we remained  
14 convinced that our customers would be served best by a large, stable enterprise  
15 able to offer the most competitive prices while providing customer service and  
16 reliability that reflect the world's best practices. Similarly, our shareholders  
17 would be advantaged by owning a part of such an enterprise.

18 Q. How does the ScottishPower transaction fit with your objective of becoming a top  
19 performing electric service provider?

20 A. The ScottishPower transaction will bring to bear the combined experience, skill,  
21 innovation and commitment of PacifiCorp and ScottishPower in the areas of  
22 electric power supply and operations, customer service, community involvement,  
23 employee relations and environmental stewardship. We are in the same business

1 and share the same objectives. We do not need to realign the objectives of either  
2 party.

3 ScottishPower is an excellent partner for PacifiCorp. Our assets, views and  
4 objectives are complementary. ScottishPower is fully committed to our focus on  
5 the core electricity business in the western United States and to our goal of  
6 providing world class service. They have a proven and enviable record as a utility  
7 system operator. They are innovative in their approach to the electricity business,  
8 particularly to system performance and customer service issues, which are  
9 increasingly important. They have already developed programs targeting areas in  
10 which PacifiCorp seeks to improve, including service reliability, computer  
11 systems and customer care.

12 ScottishPower has already demonstrated that it is both skillful and agile in  
13 transforming utilities into world class performers. By combining the experience  
14 and skills ScottishPower has developed in the United Kingdom with PacifiCorp's  
15 own experience and skills, we expect to achieve our operations and customer  
16 service objectives faster, more fully and with more certainty than if we were to  
17 attempt it alone.

#### 18 **BENEFITS OF THE TRANSACTION**

19 Q. How will the transaction benefit PacifiCorp customers?

20 A. Through the transaction, we will create a balanced and strong enterprise that can  
21 provide the highest level of service to our customers while maintaining or  
22 improving PacifiCorp's low costs. ScottishPower is a leader in efficient, reliable  
23 operations and customer service. We expect that the ScottishPower experience

1 and excellence can be brought to PacifiCorp so that the two companies together  
2 can provide service to our customers that reflects the best practices in the world.

3 Q. Did PacifiCorp pursue the transaction with ScottishPower in the expectation that  
4 retail energy markets would soon be deregulated in the states where it serves?

5 A. No. While deregulation may ultimately be pursued in PacifiCorp's jurisdictions,  
6 this was not the motivation for our wishing to take advantage of ScottishPower's  
7 skills and experience. Efficiency, customer service and community involvement  
8 are important regardless of the extent of regulation an electric utility faces. It is  
9 our belief that if a company can provide superior customer and community service  
10 in a deregulated environment, and at the same time be profitable and more  
11 efficient, it has a lot to offer to a utility still subject to cost-of-service regulation.  
12 If deregulation comes, we will be much better prepared for it as a result of our  
13 affiliation with ScottishPower.

14 Q. Please comment on the system and customer service improvements you expect  
15 will result from the transaction.

16 A. In their testimony, Messrs. Richardson and Moir describe a number of  
17 improvements and explicit commitments that ScottishPower is prepared to make  
18 regarding PacifiCorp's system performance and customer service. The system  
19 performance commitments include improving system availability and reliability,  
20 improving the worst performing circuits in each state on an annual basis,  
21 improving the restoration of the system following outages and improving the  
22 company's overall responsiveness to customers. The customer service  
23 commitments include an array of individual service guarantees accompanied by

1 payments to customers for failure to perform. The nature and breadth of these  
2 commitments and the fact that the customer service standards are backed up by  
3 meaningful guarantees is unprecedented in the electric utility industry in the U.S.  
4 I believe these standards will be the most comprehensive offered by any investor-  
5 owned U.S. utility. They address all of the most important system performance  
6 and customer service concerns. These standards will be of great value to  
7 PacifiCorp's customers and will set a new benchmark for U.S. utilities. It is clear  
8 to us that ScottishPower not only has unique operating experience but also a  
9 unique understanding of the critical value of service quality and customer service.

10 Q. Couldn't PacifiCorp implement these service quality and customer service  
11 standards without the proposed transaction?

12 A. Perhaps, but not as soon, not as fully and not with as high a probability of success.  
13 As I said earlier, we looked into what we could accomplish on our own and how  
14 long it would take us to accomplish our objectives after we abandoned The  
15 Energy Group transaction. ScottishPower is willing to guarantee material service  
16 quality and customer service improvements because it has accomplished these  
17 sorts of gains before. Lacking this experience, PacifiCorp simply could not  
18 commit to achieving improvements this substantial or this broad on this short a  
19 time schedule. I also expect that PacifiCorp could not achieve these improvements  
20 as economically as it will be able to do in combination with ScottishPower.  
21 Our objectives are to raise our service to the highest levels while at the same time  
22 maintaining or improving PacifiCorp's low costs. In combination, these are  
23 daunting tasks, but ones we believe are necessary to serve our customers and

1 survive in an increasingly competitive industry. Our transaction with  
2 ScottishPower is a sign that we are serious about these objectives and committed  
3 to achieving them quickly, fully and economically.

4 Q. How will the benefits that you expect be reflected in PacifiCorp's prices?

5 A. Let me state first that improvements in service reliability, operational efficiencies  
6 and customer service are extremely important and beneficial to customers in and  
7 of themselves. These improvements require significant up-front investments and  
8 their cost reduction benefits will be realized over a longer term. That said, I would  
9 expect, based upon ScottishPower's experience in the U.K., that its involvement  
10 with PacifiCorp's operations will result in significant efficiencies and cost savings  
11 by the end of the five-year period discussed in Mr. MacRitchie's testimony.

12 In the normal course, as cost savings are realized they will be reflected in  
13 PacifiCorp's cost of service for ratemaking purposes. Following the initial period  
14 of service quality and customer service improvements, cost savings will begin to  
15 occur and will reduce the need for price increases. These benefits will result in  
16 prices lower than they would be without the transaction.

17 Q. Would it be appropriate for the Commission to require guaranteed price  
18 reductions as a condition to approving the transaction between PacifiCorp and  
19 ScottishPower?

20 A. No. Most regulatory proceedings involving utility mergers have related to  
21 transactions that are principally motivated by the opportunity to capture savings or  
22 efficiencies resulting from the consolidation of two domestic operating  
23 companies. In these sorts of transactions, the parties have typically quantified

1 potential savings as part of their decision to pursue the transaction and their  
2 savings estimates are reasonably precise. Examples of these sorts of transactions  
3 are the 1989 merger of PacifiCorp and Utah Power & Light Company and the  
4 1997 merger of Puget Sound Power & Light Company and Washington Energy  
5 Company. In these circumstances, commissions have required some measure of  
6 price reductions to reflect the projected savings that have been quantified by the  
7 parties and have served as the basis for the commission's approval.

8 The present transaction does not involve the consolidation of two operating  
9 companies and is not principally motivated by potential operating improvements  
10 and savings. Even if one adopts the view that the standard for Commission  
11 approval requires "positive net benefits" to customers, the expectation that this  
12 transaction will result in better and more reliable service is more than enough to  
13 constitute positive net benefits to customers.

14 Q. How will the transaction benefit PacifiCorp's employees?

15 A. PacifiCorp's employees will have opportunities to work for a fast-growing,  
16 financially-stable, competitive and innovative company. As detailed in the  
17 testimony of Mr. Kelly, ScottishPower has a superb reputation in regard to the  
18 training opportunities and other benefits it offers its employees. Many of these  
19 opportunities, as well as international employee exchanges, will be available to  
20 PacifiCorp employees. ScottishPower also works responsibly and collaboratively  
21 with unions and has committed to honoring all existing labor agreements.

1 Q. How will the transaction benefit the environment?

2 A. Like PacifiCorp, ScottishPower is a leader in the industry in developing policies,  
3 programs and incentives for "green" energy, particularly wind turbines.

4 PacifiCorp is the leading purchaser of wind power facilities in the western United  
5 States outside of California. PacifiCorp also is the largest supplier to the leading  
6 green marketer in California and has the only operating geothermal facility  
7 serving the northwest. In collaboration with environmental, consumer and  
8 regulatory groups, PacifiCorp incorporated renewable resource incentives into its  
9 alternative form of regulation in Oregon.

10 The combination with ScottishPower will strengthen PacifiCorp's resources  
11 dedicated to environmental programs and the goal of becoming a leading  
12 developer and marketer of green energy. As Mr. Richardson testifies,  
13 ScottishPower will commit to implementing internal processes and systems that  
14 emphasize improving environmental performance in PacifiCorp's operations,  
15 filing "green resource" tariffs in each state, contributing \$100,000 to the  
16 Bonneville Environmental Foundation, developing an additional 50 MW of  
17 renewable resources and studying a possible expansion of the Blundell geothermal  
18 project. PacifiCorp alone would not undertake all of these initiatives  
19 simultaneously and could not accomplish them as quickly as we can with the help  
20 of ScottishPower.

21 Q. What about the communities in which PacifiCorp provides electric service?

22 A. Mr. Kelly describes in his testimony the active role that ScottishPower has taken  
23 in its local communities. A very tangible community benefit is reflected in the



1 Agreement, and retained in the Amended Agreement, where ScottishPower has  
2 agreed add \$5 million to the PacifiCorp Foundation, increasing its endowment by  
3 approximately 12.5% to \$45 million. These funds will be available for charitable  
4 use throughout the PacifiCorp service territories.

5 Both ScottishPower and PacifiCorp are committed to developing, maintaining and  
6 improving their local presence in PacifiCorp's service territories. Following the  
7 closing of the transaction, the new U.S. headquarters for ScottishPower will be  
8 located in Portland, Oregon. PacifiCorp will still be headquartered in Portland  
9 and will continue to have significant functions led from Salt Lake City, Utah.

10 While PacifiCorp will continue to be operated as an integrated utility,  
11 ScottishPower respects the unique histories of Pacific Power and Utah Power and  
12 expects to draw on the strengths of these histories in forging its community  
13 relationships. It has done the same with Manweb and Southern Water, the two  
14 utilities it acquired in the U.K.

15 More broadly, as a result of the transaction, PacifiCorp will be financially stronger  
16 and better able to survive and prosper in a changing electricity industry. We  
17 recognize that PacifiCorp is an important economic contributor to many  
18 communities in the western United States. The size and financial stability this  
19 transaction will bring to PacifiCorp will assure that we will be around performing  
20 that role for many years to come.

21 Q. Does this conclude your direct testimony?

22 A. Yes.

AFFIDAVIT

STATE OF OREGON            )  
  :  
COUNTY OF MULTNOMAH    )

I, Richard T. O'Brien, being first duly sworn, depose and state that I am Executive Vice President and Chief Operating Officer of PacifiCorp, that the foregoing Direct Testimony of Richard T. O'Brien was prepared under my direction and supervision, and that the same is true and correct to the best of my knowledge and belief.

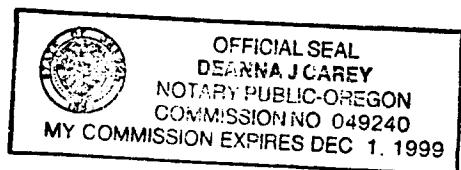
*Richard T. O'Brien*  
Richard T. O'Brien

Subscribed and sworn to before me this 25<sup>th</sup> day of February, 1999.

*Deanna J. Carey*  
Notary Public  
Residing at: Portland, OR

My Commission expires:

12/01/99



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**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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In The Matter Of The Application of )  
PacifiCorp and Scottish Power plc ) Docket No. 98-2035-004  
for an Order Approving the Issuance )  
of PacifiCorp Common Stock )

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**SCOTTISH POWER**  
**DIRECT TESTIMONY OF ALAN V. RICHARDSON**  
**FEBRUARY 26, 1999**

**RECEIVED**  
**FEB 26 9 11 AM '99**  
**UTAH PUBLIC**  
**SERVICE COMMISSION**

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## INTRODUCTION

3 Q. Please state your name and business address.

4 A. My name is Alan V. Richardson, and my business address is 500 N.E. Multnomah St.,  
5 Suite 900, Portland, Oregon, 97232.

6 Q. By whom are you employed and in what capacity?

7 A. I am employed by Scottish Power plc. Prior to announcement of the transaction, I was  
8 Managing Director of the Power Systems Division. I will become an Executive Director  
9 and a member of ScottishPower's Board of Directors effective April 1, 1999.

10 Q. What are your current responsibilities for the company?

11 A. My current responsibilities are to manage the issues regarding the transaction between  
12 ScottishPower and PacifiCorp. These include regulatory affairs, communications,  
13 community interface, and strategic and business planning.

14 Q. What position will you hold with PacifiCorp after the transaction is closed?

15 A. I will be the Chief Executive Officer of PacifiCorp after the transaction is completed.

16 Q. Where will you be located?

17 A. In Portland, as I have been since the transaction was announced on December 7 of last  
18 year.

19 Q. Please summarize your education and business experience.

20 A. I earned a degree in electronics and electrical engineering from Sunderland Polytechnic. I  
21 am a member of the Institute of Electrical Engineers. For most of my career, I have been  
22 engaged in the power/electrical engineering business. I spent a large part of my career  
23 with A. Reyrolle and Company and later with the Bushing Company, where I became  
24 Director and General Manager. Later, I joined Reyrolle Switchgear as Director and  
25 General Manager. In 1990, I left Reyrolle to join ABB Power for one year before joining  
26 ScottishPower as managing director of the transmission business. In 1995, I became

1 managing director of the Power Systems division of ScottishPower, including the  
2 distribution businesses in Scotland and in Manweb. I am also a Visiting Professor at the  
3 University of Strathclyde in Glasgow, and a member of the board of the Glasgow  
4 Development Agency, which is responsible for investment and development in Glasgow.  
5 In November 1997, I was honored for my contribution to the electricity supply industry,  
6 receiving a "Lifetime Achievement Award" sponsored by Transmission & Distribution  
7 World magazine.

### 8 TESTIMONY SUMMARY

9 Q. What is the purpose of your direct testimony in this proceeding?

10 A. I will establish that this transaction will serve PacifiCorp's customers in the public interest.  
11 On some topics, I will give an overview of the testimony to be provided by other  
12 ScottishPower witnesses.

13 Q. How is your testimony organized?

14 A. My testimony addresses the following topics:

- 15 • Background of ScottishPower
  - 16 • ScottishPower's record in transforming businesses
- 17 • The transaction with PacifiCorp
- 18 • Benefits of the transaction
  - 19 • System performance and customer service improvement
  - 20 • Commitment to communities
  - 21 • Commitment to the environment
- 22 • How PacifiCorp will be managed
  - 23 • Commitment to employees
  - 24 • Cost savings
- 25 • Competition and restructuring

26 Q. Why do you believe this transaction is in the public interest?

1 A. The combination with ScottishPower will enable PacifiCorp to become one of the top ten  
2 electric utilities in the U.S. ScottishPower's skills and experience will allow PacifiCorp to  
3 achieve substantial improvements in network performance and customer service and  
4 provide tangible benefits to all of PacifiCorp's stakeholder groups. All this will be  
5 achieved more quickly, more economically, and with greater certainty than by PacifiCorp  
6 acting alone. In addition, ScottishPower's proven track record in transforming utility  
7 businesses and running them efficiently will mean that, over time, prices for customers will  
8 be lower than they would be without the merger.

9 Q. Who else will be providing testimony on behalf of ScottishPower?

10 A. Mr. Bob Moir will testify about our plans for improving system performance and customer  
11 service, including the introduction of guaranteed service standards. Mr. Jack Kelly will  
12 testify about planned commitments to the community and employees. Mr. Robert Green  
13 will be testifying about financial and ratemaking policy issues. Finally, Mr. Andrew  
14 MacRitchie will testify about potential operating cost reductions as a result of introducing  
15 ScottishPower's experience and expertise in operating regulated utilities.

16 **BACKGROUND ON SCOTTISHPOWER**

17 Q. Please explain who ScottishPower is.

18 A. The ScottishPower Group is a leading multi-utility business in the U.K. with  
19 approximately 5 million customers across Scotland, England, and Wales. The Group's  
20 activities span the generation, transmission, distribution, and supply of electricity; water  
21 and wastewater services; gas supply; telecommunications; selling of electrical appliances;  
22 and technology and contracting services. The ScottishPower group comprises one of the  
23 largest industrial groups in the U.K. and has its headquarters in Glasgow, Scotland. At its  
24 roots, ScottishPower is a very old company. ScottishPower's predecessors have been  
25 supplying electricity to the central belt and the south of Scotland for over 100 years. Prior  
26 to 1989, the company was known as the South of Scotland Electricity Board, which was

1 renowned world-wide for its engineering excellence. Until 1991, the company was  
2 government owned and operated. It was privatized in 1991. Additional information about  
3 ScottishPower is contained in ScottishPower's Annual Report and Accounts 1997-98,  
4 which is an Appendix to the Application in this proceeding, and in Exhibit SP \_\_ (AVR-  
5 1).

6 Q. ScottishPower has expanded its operations into other utility businesses in the U.K. Could  
7 you briefly describe this growth?

8 A. At the time of privatization in 1991, the strategy of ScottishPower was very clear.  
9 ScottishPower was a medium-sized utility, and we decided that the prime tasks were to  
10 reduce our operating costs in all our areas of business and to raise customer service  
11 standards to the highest practical level. The company focused on these tasks for the first  
12 three years of its existence as a privatized utility, to the exclusion of any overseas activity  
13 or major projects outside Scotland. We continued these efforts through benchmarking  
14 and additional investments in training and information technology to reduce operating  
15 costs and raise service levels. In 1994, we had a clear view that we were achieving our  
16 goals of low-cost operation and high customer service across the breadth of the business,  
17 and that we could continue to move forward with our business strategy. In 1995, we  
18 acquired, for over \$1.7 billion, a regional electricity company, Manweb, serving 1.3  
19 million customers in the northwest of England and north Wales, consisting of both urban  
20 (the City of Liverpool) and very rural areas. In 1996, we acquired, for over \$2.5 billion, a  
21 water and wastewater company in the south of England, Southern Water, with 1.7 million  
22 customers for wastewater service, and 900,000 customers for potable water service.

23 Q. What has been the experience of these companies under ScottishPower's management?

24 A. Both of these companies have been transformed as a result of renewing the emphasis on  
25 core business activities. This has led to substantial improvements in customer service and  
26 operational performance in both companies.

1 Q. What types of improvements have been achieved?

2 A. Some of the key improvements at Manweb since the time of the acquisition are:  
3 (1) customer minutes lost have been reduced by nearly 30 percent; (2) guaranteed  
4 standards failures have been reduced by approximately 75 percent; and (3) complaints to  
5 OFFER have been reduced by nearly 40 percent. Some of the key improvements at  
6 Southern Water since the time of that acquisition are: (1) leakage from pipes has been  
7 reduced by over 50 percent; (2) there has been a substantial improvement in wastewater  
8 treatment compliance; and (3) the number of properties at risk of flooding has been  
9 reduced by over 25 percent.

10 Q. Have these improvements been recognized by the regulators of these companies?

11 A. Yes. We have been recognized by both our U.K. regulators, the Office of Electricity  
12 Regulation ("OFFER") and the Office of Water Regulation ("OFWAT"), for these  
13 improvements. Indeed, Ian Byatt, Director General of Water Service for OFWAT, stated  
14 in 1998: "I am pleased to see the improvement in operating efficiency made by Southern  
15 Water under its new management . . . ." Additionally, we have received the Charter Mark  
16 from the U.K. government for excellent customer service at both companies. Southern  
17 Water is one of the few major U.K. water and wastewater companies to be awarded the  
18 Charter Mark. More information about these Charter Mark awards is contained in the  
19 testimony of Bob Moir.

20 Q. Is there a basic philosophy that underpins the way ScottishPower does business?

21 A. Yes, there is. The ScottishPower Values are the heart of the way we deal with employees,  
22 customers, our communities, shareholders and other stakeholders. You will see them  
23 posted on the wall in every ScottishPower office, supply depot and retail shop. The  
24 ScottishPower Values are as follows:

- 25 • Well earned customer loyalty
- 26 • Enhanced shareholder value



- 1 • Positive working environment
- 2 • Trust of communities
- 3 • Teamwork and leadership

4 Further information regarding the ScottishPower Values is included in Exhibit SP \_\_\_\_  
5 (AVR-2).

6 Q. How are these Values incorporated into your business?

7 A. We measure ourselves, our company and our employees' performance in the context of  
8 these Values. Additionally, we report to the public on an annual basis about our  
9 performance against targets in key areas, including quality of supply (customer service),  
10 community, environment, and employees. Annual reports for the year 1997-98 are  
11 Exhibit SP \_\_\_\_ (AVR-3).

#### 12 **THE TRANSACTION WITH PACIFICORP**

13 Q. Could you describe the reasons for the transaction with PacifiCorp?

14 A. ScottishPower has a clear strategy of delivering high quality customer service and  
15 shareholder value. As you would expect in well-run businesses, we have evaluated our  
16 strategic capabilities and our abilities to deliver further value from our core competencies.  
17 We believe that we have a proven capability to understand and manage electric utility  
18 operations, to understand electric utility markets, and to transform average-performing  
19 businesses into ones that set the industry standard. The reason for the transaction is to  
20 exercise these transformational capabilities in the U.S. market and to position PacifiCorp  
21 for a strong future.

22 Q. How did ScottishPower determine that PacifiCorp was an ideal partner?

23 A. Over the past two years, ScottishPower evaluated the U.S. market and a number of  
24 possible combination partners. We believe we have found an ideal partner in PacifiCorp.  
25 The company combines an attractive asset base and customer profile with a core utility  
26 business that offers substantial scope for improved performance in customer service and

1 system operations, as well as improved efficiency. Although PacifiCorp is a sound  
2 business with good assets, it has recently suffered from financial under-performance. Key  
3 strengths of PacifiCorp, upon which ScottishPower intends to build, include:

- 4 • Extensive customer base in an economically attractive region of the U.S.;
- 5 • Low-cost generating resources;
- 6 • Knowledgeable and dedicated work force; and
- 7 • Experienced operational management.

8 Q. Could you describe briefly the transaction?

9 A. The transaction is essentially a simple one. It involves only a change in the shareholders of  
10 PacifiCorp. PacifiCorp would be an indirect wholly owned subsidiary of ScottishPower  
11 and would operate on a stand-alone basis, headquartered in Portland, Oregon, with  
12 operations in substantially the same structure as they are today.

13 Q. Will the type of transaction that you're proposing change in any way the degree of  
14 regulatory oversight this Commission will have over PacifiCorp?

15 A. No. The Commission will continue to exercise precisely the same degree of regulatory  
16 oversight over PacifiCorp as it does today. We are experienced operators of regulated  
17 businesses. The majority of ScottishPower's income is from regulated businesses. We  
18 intend to work positively and continuously with regulators in the U.S., as we do in the  
19 U.K., as businesses and markets develop.

20 Q. So you would anticipate no change in the ability of this Commission to look out for the  
21 interests of customers located in this state?

22 A. None whatsoever. Indeed, our goal is to raise the standards of their service. The service  
23 standards that ScottishPower intends to introduce, with more accurate performance  
24 measurements and reporting of results, should actually increase this Commission's ability  
25 to monitor PacifiCorp's performance.

26

1 **BENEFITS OF THE TRANSACTION**

2 Q. Please describe the benefits of the transaction for PacifiCorp's customers.

3 A. We have an objective to position PacifiCorp as one of the top 10 investor-owned electric  
4 utilities in the U.S. across a broad range of measurements. Focusing on customer service,  
5 we will introduce a broad range of system performance standards and individual customer  
6 guarantees. We will also make specific commitments to communities, the environment,  
7 and employees.

8 **System Performance and Customer Service Improvements**

9 Q. Why are high levels of service important to ScottishPower?

10 A. Because good service is good business. We know this because we listen to our  
11 customers. Since the announcement of this transaction, I have had numerous discussions  
12 with PacifiCorp customer groups and have listened to their concerns and preferences. I  
13 am hearing the same message in the U.S. as I have heard in U.K. As levels of service have  
14 improved across all types of businesses, there is an increased expectation from customers  
15 for even better service. One of the things I notice is that electricity is taken for granted,  
16 and perhaps the only time you appreciate it is when it is not there and you expect it to be.  
17 We drive our businesses to understand the issues surrounding system performance and  
18 improve them by focused investment and focused operations. We have chosen to lead the  
19 creation of standards for customer service rather than being told that we have to do it.  
20 We think it should be no different in the U.S. In fact, as part of our work in developing  
21 the standards package we are now proposing, we looked at what was being provided by  
22 other U.S. utilities. This confirms that our package is very much best in class.

23 Q. How is ScottishPower going to improve service to PacifiCorp's customers?

24 A. Based upon my discussions with customer groups and our experience in the U.K., we have  
25 decided to introduce an unprecedented package of service standards. They address both  
26 overall company standards, designed to improve the performance of PacifiCorp in its

1 general service activities (we refer to these as "Performance Standards"), and individual  
2 customer guarantees, relating more to the quality of service interaction with individual  
3 customers (we refer to these as "Customer Guarantees"). Together, they address the key  
4 deliverables for electric service providers, namely high levels of customer service and  
5 system performance.

6 Q. What overall Performance Standards will ScottishPower introduce?

7 A. ScottishPower will introduce a series of measurable Performance Standards, including:

- 8 • Improving system availability and system reliability by 10 percent from  
9 PacifiCorp's current performance, and reducing momentary interruptions standards  
10 by 5 percent from PacifiCorp's current performance.
- 11 • Improving the five worst performing circuits in each state on an annual basis. The  
12 improvements will occur within two years of selection, subject to receiving any  
13 required government approvals.
- 14 • Improvements in restoring system supply, and improving the timeliness of both  
15 answering calls to the PacifiCorp Business Center and resolving complaints  
16 submitted to the Commission.

17 These commitments are further detailed in the testimony of Bob Moir.

18 Q. What are the specific Customer Guarantees that ScottishPower will introduce?

19 A. ScottishPower will improve customer service with guaranteed service standards backed by  
20 payments to customers for failures to perform. These Customer Guarantees are in the  
21 areas of:

- 22 • Restoring individual customer supply;
- 23 • Keeping appointments;
- 24 • Activating power supply for individual customers;
- 25 • Providing estimates for establishing service to new customers;
- 26 • Improving response time to bill inquiries;

- 1 • Faster turnaround on resolving meter problems;
- 2 • Notification of planned interruptions; and
- 3 • Improving handling of power quality complaints.

4 These guaranteed standards are also further detailed in the testimony of Bob Moir.

5 Q. Will investments be required in PacifiCorp's system to achieve these service  
6 improvements?

7 A. Absolutely. ScottishPower knows that an important element of successfully transforming  
8 a business is a commitment to invest in systems, improved processes, and employees.

9 Q. What will be the focus of these investments?

10 A. Our investment focus will be on addressing the real issues that affect customers, improving  
11 customer service and system performance. We will focus on investing in the network to  
12 reduce the number and duration of service interruptions, improving the responsiveness of  
13 our employees and the training of our staff towards customer service, and upgrading  
14 information technology in our business centers.

15 Q. Has ScottishPower been successful in achieving some of these increases in service quality  
16 and customer satisfaction in the businesses it has acquired in the U.K.?

17 A. Yes. In fact, the level of some customer service indicators at Manweb has been superior  
18 even to that in ScottishPower's own territory. We have been able to transform that  
19 business and its customer service performance while still achieving cost reductions and  
20 efficiencies. At Southern Water, we have taken the company from being simply a  
21 technically good company into a high performing business in many respects. For example,  
22 in several key service measures, Southern Water now holds a leading position among U.K.  
23 water and wastewater companies.

24 Q. What is the time-frame in which you plan and implement your investments?

25 A. We intend to achieve the specific Performance Standards described above within five  
26 years. Even after these results have been achieved, we will continue to improve system

1 performance and customer service. We recognize that these are long-term businesses and  
2 that a business cannot be transformed overnight. Our investments are made with the view  
3 that we are committed to the business for the long-term. Customers, regulators, and  
4 shareholders expect us to take such a long-term view, and we come prepared for that.

### 5 **Commitment to Communities**

6 Q. In the application for approval of this transaction, ScottishPower talks about its  
7 commitments to the communities it serves. Why are these types of commitments  
8 important to ScottishPower?

9 A. As well as being driven by our business plan, we're guided by our Values, which include  
10 gaining the respect and trust of the communities in which we work. This is essentially  
11 about behaving corporately in a caring, sensitive way in the environment in which we  
12 work. On January 26, 1999, The Times of London measured us as being the best in the  
13 U.K. of all companies on ten measures of corporate innovation, business attitudes, etc.  
14 Exhibit SP \_\_\_ (AVR-4). I believe that reflects the values that we try to live in the  
15 company. So it is part of the natural thrust of the company to care for the environment, to  
16 care for the things that our communities care for. We live in those communities. We have  
17 a definite social responsibility. Some of the awards and recognition that we received in  
18 1997 and 1998 are detailed in Exhibit SP \_\_\_ (AVR-5).

19 Q. What commitments will ScottishPower make in the area of community programs?

20 A. As mentioned in our Application, ScottishPower has already committed to contribute \$5  
21 million to the PacifiCorp Foundation at the closing of the transaction. We will also  
22 commit to maintain the level of PacifiCorp's other community-related contributions, both  
23 in terms of monetary and in-kind contributions. The additional community commitments  
24 that ScottishPower proposes to make to improve the quality of life in PacifiCorp's service  
25 territories will emphasize education, and are based on initiatives we have already  
26 implemented in the U.K. These will include an effective "School to Work" program for

1 use by the communities, developed with the appropriate authorities. We will also maintain  
2 the existing Regional Advisory Boards, recognizing the valuable work they do in surfacing  
3 the issues that are relevant to local communities. These commitments are detailed further  
4 in the testimony of Jack Kelly.

5 Q. What other commitments is ScottishPower making with regard to the broader area of  
6 customer care?

7 A. ScottishPower will commit to more than double, to \$3 million per year, funds for  
8 programs that encourage the economic well-being of communities. These include:

- 9 • Heat assistance funding for those customers who qualify under the Federal Low  
10 Income Energy Assistance Program;
- 11 • Debt counseling service for those customers who have difficulty in paying their  
12 monthly electric bills; and
- 13 • Education on energy efficiency and electricity safety to reduce high energy bills for  
14 customers with payment difficulties and to promote electricity safety for all  
15 customers.

16 These commitments also are detailed in the testimony of Jack Kelly.

17 **Commitment to the Environment**

18 Q. What is ScottishPower's view towards its corporate responsibility concerning the  
19 environment?

20 A. Minimizing the impact of operations on the environment is important to ScottishPower.  
21 ScottishPower has consistently ranked among the top "green-friendly" companies in the  
22 U.K. ScottishPower's environmental record has been recognized in the Financial Times  
23 Business in the Environment Survey of FTSE 100 companies, where in 1997 we again  
24 secured a position as one of the top five companies for environmental performance and  
25 communications in the U.K. One of ScottishPower's Executive Directors is charged with  
26 implementing ScottishPower's environmental policy, supported by an Advisory

1 Committee. Each year, we set targets for environmental performance and issue a public  
2 report on ScottishPower's environmental policy and achievements. ScottishPower's  
3 Environmental Report for 1997-98 is included in Exhibit SP \_\_\_\_ (AVR-3).

4 Q. Scottish Power is a large fossil fuel generator. What steps have you taken to mitigate the  
5 effects of the emissions from these facilities?

6 A. We have a leading position in the U.K. on the emissions issue. The operation of our coal-  
7 fired power stations is a careful consideration for us. We purchase low-sulfur coal  
8 specifically. Another example is the "gas reburn" project at Scottish Power's Longannet  
9 power station, which involves reigniting unburned gasses at the top of the boiler. This  
10 leading edge \$45 million initiative, in conjunction with low NOx burners, is expected to  
11 reduce the production and emission of oxides of nitrogen from these units by 80 percent.

12 Q. What is your experience in windpower and renewable energy?

13 A. In terms of renewables, ScottishPower is a leading U.K. wind farm operator, with 92  
14 megawatts of capacity. We have plans to invest in a further 30 megawatts. That, we  
15 think, is a significant contribution to renewables capability in Britain and obviously offsets  
16 emissions.

17 Q. What renewable pricing options have you made available?

18 A. We've recently introduced a "green tariff" where customers can pay approximately five  
19 percent more for "green energy." That extra amount is reinvested in renewables projects.

20 Q. What investments does ScottishPower make in energy efficiency?

21 A. We invest approximately \$5.1 million per year in energy-efficiency improvements under  
22 the current regulatory regime.

23 Q. How will ScottishPower expand and enhance PacifiCorp's environmental programs?

24 A. ScottishPower will support and maintain PacifiCorp's current and committed focus on  
25 environmental programs. Among the areas to which we will commit for expansion  
26 following approval of the transaction are:



- 1 • Include PacifiCorp operations in ScottishPower's comprehensive annual  
2 environmental report with appropriate specific goals.
- 3 • Include a PacifiCorp officer on the Environmental Policy Advisory Committee.
- 4 • Develop a process to gather outside input on environmental matters, such as the  
5 establishment of an Environmental Forum.
- 6 • PacifiCorp will have environmental management systems in place that are self-  
7 certified to ISO 14001 standards at all PacifiCorp operated thermal generation by  
8 the end of 2000.
- 9 • Within 60 days after the closing of the transaction, PacifiCorp will file applications  
10 in each state for a "green resource" tariff.
- 11 • PacifiCorp will contribute \$100,000 to the Bonneville Environmental Foundation  
12 for use in the development of new renewable resources and fish mitigation  
13 projects.
- 14 • PacifiCorp will develop an additional 50 MW of renewable resources (wind, solar  
15 and/or geothermal) at an anticipated cost of approximately \$60 million within five  
16 years after the approval of the transaction.

17 This renewable resource commitment is in addition to resources the company would  
18 implement through other programs such as the green resource tariff. PacifiCorp will also  
19 move forward with the required studies necessary to evaluate the expansion of its Blundell  
20 geothermal project.

#### 21 **HOW PACIFICORP WILL BE MANAGED**

22 Q. How will plans for improving the performance of PacifiCorp be developed?

23 A. Our plan is to raise the performance of PacifiCorp in all areas of its operation. We will do  
24 this by a close analysis of the business involving PacifiCorp employees and management  
25 from operations, commercial, human resources, communication, finance, and other areas  
26 of the business. Managers from ScottishPower with substantial experience in transition

1 management will also be involved. In other words, we will use the approach that has been  
2 tried, tested, and refined with ScottishPower's transformation of Manweb and Southern  
3 Water.

4 Q. Who will be responsible for delivering these operating improvements?

5 A. Going forward, the new PacifiCorp will be delivered largely by the PacifiCorp employees  
6 who are here today. There will be very few imports of U.K. personnel into PacifiCorp.  
7 Our experience at Manweb and Southern Water has proven to us that current employees -  
8 - with leadership, direction, and training -- can deliver superior results for customers and  
9 shareholders alike. Current PacifiCorp employees have been and will continue to be a key  
10 strength of the organization. We expect to work jointly with PacifiCorp, from line  
11 personnel to the President, with all managers and employees, to achieve these goals. As  
12 the CEO of PacifiCorp, I will lead and direct PacifiCorp's management team to meet its  
13 new objectives.

14 Q. Where will the decisions regarding the operation of PacifiCorp be made?

15 A. These decisions will be made in the U.S. ScottishPower's management style is that each  
16 business division has a business plan, an operating plan, and a budget that are developed  
17 locally and approved by the Board of Directors. I will be a member of ScottishPower's  
18 Board of Directors, as will three current PacifiCorp Board members. Decisions made  
19 within this framework are entirely within the scope of the chief executive of each business  
20 division. At PacifiCorp, appropriate decision-making authority will be delegated to  
21 managerial staff so that decisions can be made locally and as close to the customer as  
22 possible.

23 Q. How does the plan for operating PacifiCorp that you've described represent, in your mind,  
24 a change in the management style of PacifiCorp?

25 A. It represents a new emphasis and introduces a culture where the focus will be on customer  
26 issues which we will relate back directly to operations and investment planning. I've

1 described ScottishPower as being an experienced and competent utility manager. We have  
2 views about the way utilities should be managed. We focus on delivery and on providing  
3 clear accountability, as close to customers as we can get it. We give our managers  
4 challenging, but practical, performance targets and they are empowered to act such that  
5 these targets are achieved.

6 Q. Will some of the efficiencies come from reductions in employee staffing levels?

7 A. It is likely that some staff reductions will occur. However, we intend to approach these  
8 situations positively, working with the staff involved and, as appropriate, with union  
9 representatives. Our experience in the U.K. has shown us that it can be done while  
10 maintaining a strong and motivated workforce, and a good relationship with the trade  
11 unions.

12 **Commitment to Employees**

13 Q. Do you anticipate changing the existing labor contracts?

14 A. We will honor existing labor contracts with all levels of staff, and work with those  
15 workers and union representatives to adjust contracts as needed. This is very similar to  
16 the approach we have used in our U.K. businesses. ScottishPower's approach to  
17 managing changes in employee relations has been to work in partnership with employees  
18 and staff representatives. Our good relations with employees and the unions representing  
19 them reflect the success of our approach.

20 Q. What role does training play in the ScottishPower approach to business transformation?

21 A. Training is a key component of our efforts to reduce costs, transform a business, and  
22 increase customer satisfaction. Training is not a single event. Continued training, derived  
23 from the goals and objectives of our business plan, is part of the ScottishPower approach.  
24 Key areas of training include use of information technology, customer service, team-  
25 working, as well as more technical and safety-related training.

26 Q. What level of training do you provide employees in your U.K. businesses?

1 A. ScottishPower has been awarded the Eagle Star Training Award in recognition of its  
2 commitment to and high levels of staff training. As an example, in our Power Systems  
3 business (transmission and distribution), our 4,300 employees receive an average of seven  
4 days each year in off-the-job training at one of our high quality training centers. This  
5 training covers a broad range of topics, including information technology, customer  
6 service, and engineering.

7 Q. Would you expect to implement similar training programs at PacifiCorp?

8 A. Employee training will be a key element of the transformation plan which we will be  
9 developing with PacifiCorp after the transaction is completed. ScottishPower also  
10 recognizes the importance of improving the overall well-being of its employees. Our  
11 experience in the U.K. leads us to believe that a successful commitment to our employees'  
12 well-being includes not only attending to the additional training that our employees need in  
13 an ever-changing economy, it also requires us to be conscious of their educational, and  
14 health and safety needs. Toward this end, ScottishPower proposes to introduce the  
15 following programs in the PacifiCorp service territory, subsequent to closing the  
16 transaction:

- 17 • ScottishPower proposes to develop one "best-in-class" training center in Oregon, and  
18 another one in Utah. These centers will provide our employees with opportunities to  
19 improve their work-related skills.
- 20 • A phase-in of the introduction of the ScottishPower Open Learning centers. At these  
21 Open Learning centers, employees will also be able to supplement their work-related  
22 skills with ones designed to enhance their overall knowledge.
- 23 • Establishing partnerships with local colleges and universities to develop management  
24 training programs.

25 The start-up costs for these efforts will be approximately \$3 million, and the annual  
26 expenditures to offer these programs will be approximately \$1 million.

1 Further detail regarding these programs is in the testimony of Jack Kelly.

2 **Cost Savings**

3 Q. In the Application, ScottishPower and PacifiCorp suggest the possibility of prices for  
4 PacifiCorp's customers that are lower than they otherwise would have been without the  
5 transaction. Are you suggesting that PacifiCorp's rates will be lower than current rates  
6 after the transaction is completed?

7 A. No, I am not suggesting that. ScottishPower is committed to assist PacifiCorp in its  
8 efforts to improve customer service and system performance while keeping rates low.  
9 ScottishPower's previous experience in the U.K. in transforming regulated utility  
10 businesses gives us the confidence that we can replicate the experience with PacifiCorp.  
11 Our commitment to investments in systems and staff, along with implementing the process  
12 improvements that we found were successful in the U.K., gives us every reason to believe  
13 that we can mitigate the upward cost pressures inherent in this business. In addition, we  
14 expect to keep rates low in the long-term through our ability to implement these measures  
15 in a way that will be more timely, more efficient, and more certain because of our  
16 experience, than PacifiCorp could have accomplished alone. This issue is addressed in  
17 more detail in the testimony of Andrew MacRitchie.

18 Q. How have you achieved efficiencies and cost savings at Manweb and Southern Water?

19 A. We achieved efficiencies through continual examination of the way the business operates.  
20 A key contributor in this achievement has been benchmarking. Internal and external  
21 benchmarking has enabled us to deliver high levels of operational excellence and customer  
22 service at low cost. In identifying benchmarking partners, our thoughts have not been  
23 restricted to just other utility companies, with significant benefits being derived from  
24 reviewing practices within such world-wide leading class companies as Compaq, Xerox,  
25 Shell Expro, BP and Nissan.

26 Q. What are the steps that you would take to develop and achieve these customer service and

1 system performance improvements that you've described?

2 A. We would begin by understanding just what levels of customer service are being achieved  
3 today. We can do that from internal measures, such as supply interruptions, call response  
4 times, or post-call activities to finish the work. We would also use opinion polls and focus  
5 groups accessing customers' opinions in a structured way about the performance of  
6 PacifiCorp in its service territory. From those inputs, we can understand just what level of  
7 service we're providing today. We will then work to understand where improvements  
8 could or should be made. Of course, we seek to prioritize them whenever possible.  
9 Those areas which would receive highest priority could be safety related areas, areas of  
10 poorest performance, and areas where improvements can be made expeditiously. Those  
11 areas that require significant training or systems investment would still remain a priority;  
12 however, implementation would be scaled over a longer time-frame.

13 Q. Was this process used at Manweb and at Southern Water?

14 A. Yes, and I would emphasize that it does take time. For example, we acquired Manweb in  
15 1995. We've made significant improvements to customer service performance in the four  
16 years since then. But even now, we are continuing to invest, installing information  
17 technology which will improve performance and service still further. Details regarding the  
18 approach and achievements at Manweb and Southern Water in terms of achieving  
19 efficiencies while improving service performance are contained in the testimony of Andrew  
20 MacRitchie.

#### 21 **COMPETITION AND RESTRUCTURING**

22 Q. Will this transaction have any effect on other utilities in this state?

23 A. No, this transaction will have no effect on any other utility in this state. This transaction  
24 does not involve a combination of operating utilities, nor are we proposing any change in  
25 the regulatory environment. We are simply focused on improving PacifiCorp's  
26 performance.

1 Q. Was the status of restructuring activities a key factor in choosing to merge with  
2 PacifiCorp?

3 A. No. We accept that the timing of competition will be different from region to region and  
4 state to state. We have embraced competition in the U.K., since those are the rules of the  
5 market. We haven't come here with a banner saying: "You must deregulate." However,  
6 we are prepared to contribute to the debate with the benefit of our experience, and if  
7 policy makers decide to open up electricity markets, we intend to be a quality provider of  
8 competitive services. As the rules are determined in each state, we will compete  
9 vigorously within those rules.

10 Q. Will you please summarize your testimony?

11 A. ScottishPower intends to apply its successful experience in transforming utility businesses  
12 in the U.K. to elevate PacifiCorp into the top ten electric utilities in the U.S. If this  
13 transaction is approved, PacifiCorp's customers will enjoy substantially improved service.  
14 Accordingly, this transaction most emphatically is in the public interest.

15 Q. Does this conclude your testimony?

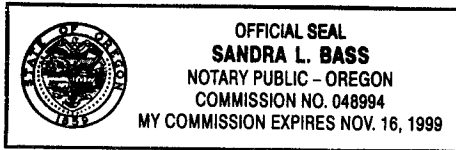
16 A. Yes, it does.  
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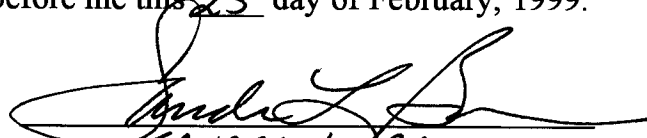
STATE OF OREGON                    )  
  ) ss.  
COUNTY OF MULTNOMAH        )

I, Alan V. Richardson, hereby declare under penalty of perjury under the laws of the State of Oregon that the foregoing testimony was prepared under my direction and supervision and that all testimony and exhibits thereto are true and correct to the best of my knowledge.

  
\_\_\_\_\_  
Alan V. Richardson

SUBSCRIBED and SWORN to before me this 25<sup>th</sup> day of February, 1999.

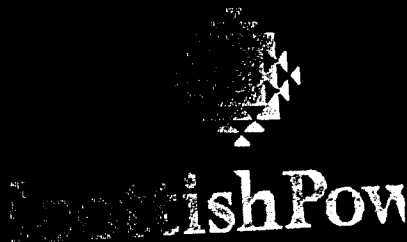


  
Print Name: SANDRA L. BASS  
Notary Public in and for the State of Oregon,  
residing at Tualatin, OR  
My commission expires: 11/16/99



# Group Activities

## Investing for Growth



**ScottishPower is now a substantial multi-utility group strongly positioned both operationally and financially to deliver benefits for customers and enhanced returns for shareholders**

# ScottishPower supplies one in five UK homes with one or more utility service.

## Generation Wholesale

Generates electricity from a mix of gas, wind, solar, hydro, and biomass. Also provides trading and ancillary services including the sale of electricity to other electricity companies through wholesale markets and the WPA.

## Power Systems

Manages transmission and distribution systems, which ensure electricity flows from generators to homes and businesses in Scotland, on a 24-hour basis. The business also operates the national grid in England.

## Energy Supply

Sells electricity and gas to homes and businesses through ScottishPower Energy Supply. It also provides energy management services, such as energy audits and energy efficiency programs, to help businesses and homes save money on energy costs.

## Manweb

Sells electricity and gas to homes and businesses through Manweb. It also provides energy management services, such as energy audits and energy efficiency programs, to help businesses and homes save money on energy costs.

## ScottishTelecom

Provides a range of digital broadband services in Scotland through which it provides business and residential services, including mobile, internet, and TV services. It also provides access to a range of other services.

## Retail

Operates a range of energy supply stores, including a range of online and mobile services. It also provides a range of other services, including energy management and energy efficiency programs.

## Contracting Services

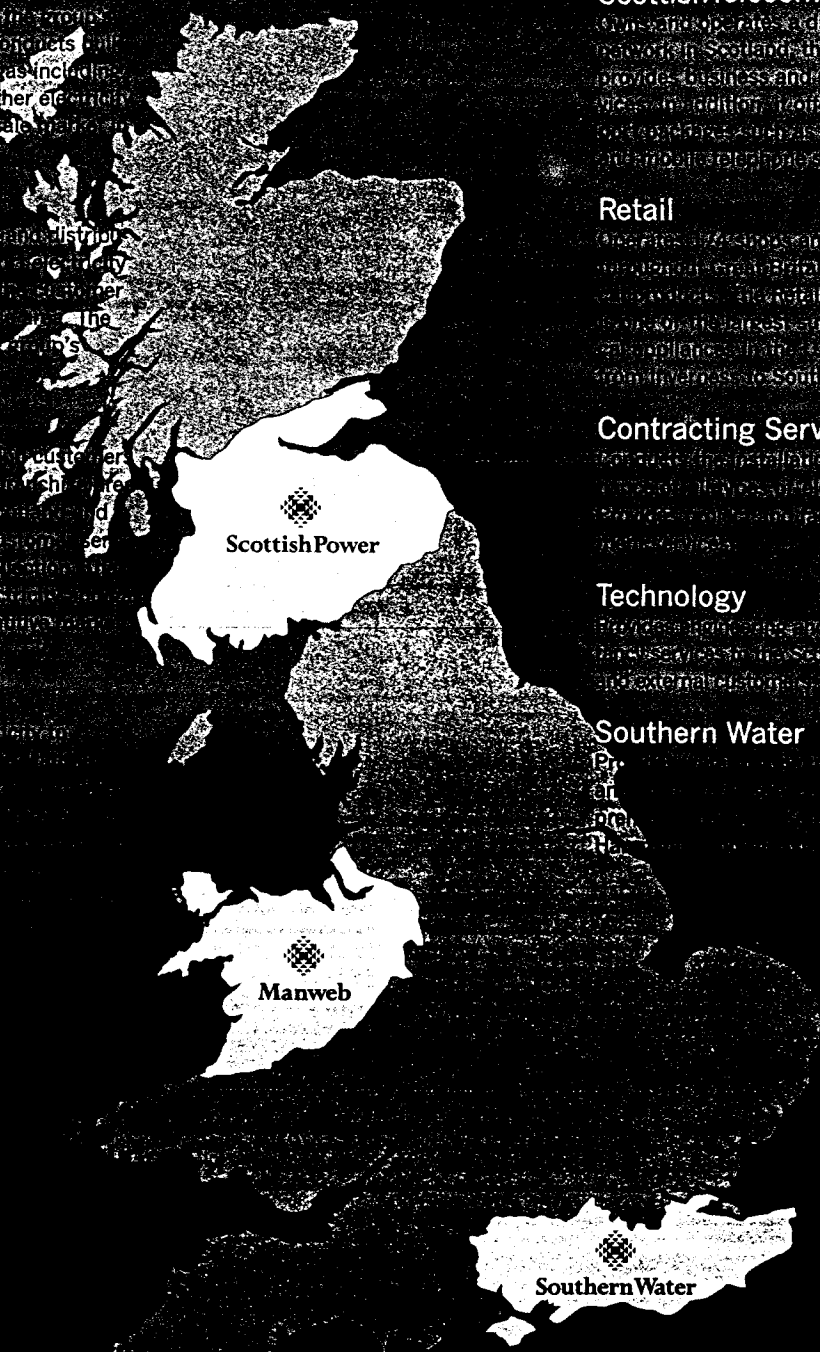
Provides a range of contracting services, including energy management and energy efficiency programs, to help businesses and homes save money on energy costs.

## Technology

Provides a range of technology services, including energy management and energy efficiency programs, to help businesses and homes save money on energy costs.

## Southern Water

Provides a range of water and sewerage services, including water supply and sewerage collection and treatment.



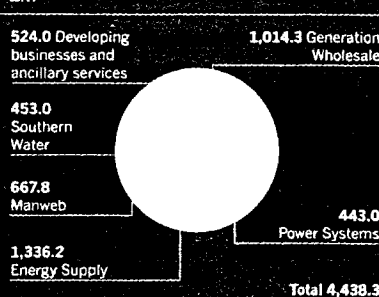
## Investing for Growth

We are committed builders of businesses, in electricity and utility-related markets, determined to deliver outstanding performance.

### Well-earned customer loyalty

Customers are at the heart of what we do. New developments and technology are part of reducing costs and providing the best possible service.

### Turnover by business segment 1997-98\*



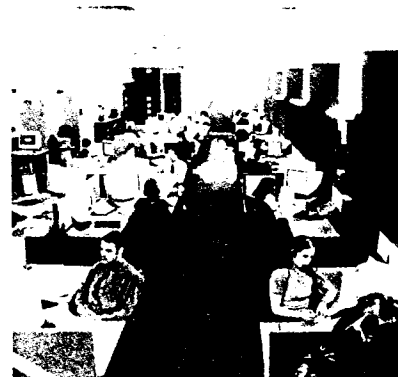
\*Including inter-segment turnover.

### Positive working environment

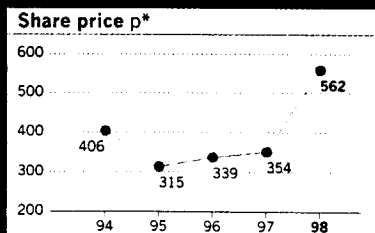


### Trust of our communities

To earn the trust and respect of our communities through recognising and responding to the needs of both the local and wider environment.



### Enhancing shareholder value



\* Price at 31 March. Share prices prior to 1997 have been adjusted to reflect the rights issue in August 1996.

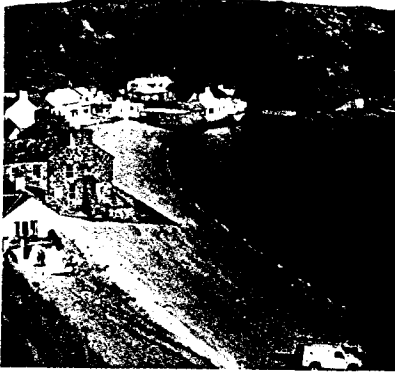


### Teamwork and leadership

We recruit and retain the best people, offering everyone opportunities to realise their potential. This is achieved through working together to a clear and common purpose.

## Introduction

ScottishPower has grown from a regional electricity company into a leading £7 billion multi-utility business supplying one in five UK homes.



**Top** Porthdinllaen National Trust village in North Wales where overhead lines were replaced by underground cables.

**Above** Welding the outfall pipe for the new Dover and Folkestone wastewater treatment plant.

**Opposite** ScottishPower Corporate headquarters in Glasgow.

Since privatisation, the company has developed and expanded via a combination of organic growth, particularly in the rapidly expanding telecommunications market, and acquisitions in the English electricity and water supply sectors.

Significant milestones in the group's development include the acquisition in 1995 of Manweb, the regional electricity company (REC) whose operations are based in Merseyside, Cheshire, and North and Mid-Wales and Southern Water, the water and wastewater service company which was acquired in 1996. ScottishPower has achieved significant efficiencies from these acquisitions, which have also provided a platform for new services such as gas and telecoms.

The domestic gas market was fully liberalised by May 1998, with electricity liberalisation scheduled to be completed by June 1999. The liberalisation of these markets has presented ScottishPower with the opportunity to extend into new territories across the UK. ScottishPower has already acquired more than 475,000 domestic gas customers in the recently deregulated domestic gas market. The group anticipates that it will have more than five million energy customers in the UK by the year 2000.

The company's activities have an important impact on the British economy, supporting the equivalent of more than 138,000 jobs nationwide, according to a study commissioned from the business consultancy Business Strategies Limited in 1998.

The group employs 14,500 people, and has led important initiatives aimed at supporting their training and development, as well as encouraging participation within the communities in which they work.

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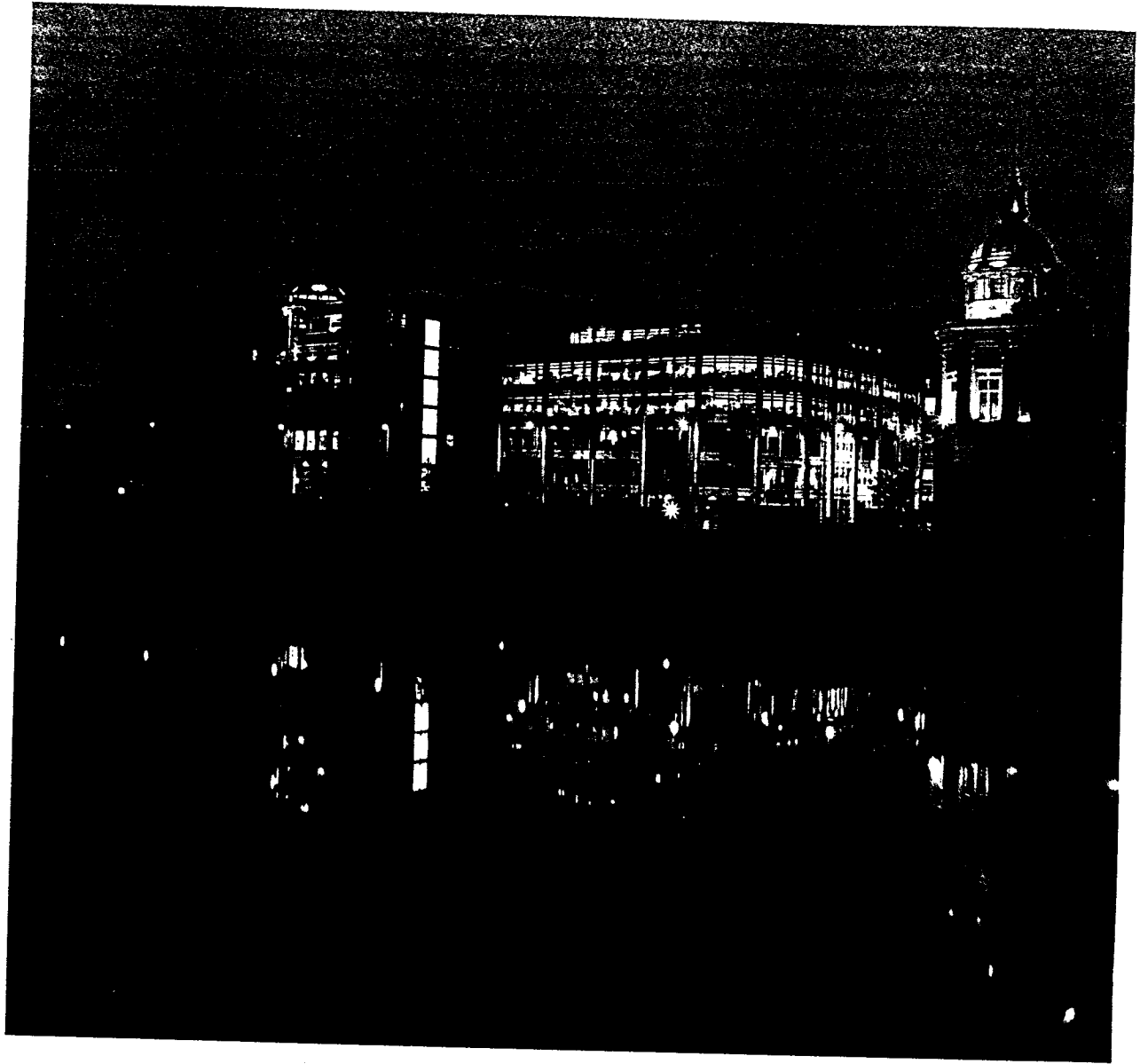
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## Generation Wholesale

The Generation Wholesale business draws from a diverse range of power sources, operates ScottishPower's generating stations, and deals in the wholesale trading of electricity and gas.

ScottishPower has a broad range of power sources, including thermal and renewable generation, as well as nuclear, gas, and hydro-electric capacity obtained via long term contracts. The business owns more than 4,000 megawatts (MW) of generation capacity.

Generation Wholesale returned an operating profit of £131.8 million during 1998. Increases in unit sales will be driven by an upgrade in the capacity of the Anglo-Scottish transmission link. This will contribute towards a 50% increase in electricity exports from ScottishPower: at no additional investment cost, because ScottishPower will be able to exploit its existing capacity more effectively.

The company currently sources 1.67 million tonnes of low sulphur deep mined coal annually as part of a six year contract with Scottish Coal, operator of the Longannet mine complex at Kincardine-on-Forth, close to the company's biggest power station. The business has various contracts lasting three to five years to take a further 1.7 million tonnes of Scottish opencast coal. The lower costs secured by these contracts will support the aim of extending the working lives of Longannet and Cockerzie power stations to 2020 and 2010 respectively.

The flagship facility at Longannet is one of the largest coal-fired stations in Europe, with four 600 MW units. ScottishPower engineers have a proven record of innovation, the most recent example being the installation in one unit of a unique gas injection system 'gas-reburn' which boosts combustion as well as reducing emissions of nitrogen oxides (NOx).

Other major plant includes the 1200 MW coal-fired station at Cockerzie, East Lothian. In addition the company owns and operates a 41.5 MW gas-fired station at Knapton, Yorkshire.

The 400 MW Cruachan pumped storage station near Oban in the Scottish Highlands sits deep within Ben Cruachan, drawing power from a reservoir on top of the mountain.

Our generation business is also the second largest windfarmer in the UK with windfarms at Rigged Hill, Corkey and Elliots Hill in Northern Ireland; Barnsmore, Co. Donegal, Republic of Ireland; and Hagshaw Hill in Lanarkshire, Scotland. It has joint venture interests in two windfarms in England, and one in Wales.

The Energy Trading Centre manages the gas and electricity portfolio, enabling successful competition in wholesale energy markets. This approach balances ScottishPower's generation and supply activities, maximising value from its vertically integrated businesses.

This is a key competitive advantage for ScottishPower, to be strengthened further by the conversion of an underground gas reservoir at Hatfield Moors in Yorkshire for storage of approximately 4.1 billion cubic feet of gas. Currently awaiting final planning consent, completion will provide a staging facility between ScottishPower's North Sea supplies and its customers, as well as providing storage during periods of low demand.

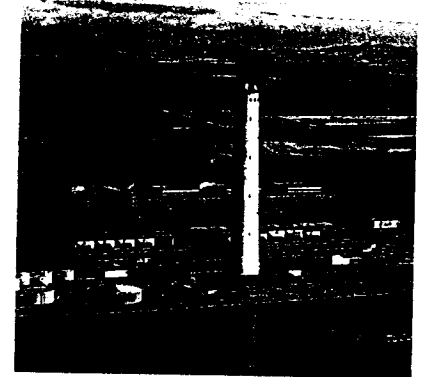




**Above** Scottish coal arriving at Longannet Power Station from Longannet mine.  
**Right** Longannet Power Station.

**Top left** Map of ScottishPower's generation facilities in the UK.

**Bottom left** Cruachan, a power station within a highland mountain.



## Power Systems

Power Systems, ScottishPower's 'wires' business, transmits and distributes power to customers throughout the group's franchise areas, and has a key role to play during the liberalisation of domestic electricity markets.

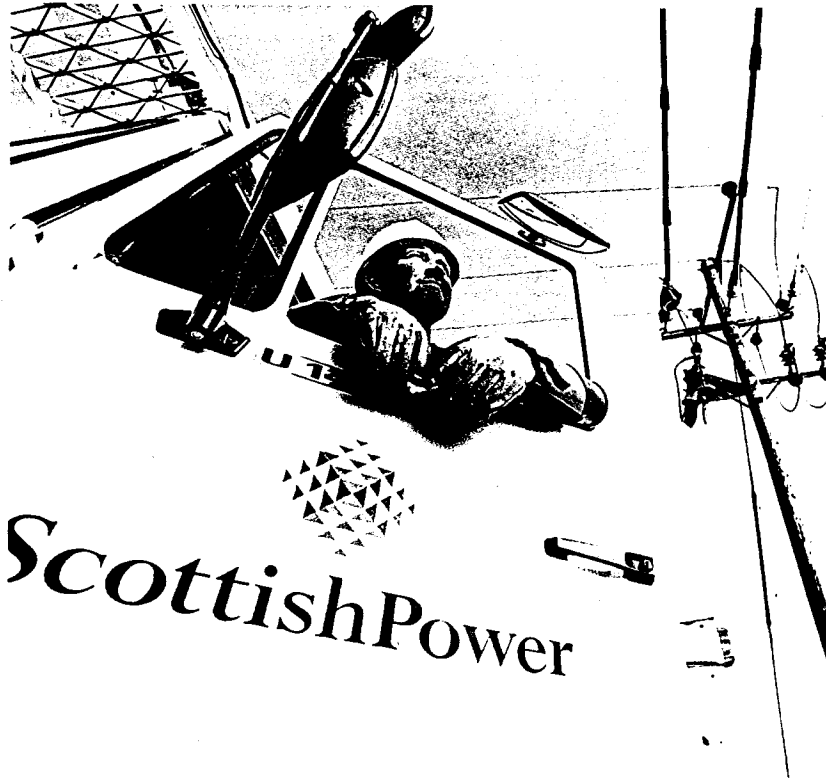
The integration of the ScottishPower and Manweb 'wires business' activities helped bring greater efficiencies, as well as moving the company closer to its customers.

Power Systems is responsible for the distribution and transmission network in ScottishPower's franchise area, and the distribution network in Manweb's franchise area. In addition its activities include providing new connections, developing transmission networks, and their refurbishment, maintenance and fault repair.

Apart from distributing and transmitting electricity to ScottishPower's and Manweb's own customers, Power Systems 'carries' electricity for competitor suppliers within both territories, a task which has involved major investment in staff training, systems development, and new equipment.

Power Systems employs 4,300 people, and has been investing at a rate of more than £200 million a year – more than £500,000 per working day. It is responsible for assets worth £2 billion, including more than 63,000 kilometres of underground cables and 50,000 kilometres of overhead line. The system can cater for a maximum demand of 7,242 MW of power, and its network includes more than 1,000 primary and 80,242 secondary substations across both franchise areas.

The business generated an operating profit of £249.5 million during the year ended 31 March 1998.



# ScottishPower

The successful management of the distribution system is crucial to the group's ambitions to develop a broad multi-utility range of services – supplying gas, electricity and telecommunications to existing and potential customers in a single package, as well as delivering power on behalf of third party suppliers under the market deregulation requirements.

The metering business, merged after the acquisition of Manweb and headquartered at Portobello, Edinburgh, was re-structured in readiness for the removal of franchise markets and full liberalisation of supply: that change means that, from the year 2000 the business will have to compete for contracts to 'meter' power on behalf of third party suppliers. Its data collection system achieved the prestigious ISO 9002 award.

Key recent investments have included three projects aimed at furthering security of supply in Fife, Borders, and Liverpool/Southport.

The business has introduced pioneering working practices such as 'live line' working which minimises the length of time customers are off supply during planned maintenance. Other projects include greater network automation, the installation of remote control and alarm systems at all main substations, and a new work and asset management system to improve inventory control and materials management. A division wide benchmarking initiative – covering many areas common to ScottishPower and Manweb – realised significant savings in areas such as procurement, as well as encouraging new working practices.

The benchmarking programme, which involves the study of other companies' operational techniques and comparing them with existing practice, has been of significant benefit. Numerous operations worldwide and throughout the UK have been reviewed in pursuit of establishing 'best practice'. In some cases, such as the pursuit of uninterrupted supply for major industrial users, whose needs





depend on 24 hour power, lessons have been learned from customers themselves.

In a joint venture with the engineering company Reyrolle, ScottishPower installed a Dynamic Voltage Restorer at the Caledonian Paper mill at Irvine, Ayrshire. The system protects against supply anomalies, which might jeopardise production. The first of its kind to be installed in Europe, it is also the largest in the world. The package developed by Power Systems is attractive particularly to large scale industrial users, or those in the electricity industries who operate 'clean rooms' and related areas which are guaranteed continuous power supply.

The business has successfully targeted major inward investors, winning the contract to supply the LG Electronics plant in South Wales, and several similar large scale industrial projects in Central Scotland. More broadly, its knowledge base in electricity distribution has been extended to include gas.

ScottishPower and Manweb teams have developed a rapid response system to deal with supply problems caused by severe weather conditions, pooling resources to minimise the period during which customers may have no power.



**Above** Our transport capability is essential for maintaining and restoring supplies in extreme weather conditions.

**Left** ScottishPower is making pioneering use of the Internet to enable organisations who dig up roads to log onto a new £6 million 'electronic map' of the company's electricity network.

**Far left** Essential maintenance is undertaken using 'live line' working which minimises the length of time customers are off supply during planned maintenance.

The Energy Supply business provides the prime point of contact with electricity and gas customers, covering sales and marketing, billing and customer enquiries, as full market liberalisation takes effect across the UK.

The group's Energy Supply business is responsible for the sales and marketing of electricity, gas and related products to customers within ScottishPower's and Manweb's respective franchise areas and to the competitive market throughout the rest of the UK.

A great deal of effort is aimed at improving our understanding of customers and their needs. Electricity prices continue to reduce in real terms for both domestic and small business customers, presenting the challenge of building new businesses in order to sustain growth.

Market liberalisation is key to the company's strategy. The UK gas market was fully open to competition in May 1998, and the electricity supply market is scheduled to be fully open by June 1999.

In domestic gas supply ScottishPower established itself quickly as the leading competitor to British Gas within its three 'home' territories, where the company's target is to establish a 14% market share by 2000. Since the gas market opened to full competition ScottishPower's number of domestic gas customers passed the 475,000 mark.

As domestic electricity markets open up, ScottishPower has adopted both defensive and offensive market strategies: first to protect sales in its home territories, and second to build new business elsewhere. This is a highly competitive situation, and one area of potential growth will arise among those 'new' customers who have signed up for gas. ScottishPower has developed a strong dual fuel product and is the first company to offer a single bill and point of contact for both gas and electricity.

Call Centres for electricity customers have been established in Glasgow and Warrington, and their activities extended to cover gas supply. A Call Centre in Wrexham provides facilities for our Welsh speaking customers.

In the business sector, most of which was deregulated in 1994, our target remains to win both large, multi-site clients as well as small and medium sized enterprises. One typical multi-site deal was that completed with the leisure

chain Bass plc, to whom gas is supplied at 2,700 sites nationwide.

'PowerSave' projects, involving shared savings schemes for small and medium sized businesses, have been launched in Merseyside, and in the provision of energy efficient lighting systems for the local authority in Wirral.

Research indicates that the ScottishPower brand is respected beyond its 'home' areas. Manweb and Southern Water operations have now been branded with the ScottishPower 'Powermark' logo, to reinforce the links with ScottishPower. Customers associate Scotland with positive attributes such as an ethical approach, integrity and a 'green' environmental outlook, and the ScottishPower brand benefits from those perceptions.

Both ScottishPower and Manweb have achieved steady and substantial reductions in the area of 'guaranteed standards failures' since privatisation.



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In Scotland the total fell from 2,020 in 1991-92 to 117 during 1997-98; in Manweb the figures were 1,405 and 62 respectively.

The drive for greater efficiencies continues. Underlying operating costs within the Scottish franchise market have declined by an average of 7% each year since 1995. Initiatives have included matching resources to demand more effectively, a trend applied with particular success to the Manweb operation. 'Back office' costs have been reduced successively, and the group is exploiting synergies across both areas. One Customer Service Call Centre meets all service requirements in the Scottish franchise area, equipped with the latest communications and information technology: replacing the activities of nine regional offices.

The electricity Regulator OFFER found in 1998 that the average annual household bill for Manweb electricity customers stood at £266 – a reduction in real terms of £100 since privatisation. In Scotland, domestic customers have seen real price reductions with new electricity tariffs lower than those in 1974. Further reductions have been made for pre-payment customers.

Customer complaints have fallen for the third successive year, and are running 21% lower than in 1994, producing one of the best levels of all 14 UK Public Electricity Suppliers.

ScottishPower and Manweb hold the Government's Charter Mark for service excellence in recognition of the group's record.

A multi product billing system, is being phased in which will provide a fully integrated billing, account management and customer service system. It is designed to meet the demands of a multi-utility environment once market liberalisation takes full effect. ScottishPower anticipates that its long standing commitment to the multi-utility concept, and its related investment, will offer a key advantage over many competitors.



Companies like ScottishPower succeed in the new market environment by 'differentiating' themselves: providing innovative products and excellent customer care. The successful launch of a ScottishPower Visa card, development of 'lifestyle tariffs', and a security scheme whereby customers identify meter readers with a pre arranged password, are all examples of our response to the challenge.

Affinity agreements are in place with the National Farmers' Unions in Scotland, England and Wales, representing 135,000 members, and with Union Energy, the Trade Union Congress's energy affiliate, offering competitively priced domestic gas and electricity to Britain's 7 million trade union members.

**Above** ScottishPower is already successfully marketing gas in its three operating regions and from June 'dual fuel' packages were on offer to our customers.

**Left** ScottishPower call centres deliver high-quality customer service.

Southern Water, acquired by the ScottishPower group in 1996, supplies water and wastewater services to 1.7 million customers in Kent, Sussex, Hampshire and the Isle of Wight. Investment in improving services will reach £1 billion by the year 2000.

Southern Water, a significant part of the group, returned an operating profit of £241 million in 1997-98. Its water supply business supplies an average of 603 million litres of water per day, through 13,200 kilometres of water main, to 2.2 million people. The company has a reservoir storage capacity of 42,444 million litres.

Southern Water customers are benefiting from a range of initiatives. Capital investment is running at £5 million per week in a wide ranging programme of improvements to both water supply and wastewater treatment.

Around 180 miles of water main is being replaced or relined each year and long term planning includes the potential expansion of reservoir capacity.

Among the UK water operators, the company has one of the lowest levels of water lost through leaks: 11.5% in 1998, the target being reduced further to 11% by 2000. During 1997-98, 1.72 million gallons – enough to supply a population of 27,000 were saved each day by mending leaks in the distribution system.

A £2 million state of the art Call Centre at Worthing, West Sussex, handles more than 4,000 calls per day.

For the second successive year, Southern Water restricted price increases, to 2% below the level set by the Regulator OFWAT for 1998-99. Our 'customer charter' offers service level standards above those sought by OFWAT.

Investment continues on a large scale as we replace and upgrade wastewater

systems along the southern coast. The number of beaches reaching European bathing standards has risen from 41% to 89% since privatisation. In more than 1,500 independent tests during summer 1997, 73% of bathing water showed 'excellent' quality and another 27% was 'good'.

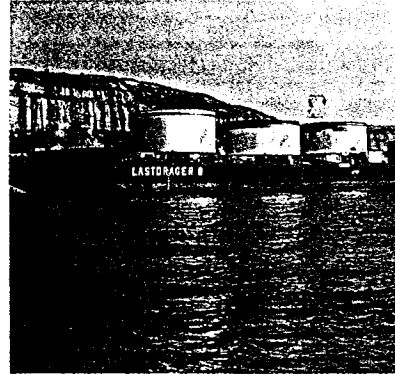
A £42 million underground treatment works has been completed at Eastbourne, as well as a new works at Pennington, Hampshire. Improvements are underway at Queenborough, Hythe and Swalecliffe in Kent. Europe's largest stormwater tunnel, three miles long, has been completed under Brighton seafront. New projects are underway at the Isle of Wight, Portsmouth and Havant.

Southern Water's activities have been re-structured into the core areas of operations, technology, and customer services, resulting in substantial operating cost savings. ScottishPower sold the company's 15 non core businesses, realising £90 million, more than the original £70 million target. Property disposal receipts move towards the target of £30 million.

The company's major construction programme brings great environmental improvements to bathing waters and rivers in the region it serves. However the programme itself must be managed carefully in order to minimise any short term environmental impact.

Southern Water carries out environmental assessments, ecological surveys, microbiological studies and oceanographic surveys as part of its project planning process. Recently, salmon have been found in the River Medway in Kent for the first time in more than a century, indicating the improved health of local waters.

The company also generates local initiatives such as the annual 'Pond Week', when several hundred volunteers clean, restore or create new ponds in the region. Seven hundred ponds have been treated since the scheme began in 1988.

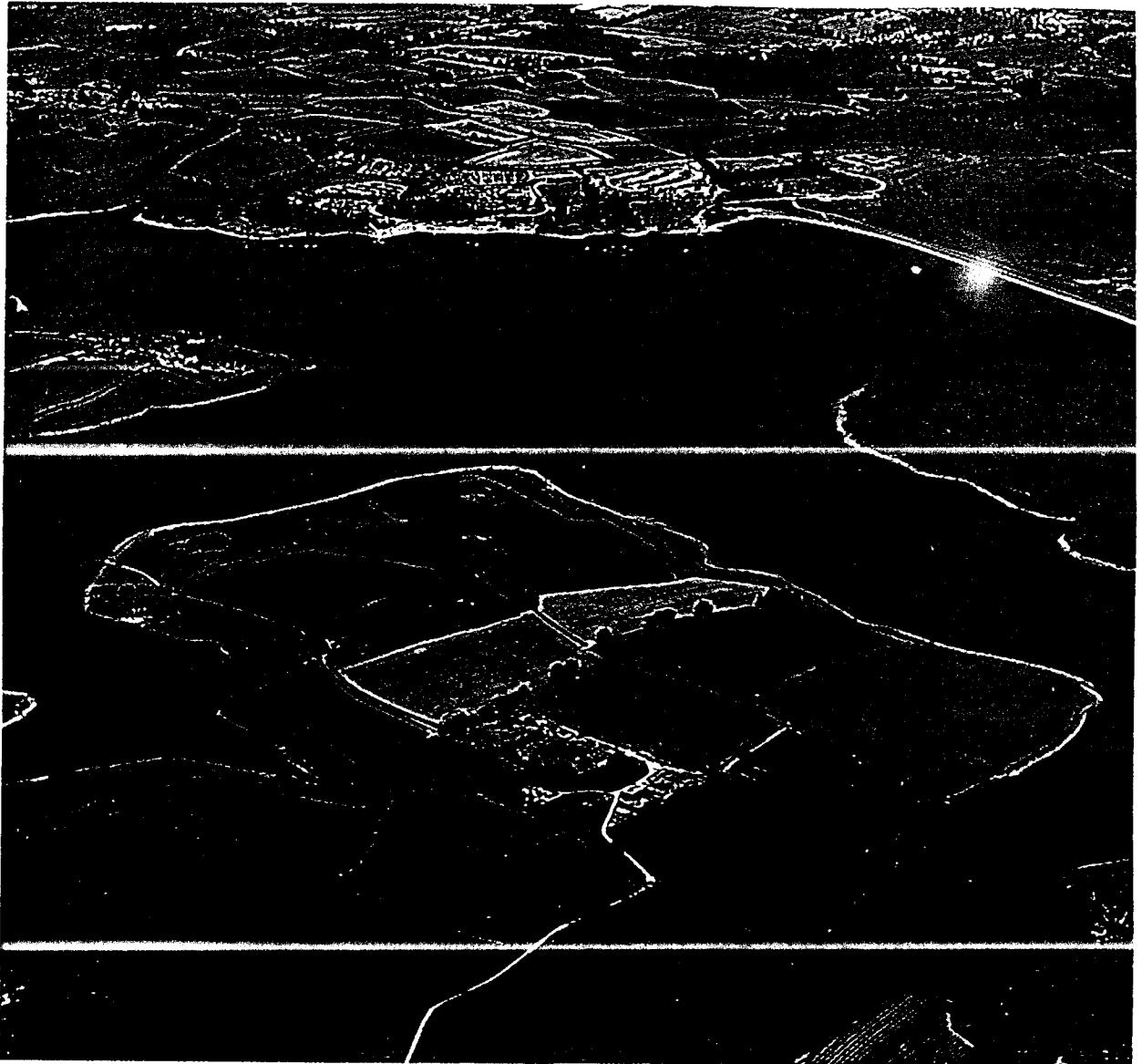


Southern Water has initiated several environmentally friendly experiments within its wastewater business. These include the establishment of an experimental 'farm', to demonstrate to farmers the value of recycling sewage sludge – formed when solids are removed during treatment – into a soil conditioner and fertiliser.

The water industry regulator OFWAT has reported regularly that Southern Water's service is among the best in England and Wales. In 1996-97 OFWAT reported that Southern Water was the only one of the 10 major water and wastewater companies to reach average or above average performance levels across its entire range of services.

The company is completing a 10 year plan intended to identify key areas for new investment, primarily to meet ever improving European standards. Southern Water completed a wide ranging survey of customer views before submitting its plan to OFWAT.

OFWAT's initial reaction to the company's future plan was given in 'Prospects for Prices' in October 1998. The Director General felt that was scope for a significant initial price cut followed by real term bill increases through to April 2005. A full strategic business plan will be submitted in April 1999 and a final decision on the profile of bill movements will be made in November 1999.



**Above** Bewl Reservoir is the largest lake in the South East of England. It attracts more than 200,000 visitors per year.  
**Left** Pumping station at Testwood Lakes, near Southampton.

**Far left** Barge carrying the giant tunnelling machine used to drill the mile long tunnel at Hastings.

ScottishTelecom has grown rapidly to become a significant provider of fixed and mobile telecommunications services to the domestic and business markets, and an important player in the expanding Call Centre and information sectors.

The telecommunications business has developed quickly since its launch in 1994, establishing ScottishTelecom in strong strategic positions within several target markets, and moving into profit within four years of start up.

An aggressive acquisitions policy, coupled with organic growth, has helped the business achieve positions of strength quickly and effectively within one of the world's fastest growing industry sectors.

ScottishTelecom provides a broad service range, including fixed voice and data, mobile services, Call Centres, online and Internet access, residential packages, audiotext, and personal numbering. The package includes innovative tariff structures, which are proving popular in a highly competitive market.

ScottishTelecom won the contract to service the 'virtual' University of the Highlands and Islands, connecting multiple remote sites. This follows significant network extension in the Scottish Highlands and Islands, to complete the company's infrastructure across Scotland.

The business has expanded into the Manweb territory, beginning in Merseyside, and extending services into Manchester, and Staffordshire.

By 1998, ScottishTelecom had achieved a 6% share of the Scottish corporate sector, in direct competition with BT, and its market share continues to grow. The company is also winning a greater share of existing clients' telephone and data business. Examples include the winning of The Royal Bank of Scotland's entire UK network. A campaign among small and medium sized enterprises during 1997-98 won 1,000 customers, each taking an average of five lines.

More than 20,000 residential clients have signed up, and expansion of the Fixed Radio Access (FRA) network continues in Edinburgh, Aberdeen, Stirling and Falkirk. This system involves the installation of a small dish, similar in shape to a satellite TV receiver, which transmits and receives digital signals to and from a series of relay stations. ScottishTelecom offers innovative packages of fixed, FRA and mobile telephony for domestic customers.

The merger with Martin Dawes Telecommunications' Scottish interests under the ScottishTelecom brand during 1997 was followed by the acquisition in February 1998 of the Vodafone distributor Pinnacle Cellular. The number of mobile customers passed the 100,000 mark as a result.

The Teledata acquisition in 1996 provided a platform in the growing Call Centre sector, and the company continues to grow by acquisition as well as building on existing strengths. The company designs and manages a variety of services, including telesales, technical help desks, information and inquiry lines.

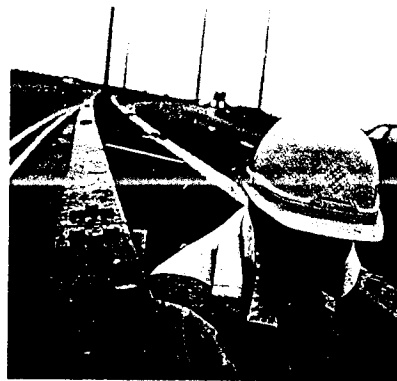
This is a growing market sector. Many companies, especially in financial services, computer hardware and software, are turning to third party providers like ScottishTelecom to manage Call Centre services: clients

include Microsoft, Compaq, Sony, and the US Embassy.

ScottishTelecom acquired the UK's largest independent Internet service provider, Demon Internet, during 1998, in a deal worth £66 million. This has helped establish the company in a market, which continues to experience exponential growth.

**Below** ScottishTelecom is laying fibre optic cables across Kessock Bridge, Inverness as part of the project to significantly develop the network around the Scottish Highlands and Islands.

**Bottom** Mobile customers now exceed 100,000.



ScottishPower's Retail business has grown rapidly to become one of the UK's biggest electrical retailers, and is responding quickly to changes in a highly competitive market.

ScottishPower Retail sells electrical products through a chain of 174 shops, including 18 new superstores whose addition has broadened the geographical presence across the UK, and consolidated its position as the third largest national electrical retailer.

A new Scottish distribution centre has opened at Mossend, Lanarkshire, in

order to improve delivery service, complementing the existing centre at Castleford, Yorkshire. This network of stores is supported by a modern technological infrastructure, which enables faster point of sale procedures and better management information.

The business now has over 5% of the UK 'white goods' market and over 3% of the 'brown goods' sector. Electrical white goods include cookers, washing machines, refrigerators, and account for 60% of total appliance sales. Brown goods, including televisions, stereo equipment, computers and camcorders, account for the remainder.



Above Interior of ScottishPower Superstore.

## Contracting Services

ScottishPower Contracting is one of the most successful businesses of its kind, providing specialist engineering services, project and facilities management services to both internal and external clients.

The Contracting business recently completed the integration of its activities with those of Manweb Contracting, creating one of the biggest and most profitable businesses of its kind in the industry, employing 900 people.

With sales of around £70 million, the business specialises in niche markets, including the installation and maintenance of high voltage equipment, residential heating (including both electricity and gas), street lighting,

security and fire alarms, residential telephones, appliance and installation inspection and pre-planned maintenance.

Key projects include a new substation and distribution network at ICI Films' Melinex plant in Dumfries (since acquired by Du Pont), and several upgrading contracts at British Aerospace, Broughton, which manufactures the Airbus A300/310. The Melinex project included the building of a new substation and designing a new supply system.

A major lighting refurbishment was undertaken at Rolls Royce Motors, Crewe, where improvements led to notable increases in staff morale and productivity. The scheme won Rolls Royce a highly commended award from the Lighting Industry Federation.

The business has continued to provide services to local authorities, hospitals, universities, and prisons. The customer base includes a wide range of private sector manufacturers, such as Motorola, Vauxhall, Coca-Cola and NEC.

Below Contracting Services working with British Aerospace, Broughton near Chester.



## Information Systems

ScottishPower, Richardson, p. 16  
Ex.SP\_ (AVR-1), No.98-2035-04

The Information Systems business embraces the whole range of ScottishPower's information technology activities, and has a key role in supporting the company's expansion into new markets.

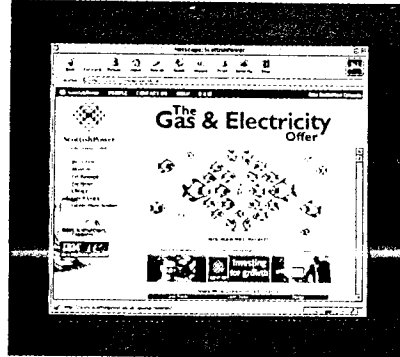
Integrated information systems are vital to the company's ambitions to develop as a multi-utility market leader, and the Information Systems business (IS) was heavily involved in helping other ScottishPower businesses prepare for the impact of market deregulation.

ScottishPower's Year 2000 (Y2k) programme adopts a business led approach to the Millennium issue and is taking into account the operations across all parts of the group. It expects to have substantially all of its business critical systems Y2k ready by the end of March 1999. The company is working proactively with suppliers to ensure that they are Y2k ready, and is actively engaged in identifying and resolving issues that may exist.

ScottishPower was the first UK utility to offer customers the opportunity to pay power, telephone and water bills via the internet. That followed achievement of the IBM 'e-business' mark, a fast developing standard for online

commerce. New gas customers can also sign up on the World Wide Web.

**Below** An extract from the ScottishPower web site, [www.scottishpower.plc.uk](http://www.scottishpower.plc.uk)



## Technology

The Technology business provides engineering and technical services to a range of internal and external customers, ranging from assisting the creation of ScottishTelecom's Fixed Radio Access system to gas power station projects and refurbishment of retail stores.

The Technology business has been transformed into a profitable growing business since privatisation. Engineers and other specialists offer their services to external market clients as well as within the ScottishPower group, a mix that has brought both success and new jobs.

Typical contracts have included supplying a specialist engineering team

to Scottish Nuclear prior to its privatisation as part of British Energy, and the development of combined-cycle gas power station projects.

Technology has branched out of its traditional operating base to win contracts to refurbish more than 50 ScottishPower retail stores, as well as winning external business from blue chip clients throughout the UK.

The group transferred a generating turbine from British Steel's former Ravenscraig works in Lanarkshire to Scunthorpe. And it helped redesign a pumping scheme for the Royal Docks in London Docklands.

**Below** Technology have completed the reconditioning of turbo-blowers bound for British Steel's Scunthorpe Mill.





ScottishPower Learning funds and supports a range of initiatives aimed at improving education and opportunities for employees and people of all ages within the communities in which we work.

ScottishPower Learning was launched in 1996 in recognition of the group's belief that the excellent standards of training enjoyed by staff can be extended to provide people in our communities with the opportunities to learn new skills that will help them succeed in today's dynamic and competitive job market.

The company contributed £2 million to the scheme during 1997-98, and achieved the 'Community Initiative of the Year' award in the Utility Week Awards. Last year

ScottishPower Learning supported the training of more than 800 unemployed young people.

The company is an active participant in the Government's Welfare to Work scheme. Ian Robinson, the group's Chief Executive is Chairman of the Advisory Taskforce in Scotland.

In July 1998, ScottishPower launched its New Deal programme, an initiative within the Welfare to Work scheme, which will offer 250 places for unemployed people aged between 18 and 24 across the group.

Our Open Learning facilities offer around 700 different learning programmes – covering languages, vocational qualifications, diplomas and degrees – in 46 Open Learning Centres across the UK.

More than half of our 14,400 employees and more than 1,000 family members have taken part so far in a scheme whose aim is to help them fulfil their potential in a variety of fields. In the wider community, more than 2,000 pupils, teachers and members of community groups have already benefited.

ScottishPower also plays its part in helping school leavers, unemployed and disabled people build their level of skills, and often their self confidence, in order that they can join or re-join the workforce. The process involves the building of strategic alliances within the fabric of society, including industry, schools and higher education establishments, and community interests: in keeping with the ScottishPower Values programme.

## Community

The company's publicly stated Values Programme includes a firm commitment to earn the trust and respect of communities in which it operates, and that ethic is instilled throughout our businesses.

The group has a significant impact on the UK economy, accounting for £5.8 billion of output, directly and indirectly, and supporting more than 138,000 jobs.

Our community programme is measured for performance, and new targets are set annually. It includes supporting education and employment initiatives, charities and caring organisations representing children and young people, people with disabilities, older people, and the disadvantaged.

ScottishPower concentrates effort on helping the young and long term unemployed. In addition the group sponsors the performing arts, sport, recreation and intends to do more to help promote inward investment and economic regeneration within its communities.

Practical examples include Southern Water's 'Learn to Swim' campaign which has helped over 250,000 children to learn to swim, the sponsorship of the Royal Scottish National Orchestra's Proms and Schools Proms series. The ScottishPower and Manweb Community Champions programme is an award scheme that recognises and rewards groups and individuals who contribute significantly to their local community. In addition, Manweb is working closely with local groups in Shropshire, recruiting volunteer 'Power Wardens' who become the communication link to the company's

emergency team in the event of serious loss of supply in bad weather.

**Below** Southern Water last year helped around 40,000 children learn to swim.



ScottishPower believes firmly that a sustainable energy strategy must involve a balanced fuel mix, further development of renewable energy, active encouragement of energy efficiency and adoption of clean-up technologies.

Each area of activity has strict targets for environmental improvements, varying from the recycling of packaging in Retail to reductions of waste in engineering operations.

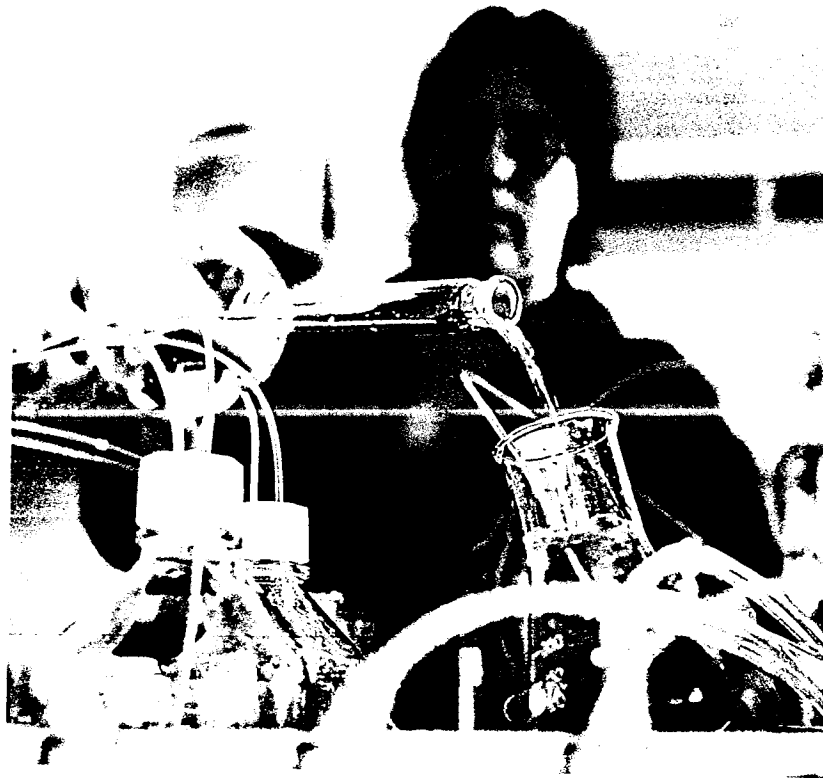
The group's Energy Efficiency programme has contributed to saving many hundreds of thousands of tonnes of emissions of the 'greenhouse gas', carbon dioxide. The effort includes campaigns to raise awareness among staff and customers.

Research will continue to play an important role. One example is the pioneering 'gas re-burn' project at Longannet power station in Fife. A £28 million initiative backed by the European Union, it was commissioned formally by Donald Dewar MP, Secretary of State for Scotland, in November 1997.

Combined Heat and Power (CHP) schemes, involving the creation of local power supplies to large premises, for example large manufacturing plants with heavy energy needs, represent a decentralising of bulk power and significant energy and cost savings.

ScottishPower believes that 'renewables' such as wind power, small scale hydro plant, farm waste, forest residues, and waste combustion provide substantial promise as supplementary power sources.

Southern Water's considerable investment expenditure has important environmental considerations, whether in improving wastewater treatment, repairing leaks, or other infrastructure projects.



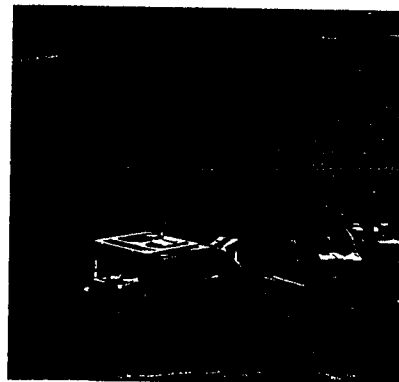
A major programme of regional sewage sludge centres is underway, delivering high quality compost for agriculture. Southern Water opened an experimental farm to demonstrate the value of recycling sludge, formed by removing solids during treatment, into a soil conditioner and fertiliser.

The company is on target to phase out sea disposal of sludge by the end of 1998, and end landfill and liquid disposal and the production of untreated sludge by the year 2000.

The annual 'Pond Week' initiative has involved more than 1,200 volunteers, who have cleaned, restored or created more than 700 ponds. Salmon have been found in the River Medway for the first time in more than a century, an indication of the improving state of our local waters.

ScottishPower's environmental record has been recognised in the Business Environment Survey of FTSE 100 companies, where the group has retained its position in the top quintile for our environmental performance and communications.

**Above** Testing water quality at Southern Water.  
**Below** Euclid vehicle moves low sulphur coal from Longannet's reserve coal stocks.





**Above** Penrhyddlan and Llidartywaun windfarm, Wales, Europe's largest wind power complex.  
**Left** Designed for children: an environment to learn about safety.  
**Far left** Working in partnership with British Trust for Conservation Volunteers, more than 700 ponds have been saved, restored or created in the last ten years.

The ScottishPower group is committed to enhancing shareholder value through building businesses in electricity and utility-related markets. With a customer base of five million homes across the UK.

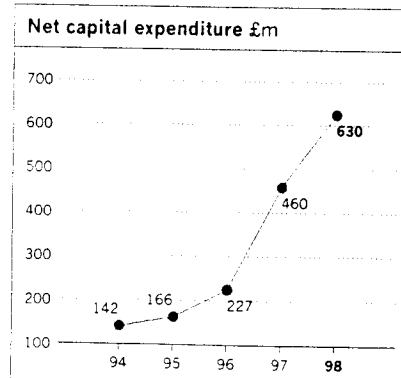
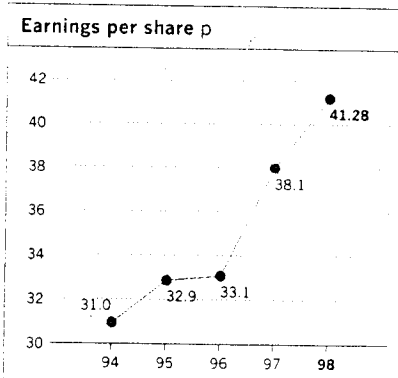
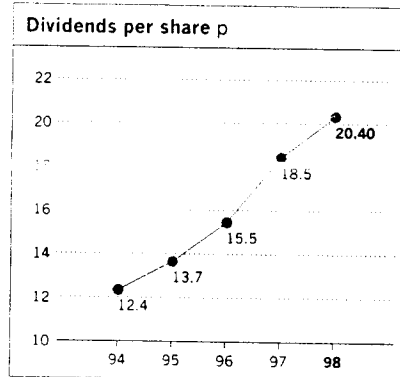
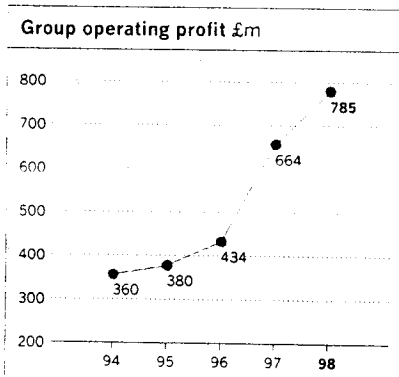
Between 1993 and 1998 the company invested more than £1.6 billion in building its businesses in addition to acquiring the REC Manweb, at a cost of £1.1 billion, and the water and wastewater company Southern Water for £1.7 billion.

In the last five years group operating profit has grown by 118%, reaching £3.1 billion in the financial year 1997-98. This increase has been achieved through the combination of improved efficiency, increased sales, in our electricity and developing businesses and the inclusion of profits from Manweb and Southern Water.

Our major investment decisions are evaluated against the ability to offer more value to shareholders than that offered by the return of funds through a special dividend or share buy-back. Both earnings per share and dividend to cashflow measures are used to evaluate this.

As well as continuing to drive for growth in our UK businesses, we are exploring international opportunities in the energy sector. We shall only proceed if we see the opportunity to add substantial value for ScottishPower shareholders.

The compound average growth rate over the last five years for earnings per share was 7.5%. Since 1994 the compound average growth rate for dividend per share has been 13.3%.



# Five Year Financial Summary

ScottishPower, Richardson, p.21  
Ex.SP\_ (AVR-1), No.98-2035-04

	Years ended 31 March				
	1998 £m	1997 £m	1996 £m	1995 £m	1994 £m
<b>Results</b>					
Turnover	3,128	2,941	2,271	1,716	1,569
Earnings before interest, tax & depreciation	932	790	515	430	413
Profit before taxation	640	558	404	375	351
Profit after ordinary taxation	488	422	295	274	258
Windfall tax	(317)	-	-	-	-
Profit for financial year	170	421	296	274	258
Dividends	(243)	(218)	(146)	(112)	(101)
Free cash flow*	707	573	242	180	335
Capital expenditure (net)	630	460	227	166	142
Net debt	1,953	1,790	632	86	4
Net Assets	1,710	1,523	1,207	1,106	942
<b>Ratios and statistics</b>					
Gearing	114%	118%	52%	8%	0%
Earnings per ordinary share*	41.28p	38.11p	33.12p	32.88p	30.95p
Dividend per ordinary share	20.40p	18.50p	15.50p	13.65p	12.40p
Return on equity*	27.2%	27.7%	24.5%	24.8%	27.4%
Interest cover	5.3x	6.2x	14.4x	61.5x	41.8x
<b>Employees</b>					
Number of employees (full time equivalent) at 31 March					
- Scottish Energy businesses	4,748	4,916	5,215	5,595	5,922
- Manweb	2,151	2,757	2,979	-	-
- Southern Water	2,364	3,526	-	-	-
- Developing businesses	5,043	3,202	2,579	2,445	2,058
	<u>14,306</u>	<u>14,401</u>	<u>10,773</u>	<u>8,040</u>	<u>7,980</u>
<b>US GAAP information</b>					
Profit for the financial year under US GAAP	£130m	£353m	£271m	-	-
Earnings per ordinary share per US GAAP*	37.86p	31.66p	30.14p	-	-
Equity Shareholders' funds per US GAAP	£2,253m	£2,340m	£1,510m	-	-
* 1998 figures are quoted excluding the effects of the windfall tax liability of £317 million and the windfall tax payment of £158 million.					



## Values

Working together to  
improve lives

We are committed  
builders of businesses,  
in electricity and  
utility-related markets,  
determined to deliver  
outstanding performance.



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# Introduction



“As the ScottishPower group grows and develops as a major business, I strongly believe that it is important for us to set out in clear and simple terms where the group is going and, to define the values that we as a management team really believe in.

Building on the work undertaken by a group of managers from across the business, the Executive has developed a mission statement and a series of values to which we as a team are totally committed. These values are the principles guiding the way we both run our business and work together as a team. To bring this to life we have also identified what all of us should and should not be doing to uphold these values in our business.

It is the responsibility of every manager in the group to make these values “live” through our day to day behaviour and the way we manage our teams. Through working together in this way I believe that we can continue to build the ScottishPower group into a business that is universally respected and admired.”

*Ian Robinson*

Ian Robinson **Chief Executive**



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## Our mission

We are committed builders of businesses,  
in electricity and utility-related markets,  
determined to deliver outstanding performance.

## Our values

- 1 Well-earned customer loyalty
- 2 Enhanced shareholder value
- 3 Positive working environment
- 4 Trust of communities
- 5 Teamwork and leadership

## Value 1 Well-earned customer loyalty

We shall deliver quality and value for money services which meet and influence our customers' needs.

### We will

Satisfy our customers' basic requirements and innovate and adapt our range of products to meet their changing needs.

Keep alert in the marketplace to ensure that we outperform competitors.

Make the most of the relationships that we have across the ScottishPower group and with external customers and suppliers.

### We will not

Forget that we are all ultimately dependent upon the customer.

Promise what cannot be delivered.

Set performance targets ignoring customers' needs.

## Value 2 Enhanced shareholder value

We shall create shareholder value by building businesses and continuously seeking opportunities to gain advantage over competitors.

### We will

Maintain a leading position on efficiency and use of assets in all our businesses.

Constantly seek to influence our markets and to maximise opportunities.

Think of opportunities for other areas of the group.

Aspire to be the best and to lead.

### We will not

Hesitate and allow others to beat us to it.

## Value 3 Positive working environment

We shall seek to provide a positive working environment which inspires employees to fulfil their potential and maximise their contribution.

### We will

Show respect and concern for employees as individuals gaining their trust and taking seriously our responsibility for their safety and well-being.

Develop ways of working with employees based on teamwork and involvement stressing the importance of delivering quality to the next person in the chain.

Provide rewards for, and recognition of, good performance, based on fair assessment and supported by straightforward feedback.

Address fairly, for the greater good of all, continuing failure to perform at the required level.

Provide and encourage employees to take advantage of opportunities for personal growth, through training and career development.

### We will not

Deliberately mislead employees.

Denigrate employees' ideas.

## Value 4 Trust of communities

We shall maintain the respect and trust of all communities through recognising and responding to the needs of both the local and wider environment.

### We will

Plan our activities in a responsible manner to ensure that we contain the impact on communities and the environment to a practicable minimum.

Promote a deep understanding of longer-term environmental and community issues and how they affect and are affected by our business.

Actively participate in a positive way within the local community.

### We will not

Underestimate the significance of small things.

Treat community or environment issues only as tactical or short-term projects.

## Value 5 Teamwork and leadership

The ScottishPower group will be led by a management team who

Have a passion to deliver.

Are ambitious, honest, frank and ethical.

Share a common sense of direction.

Manage change and have the courage to confront difficult issues and situations.

Are able to take, and encourage others to take, considered and acceptable risks.

Never forget that people do it all.

### We will not

Tolerate wilful unclarity and partial disclosure.

Operate under a fear-driven, good-news culture by withholding bad news, covering up problems, or "shooting the messenger".

## Value 5 Teamwork and leadership

### We shall lead by

Being visible, approachable and "walking the talk".

Setting an example of how people should behave in dealing with both colleagues and customers.

Communicating a clear purpose and direction through listening, talking and supporting at all times.

Encourage confidence through setting clear objectives and making effective decisions in the best interests of the business.

### We will not

Be dishonest.

Play politics.

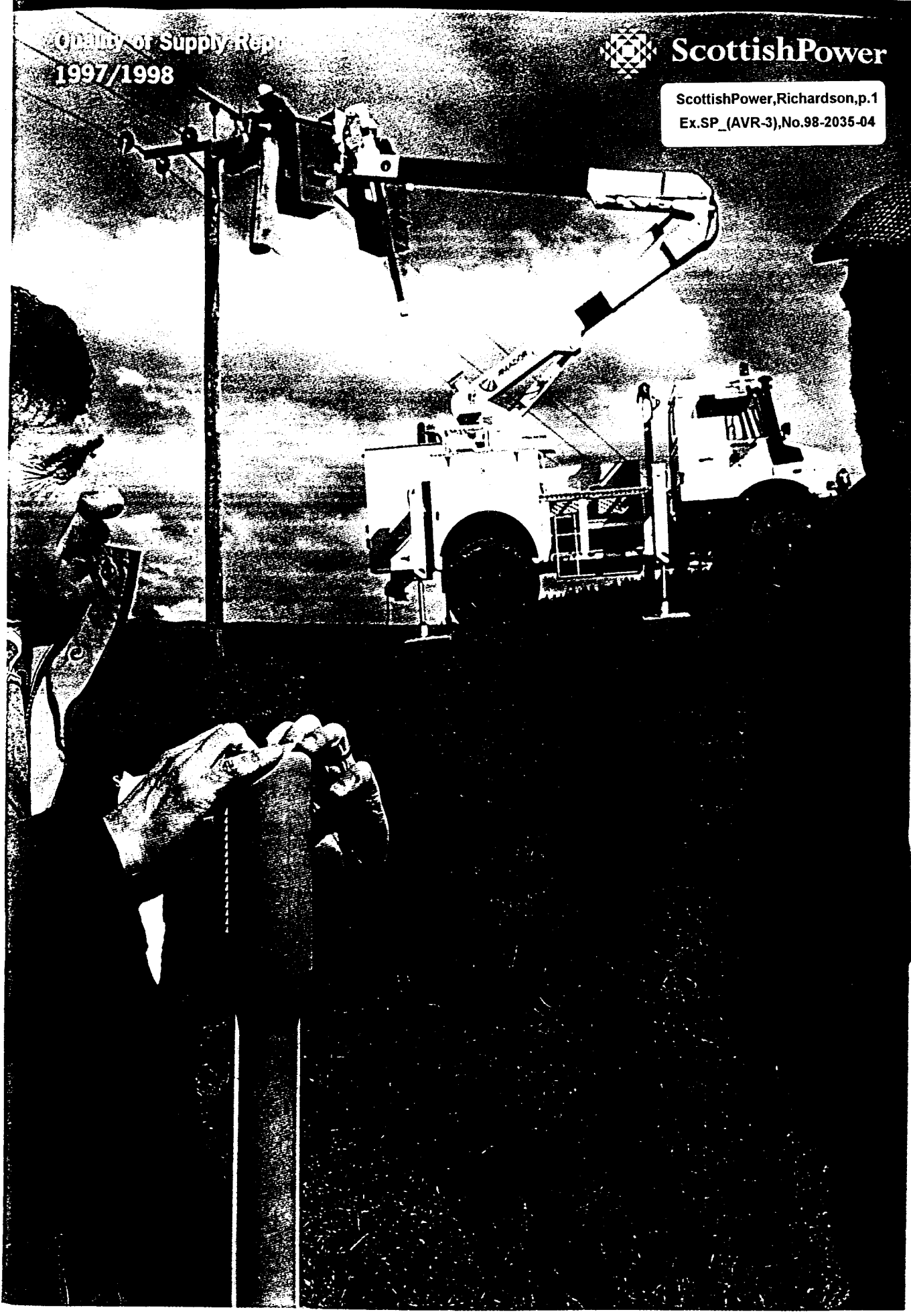


Quality of Supply Report  
1997/1998



ScottishPower

ScottishPower, Richardson, p.1  
Ex.SP\_(AVR-3), No.98-2035-04

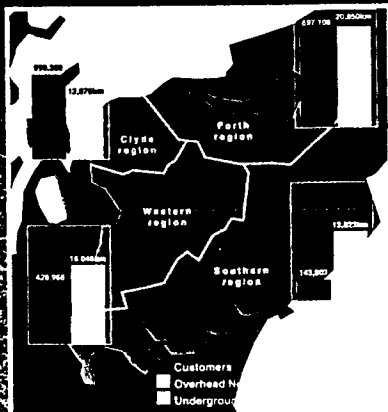


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- 10 System performance
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## Report highlights

- ▶ Customer minutes lost for each connected customer (CML) due to pre-arranged interruptions continues to fall to 29% of 1992/1993 figures.
- ▶ Fault interruptions – we reconnected 88% of customers within 3 hours.
- ▶ After the December 1996 storm, we rebuilt damaged overhead lines using stronger materials.
- ▶ In April 1997, we commissioned a new incident recording and customer monitoring system to provide more accurate incident reporting.



## Company profile

We distribute electricity to more than 1.8 million customers in 23,000 square kilometres, stretching from Newport-on-Tay and Helensburgh in the north to Stranraer and Holy Island in the south.

This geographical area is made up of contrasting areas from the heavily-populated industrial and urban areas of the Clyde and Forth valley to the exposed and sparsely-populated areas of the Borders and Dumfries and Galloway.

We are now restructuring our regional boundaries and we have shown details at the end of this report.

Front cover: Southern Region Manager, Gordon Christie MBE (left of picture), explains live working methods to a landowner. Gordon Christie received his MBE in the New Year Honours List for his services to customer relations and the electricity industry.

# Message from Alan Richardson

Managing Director,  
Power Systems.



This fourth 'Quality of supply' report reviews the quality of supply we delivered to our customers between 1 April 1997 to 31 March 1998 and shows our progress of recent years and the improvements we will deliver to our customers by the year 2000.

We also examine our past and future capital investments which are aimed at improving the availability, security and quality of service our customers experience.

Our aim is to provide a consistently high quality of electricity supply to our customers. By the year 2000, our target is to reduce customer minutes lost for every connected customer (CML) by around 20% from the 1991/1992 levels. Our performance figures for 1997/1998 show that we are progressing towards that target and we will continue to focus on system performance to make sure that we deliver the highest possible quality of supply to our customers.

We also aim to deliver excellent customer service.

We are committed to improving the reliability of our network and our quality of supply through carefully targeted investments in the distribution system. Much of this investment is targeted towards our customers

in the rural areas (the countryside) and our initiatives are described in this report. However, we are upgrading urban networks (towns and cities) with programmes to refurbish buildings and replace switchgear.

We have good working relationships with manufacturers and encourage development of equipment and technology to deliver the best possible benefits to our customers at acceptable cost.

Early in 1997, we introduced two new computer systems – **Prosper** and **TroubleCall**. This improves our response to a customer's loss of supply and provides accurate data on our network. The data provided by these systems will make sure that we respond efficiently to losses of supply and that our quality of supply improvement programmes are targeted at our worst served customers.

This report provides a clear overview of our electricity network operations. If you have any questions or comments about its content, please contact either me or the Regional Manager at your local regional office. You will find details of how to contact us on the back cover of this report.

This section describes some developments we are introducing to improve all areas of our service and reliability.

### Market research

Customers tell us through our research that reliability and availability of supply is most important to them. If their electricity supply is interrupted for any reason, they expect us to deal with it promptly. Short interruptions of a few seconds are inconvenient but most of our customers prefer them to longer interruptions. Customers on our urban networks are generally satisfied with the quality of supply we provide.

### Network management

When power supplies are disrupted, it is essential that our customers can:

- contact us easily;
- tell us about their circumstances; and
- have information about the action we are taking.

Our 24-hour service line is available on **0845 27 27 999**. Our aim is to deal with calls quickly and efficiently to make sure that customers are given accurate up-to-date information. We are always reviewing the level of



# Quality of supply developments

service we provide to our customers, particularly in emergency situations, and we are looking to best practices.

Since opening the £5m **Power Systems Management Centre** (PSMC) in January 1996, we have extended the system to our regional centres to give us greater flexibility in managing our network. The PSMC includes a control room with a modern computerised network management system to control all network operations and a despatch centre where dedicated staff co-ordinate the response of our emergency repair teams.

How long a power failure lasts depends on how quickly our field staff can correct the problem. During 1996/1997, we restored power to 88% of our customers affected by faults within three hours, which was more than our target of 80%. We aim to further improve our performance in this area and we will continue to improve our

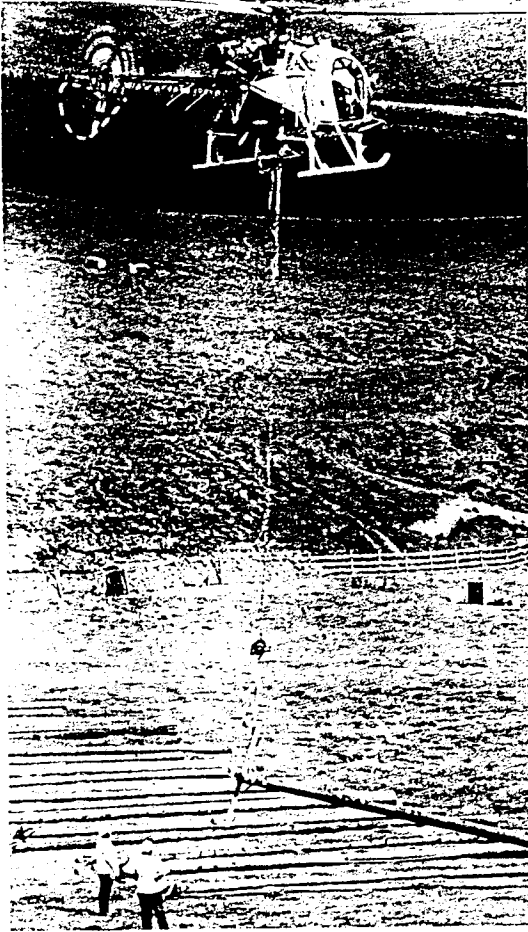


customer service to make sure that we beat our new target of 85%.

To improve our ability to accurately record incidents and identify those customers who suffer repeated interruptions to their supply, we have developed **Prosper**. This is a new incident-recording and customer-monitoring system – at a cost of more than £500,000. We began to use this system at the beginning of April 1997 and the database analysis identifies the worst circuits for network improvements. The system uses accurate and consistent figures to show the number of customers affected by a fault. Before April 1997, the figures we entered into the computer fault-reporting system were our staff's best estimates. The customer numbers being reported now compared to the previous figures show a 21% increase due to the improved reporting systems. This directly affects our company CML figures for 1997/1998.

### **Substation automation**

System Control and Data Acquisition (SCADA) schemes provide the basis for reporting alarms and remote controlled equipment automatically. Our project to make all major substations in ScottishPower automatic began during 1997/1998 and now 30 substations have this facility. Our Power System Management Centre (PSMC) in Hamilton controls these substations and we aim to complete the remaining 289 sites by the beginning of 1999. Within the first three months of the programme, we have already used this technology to restore supply to more than 3,000 customers, approximately one hour faster than would have been possible without the new equipment. Alarms from the substations alerted us to the customers without power before we received calls at the call centre.



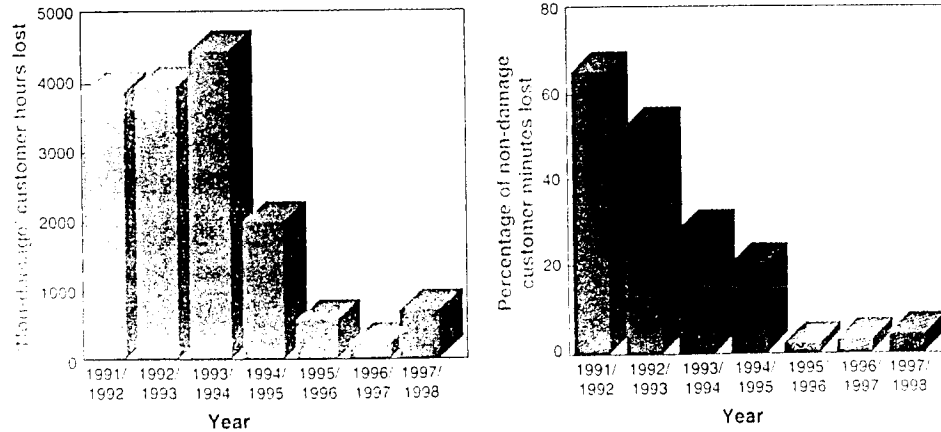
### Overhead line protection policy

The overhead line protection policy, which started in 1993/1994, continues to provide benefits to our rural networks and we have improved 234 circuits throughout ScottishPower. The policy co-ordinates recent technological advances in overhead line protection equipment to the benefit of our rural customers. Overhead lines often

experience a temporary fault, perhaps due to lightning, birds or windblown debris. Older protection systems would disconnect the line, even though they were not damaged, until our staff arrived to switch the line back on. The new equipment has improved the reliability of supplies to rural customers by removing most of these long disconnections.

The graph shows the improvement in customer minutes lost due to non-damage faults after we applied the overhead protection policy during 1994/1995.

Overhead protection – applied to Dalbeattie Primary 1993/1994



### **Reconstructing overhead lines**

We developed our overhead line reconstruction programme from our analysis of system failures during the storms of November and December 1996.

Most of our existing 11,000 volt lines were built between 1950 and 1960 and the line strength was not designed to cope with the storms of recent years. As we rebuild our overhead lines, this policy of stronger construction will greatly improve our network performance in severe weather. However, the stronger construction lines will not completely remove the possibility of damage from hurricane force winds or windblown debris. The rebuilding programme will take many years to complete and we will ask the Office of Electricity Regulation (OFFER) to agree to its future funding.

During 1996/1997, we successfully carried out a trial of 11,000 volt covered conductor lines near Stranraer. This type of line design is included within the reconstruction policy. We will use it in

selected areas where there is a clear need, for example woods, forests and river crossings.

The programme to rebuild overhead lines to improve our customers quality of supply depends significantly on landowner permission and planning authority approval. Progress can often be held up by negotiations with landowners for replacing routes and for land access. We continue to try to find appropriate cost-effective methods to improve the quality of supply to our rural customers while dealing with the needs of landowners and the local environment. An example of our environmental care is when we diverted an 11,000 volt line being rebuilt in the Ettrick Valley of Borders Region after the storms of December 1996. We identified part of the original route as being a site for Millenium funding to restore a natural wetland, so we diverted the new route around the wetland by consulting with Forest Enterprise to create a route hidden from the roadside by trees.

## Automation

We supply rural villages, often far from our main substations, by an 11,000 volt overhead line. Incidents on the high-voltage lines which cause damage to our equipment can result in the supply to the village being lost until staff arrive to isolate the problem and restore supplies. However, many villages have an alternative supply available in the form of a second high-voltage overhead line. This system detects a loss of supply to the village and, having checked that the incident is not within the village network, signals the pole top switches to operate and restore supply to the village. This takes 30 to 60 seconds compared to the two hours it would take for our staff to carry out the work on site.

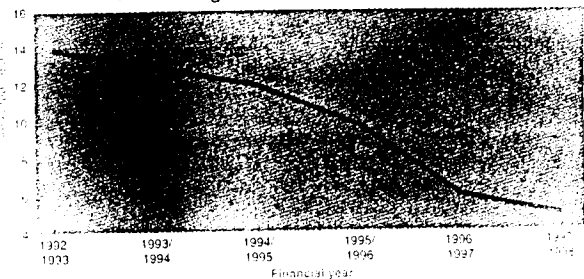
During 1997/1998, further schemes were installed for Johnstonebridge in Dumfries and Galloway and at Broughton, Tweedsmuir and Skirling near Biggar. Schemes planned for 1998/1999 will benefit Dalrymple and Hollybush in Ayrshire and Dolphinton in Lanarkshire.



## Planned work

ScottishPower and Manweb lead the way in applying outage-free techniques for live work on the 11,000 volt overhead line system. We introduced these working practices as part of our policy to improve service by not disconnecting customer supplies for routine maintenance work. Our efforts have resulted in a 65% drop in CML due to planned interruptions from 1992/1993 to the 1997/1998 level of 4.9 CML.

Pre-arranged customer minutes lost





## Transients

Transients are short-term supply interruptions lasting less than one minute but usually for about 10 seconds. Interruptions are caused by the automatic operation of switches on the 11,000 volt network which disconnect faulty lines. After a suitable time, intended to allow the cause of a temporary fault to clear, the switch closes automatically to restore supply. More than 60% of incidents on 11,000 volt overhead lines cause no damage to our equipment and allow us to quickly restore supplies.

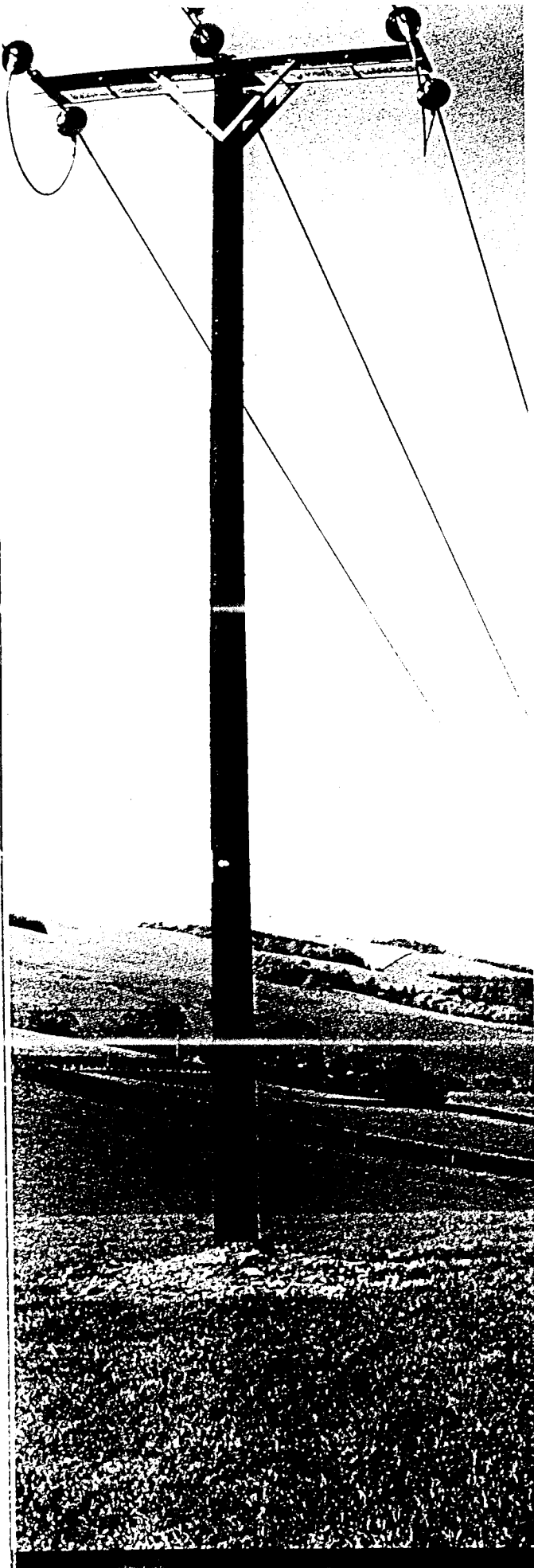
We can pick up limited data on transient interruptions from a System Control and Data Acquisition (SCADA) system recording switch operations at our substations. Some transients on the network are protected by pole-mounted switches which are distant from our main substations. So that we can get accurate data about customers affected by these transients we have installed power fail monitors (PFM) in some customers' homes for a trial. These devices detect loss of supply and report it through the



customer's phone line to a central computer system. The computer system provides a useful database that analyses circuit performance for both long-term and short-term interruptions.

Some customers have helped us with the trials but we are aware some customers may resist if we install such devices on a wider basis. There have also been technical problems with the new equipment and the connections we need within the customer's home. As an alternative, we are developing an expert system to give the same information on transients using a monitoring technique that we already use for monitoring power quality.

We will report the results of these developments in future issues of our quality of supply reports.



### **Power-quality monitoring**

Voltage dips happen on all power systems because of system incidents, for example cable damage and lightning. Computers, process control equipment and power electronics have made customers more aware of these voltage dips.

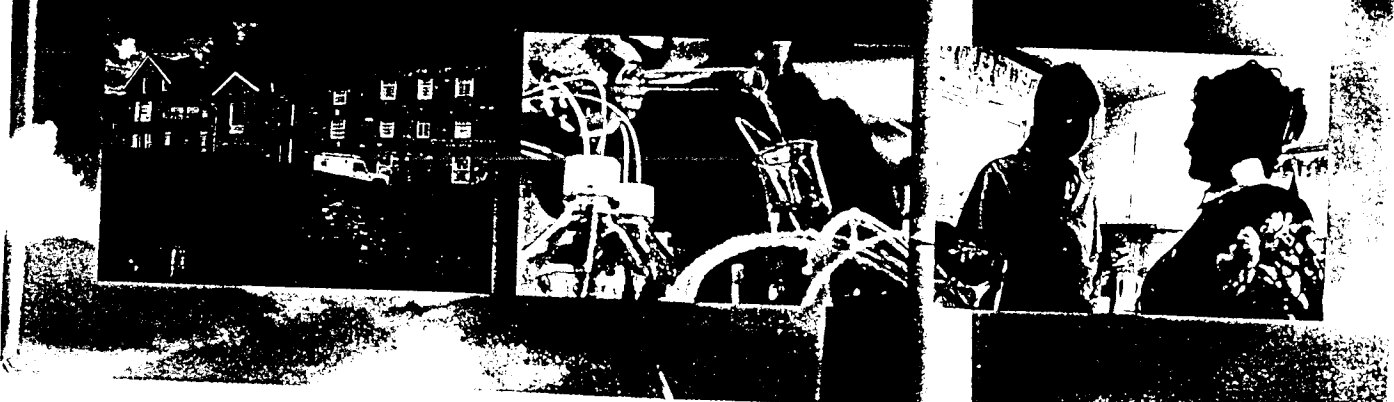
Modern equipment should be designed to ride-through (carry on working) many of these disturbances and European law exists to guide equipment manufacturers in the types of power quality problems which exist on a public supply system. Customers who rely on modern electronic devices should ask for guidance from equipment suppliers on what voltage dips the equipment can ride-through and how it should be protected.

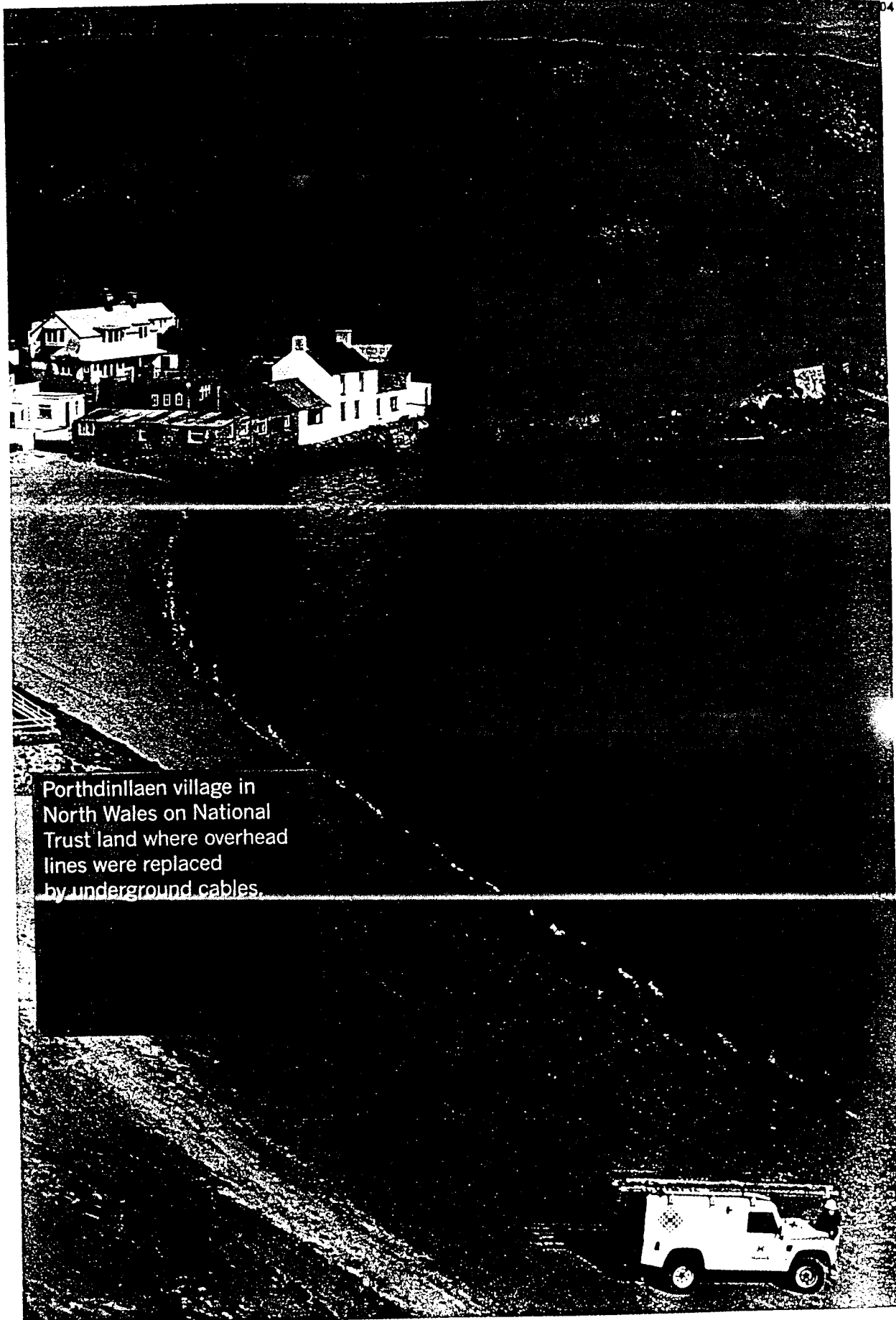
Voltage dips particularly affect major process and service industry customers who are concerned about losing many hours of production because of the effect of supply disturbances which only last less than one second.

The ScottishPower area has one of the highest

**Environment Report  
1997-98**

**Meeting our targets  
and moving forward**





Porthdinllaen village in North Wales on National Trust land where overhead lines were replaced by underground cables.





ScottishPower  
1 Atlantic Quay  
Glasgow G2 8SP  
[www.scottishpower.plc.uk](http://www.scottishpower.plc.uk)

# Encouraging young people to develop their sporting talents



## Our commitment for the future

Working to meet  
expectations in  
a new world

We are investing all the time in the communities we serve. It is a continuous commitment founded on long-term partnerships with charities, caring organisations and other agencies providing vital support networks in our communities.

And this work is growing. Each year we are forging new relationships with individuals and groups. In 1998-99, for example, we will assist training programmes for over 450 unemployed people. Moreover, the ScottishPower group is working closely with the New Deal initiative and making important contributions to a number of strategy groups in Scotland, Merseyside, North Wales and South East England.

### New initiatives

Already we have identified several key projects for the coming year – backing for the National Museum's 20th Century Gallery, and expanding into Scotland the Community Champion programme which is proving so successful in North Wales and Cheshire.

Another key initiative – the largest water-usage survey undertaken by Southern Water – will see more than 400,000 customers receiving a check list to help them audit and evaluate their use of water at home.

Our commitment won't stop there. We will go on demonstrating our active involvement through a systematic programme of community investment and initiatives.

## If you would like to know more:

For more information about  
your local area:

**Manweb**  
Corporate Communications  
Manweb House  
Chester Business Park  
Wrexham Road  
Chester CH4 9RF  
Telephone 01244 652000  
Fax 01244 652119

If you would like to know more about  
the ScottishPower group and its  
involvement in the communities in  
which we operate, please contact us  
at the address below:

**ScottishPower**  
Corporate Affairs  
1 Atlantic Quay  
Glasgow G2 8SP  
Telephone 0141 248 8200  
Fax 0141 248 8300

For more information about  
your local area:

**Southern Water**  
Corporate Communications  
Southern House  
Yeoman Road  
Worthing  
West Sussex BN13 3NX  
Telephone 01903 264444  
Fax 01903 693068

Or visit our web site  
[www.scottishpower.plc.uk](http://www.scottishpower.plc.uk)



The farming community benefits, too. With the Farm Energy Centre, we offer free milk cooling units to dairy farmers in North West England and North Wales. Milk cooling accounts for one third of electricity consumption on dairy farms and the units could cut costs by half, saving around £375 a year for a 70-cow herd.

The hallmark of our environmental initiatives is their practicality – like our provision of office accommodation for the environmental protection agency, Forward Scotland.

#### Conserving water

Our customers are also joining our efforts to conserve water. In South East England, 12,000 customers exchanged wasteful garden sprinklers – which use as much water in an hour as a family of four in two days – for a free hosepipe spray gun. And Southern Water issued over 200,000 'hippo bags', a water conservation measure, to households in parts of Sussex and Kent.

Conservation is not just about managing resources, though. It is also about the stewardship of sites and installations whose appearance has an impact. Tunnelling to create the Brighton and Hove Stormwater Tunnel, the largest in Europe, we removed 400,000 tonnes of chalk – and we used it to restore a waste tip at Sheepcote Valley. The area has been landscaped and planted with beech, oak, hawthorn and hornbeam, and part of it is now a sports field for school pupils.

#### Make it memorable

We are minimising the visual intrusion of our new £42 million waste water treatment plant at Eastbourne. Architects have designed the surface buildings as a replica Napoleonic fort, complementing existing Napoleonic buildings along the coast. Meanwhile, 14 metres below ground, the treatment plant itself is serving up to 130,000 people and treating 2,500 litres of waste water per second.

In Edinburgh, our imaginative lighting of a city centre electricity substation at Dewar Place was a primary winner in the Scottish Environment Regeneration Awards and won an Award of Merit from the US Illumination Engineering Society.

We have refurbished the tourist centre at our Cruachan hydro station, near Oban – it is Argyll's most popular attraction, a magnet for some 50,000 visitors a year. And, at the North Wales village of Porthdinllaen, we worked with the National Trust to replace overhead lines with underground cables.

#### Green curriculum

Moreover, we have also helped to put environmental issues firmly on the educational agenda. ScottishPower is the major funding partner for a Scottish Further Education Unit project to assist further education colleges in 'greening' their curriculum. Key teaching staff will be directly involved through interactive workshops, and colleges are being helped to formulate their own environmental policies and a best practice brochure will be produced.

Awareness of energy efficiency and renewable energy among Scottish school children is also being raised by this year's Young Technologist challenge – jointly sponsored by ScottishPower and ScottishTelecom.

And we are working with educationalists to help young people become aware of the importance of protecting the environment. Our WaterWise programme helps teach primary school pupils about the significance of conserving water reserves. Kate Guest, at St Peter's Primary, Wrexham and Michael Johnstone, at St Francis Primary, Falkirk, were named ScottishPower winners of the heat of the Young Environmentalists of the Year competition, organised with the Young People's Trust for the Environment.

Top: Working in partnership with British Trust for Conservation Volunteers, more than 600 ponds have been saved, restored or created in the last ten years.

Bottom: Cruachan power station – the most popular tourist attraction in Argyll.



**We are working to help young people become aware of the importance of protecting the environment**



## Fitness and health in the community Promoting welfare and wellbeing through active leisure

One of our prime concerns is the health and welfare of our employees. And it's matched by our commitment to the welfare of the communities we serve.

For our staff, the most obvious illustration of our approach is the free, comprehensive health checks available in our Wellscreen programme – plus our state-of-the-art fitness centres providing full fitness assessments and exercise programmes devised for their own needs.

Leading personalities help to popularise these facilities – Gladiator Saracen joined in training at the opening of our PowerClub in Glasgow, and Chester City footballer Ian Jenkins has been working out at our Queensferry fitness centre.

### Swimming safely

Other initiatives have benefited in the same way. Olympic swimmer Paul Palmer and cross-Channel record-holder Alison Streeter are helping our Learn to Swim campaign in South East England. Partnered by the Amateur Swimming Association – and with many of our employees volunteering as co-ordinators – it is teaching more than 200,000 children aged 4 to 12 years to enjoy water sports safely.

And this is just one of the ways we are encouraging young people to develop their sporting talents. We sponsored the Isle of Wight sailing team in the International Island Games – they were presented to HRH The Princess Royal

when she visited the Games. We are also backing youth rugby in North Wales, amateur rowing in Scotland, the South of England and North Wales as well as competitive football for 12 to 16 year olds in Dumfries and Galloway's Football Youth League.

### Sporting excellence

Our employees are proving their own sporting excellence. Keith Foster, from our Technology Group at Crawley, represented Great Britain in the World Triathlon Championships in Perth, Australia – a gruelling mix of 1,500 metre swim, 40 kilometre cycle and 10 kilometre run.

Former professional American footballer, Andy Meikle, a Construction Engineer at Glenrothes, Fife, celebrated his return to the amateur game by being selected for the GB Lions squad.

And stock car enthusiast Gary Wrench, a Linesman's Mate at Crewe, won the British Championships, the Champion of Champions trophy, the English Championships and the Shell Shifter Championship.

But employees are using their sporting talents to help others, too. Chris Lloyd, a Business Development Engineer based at Prenton, Merseyside, is devoting three evenings a week and Sunday afternoons to coaching at the Everton Football Club Centre of Excellence, where he has responsibility for the under-10s team. Chris also captains Chester Celtic in the Chester and District League.

Top: State of the art fitness centres for all our employees.  
Bottom: Southern Water 'Learn to Swim' initiative.  
Main picture – far right: Supporting youth rugby in North Wales.



**We are helping  
more than  
200,000 children  
to enjoy water  
sports safely**

### Choose engineering

During the year Rod Matthews, Chief Executive of ScottishTelecom, served as Chairman of YES in Scotland and, across ScottishPower, we supported the YES Open Day by providing access to a number of key operational units to schools and the public, promoting engineering as a career choice.

We work closely, too, with university careers advisors on our Intermediate Graduate Scheme to determine students' career ambitions. And we support Scottish Knowledge, the partnership between leading Scottish companies and Scottish universities and colleges to make distance learning packages available worldwide.

Right across the ScottishPower group, we are keenly interested in helping young people to exploit their energy, discover their talents – and fulfil their promise.

That is why we have organised franchise arrangements with the Prince's Trust Volunteers, the initiative supported by the Prince of Wales to enable young people to develop their confidence, motivation and skills while serving the community.

### Teaching teamwork

Projects undertaken this year saw more than 200 young people being guided through the Trust's 12-week courses, developing key skills in teamwork, communication, decision making, problem solving and caring for others, which lead to recognised vocational qualifications. In Scotland, a team constructed three benches for villagers in Kincardine-on-Forth, near our Longannet Power Station and created a garden alongside the village primary school. In North Wales, a team constructed a wildlife pond on industrial wasteland at Wrexham.

Our financial support to the Prince's Scottish Youth Business Trust also means that young people are able to gain access to funds to help them establish their own business. And outside the Prince's Trust initiatives, we are applying our own techniques in job creation.

Sometimes this requires investment in training. A partnership with Enterprise Ayrshire has provided small and medium sized companies with a range of training opportunities. And, as part of a £20 million project to reduce leakage from water mains in Kent, Sussex and Hampshire, we are training long-term unemployed people aged between 21 and 50 to become qualified leakage inspectors. We also provide a two-year training programme in customer service for unemployed school leavers in North Wales.

### Industrial renewal

Occasionally, job-creation involves high profile investment in infrastructure. ScottishPower is, for instance, a member of the consortium leading the £50 million project to regenerate the former naval base at Rosyth, in Fife. The project will create 3,000 jobs at Rosyth Europarc, which is expected to be Scotland's largest industrial park.

Lastly, though, opportunities may simply flow from an investment in information. ScottishTelecom's World of Communication museum in Edinburgh, helps people to learn about communications systems. Its interactive and educational approach appeals to visitors of all ages. Over 10,000 people have visited in the first year and the museum has forged strong links with local schools, further and higher education institutions, as well as youth and special needs groups.

In the same way, we are supporting the new Museum of Scotland which is due to open in Edinburgh on St Andrew's Day, November 30, 1998. We are sponsoring the Museum's 20th Century Gallery and helping it to display its collection of Scotland's natural and cultural heritage on an award-winning web site.



**We are helping job creation by encouraging young people to develop their skills in business**



Top: Developing confidence and motivation with the Prince's Trust Volunteers.  
Middle: Developing training opportunities.  
Bottom: The 'Techmobile', collaboration between ScottishPower Learning and the Glasgow Education Business Partnership, supporting the teaching of science and technology for children aged between 5 to 14 years old.

## Enhancing the environment Protecting and conserving our natural surroundings



**Our scientists carried out more than 220,000 tests for more than 100 different substances**



Top: Preston Island near Longannet power station.  
Bottom: Children helping to plant a wild flower meadow, on the site of a former power station, in Liverpool.

Our commitment to the environment is a natural part of our business practice. As our Group Environmental Report demonstrates in detail, we actively seek to contain any impact on the environment to a practicable minimum.

### 'Nature's Prize'

We have had several successes. In Scotland and Wales, we achieved the international standard in environmental management, ISO 14001, in key areas of our operation. And our work in transforming a derelict foreshore adjoining Europe's largest coal-burning power station at Longannet, Fife, was recognised in 'Nature's Prize', the 1997 Scottish Environment Awards.

Today, the Torry Bay nature reserve is host to 33 species of birds. Six miles of footpaths and a £300,000 footbridge were created on new land built from half a million tonnes of waste ash pumped each year from nearby Longannet. The centrepiece is a 16th century saltworks – one of the earliest commercial extraction works – which was saved from the river by a collar of new land around it.

In Cheshire, too, employees joined the Mersey Basin Business Foundation's challenge to clear an overgrown area of the Weaver Navigation, between Townbridge and Newbridge. They helped establish rare heather moorland on the former salt marshes, reclaimed as part of the Mersey Forest.

### Reclaimed for leisure

Similarly, at the ash lagoons near our Cockenzie Power Station outside Edinburgh, we have transformed another derelict foreshore along the east coast of the River Esk. Some 134 hectares of land have been reclaimed to provide community leisure facilities with a boating pond and nature reserve. The site is home to more than 200 species of plants, 13 species of butterfly and numerous small animals. In 1997, over 3,000 birdwatchers visited it to see a rare Western Sandpiper. With East Lothian Council, we have added six new shallow pools for wading birds.

Our nature conservation work is UK-wide. For Pond Week, we teamed-up with the British Trust for Conservation Volunteers, one of the biggest wetland conservation projects in Britain which, in the last ten years, has saved, restored or created more than 600 ponds.

And, if it's not ponds, it's rivers. Otters and kingfishers have returned to the River Cart, after employees at our Cathcart Business Park joined volunteers from the Greenways Trust to clear litter and other debris from the watercourse.

### Improving quality

More dramatically still, in Kent's River Medway – once one of England's most polluted rivers which hasn't seen salmon since the 1880s – staff from the Government's Environment Agency netted (and then released!) a 10lb 'king of fishes'. That's where we are investing another £25 million on further improvements to water quality – part of £70 million-plus invested last year alone in new water supply schemes in South East England.

In that period, too, our scientists carried out over 197,000 tests for more than 100 different substances. Every day, we supply over 603 million litres of water to the 2.2 million resident population. And, as our Drinking Water Quality Report shows, 99.8 per cent of tests on those supplies meet stringent United Kingdom standards.

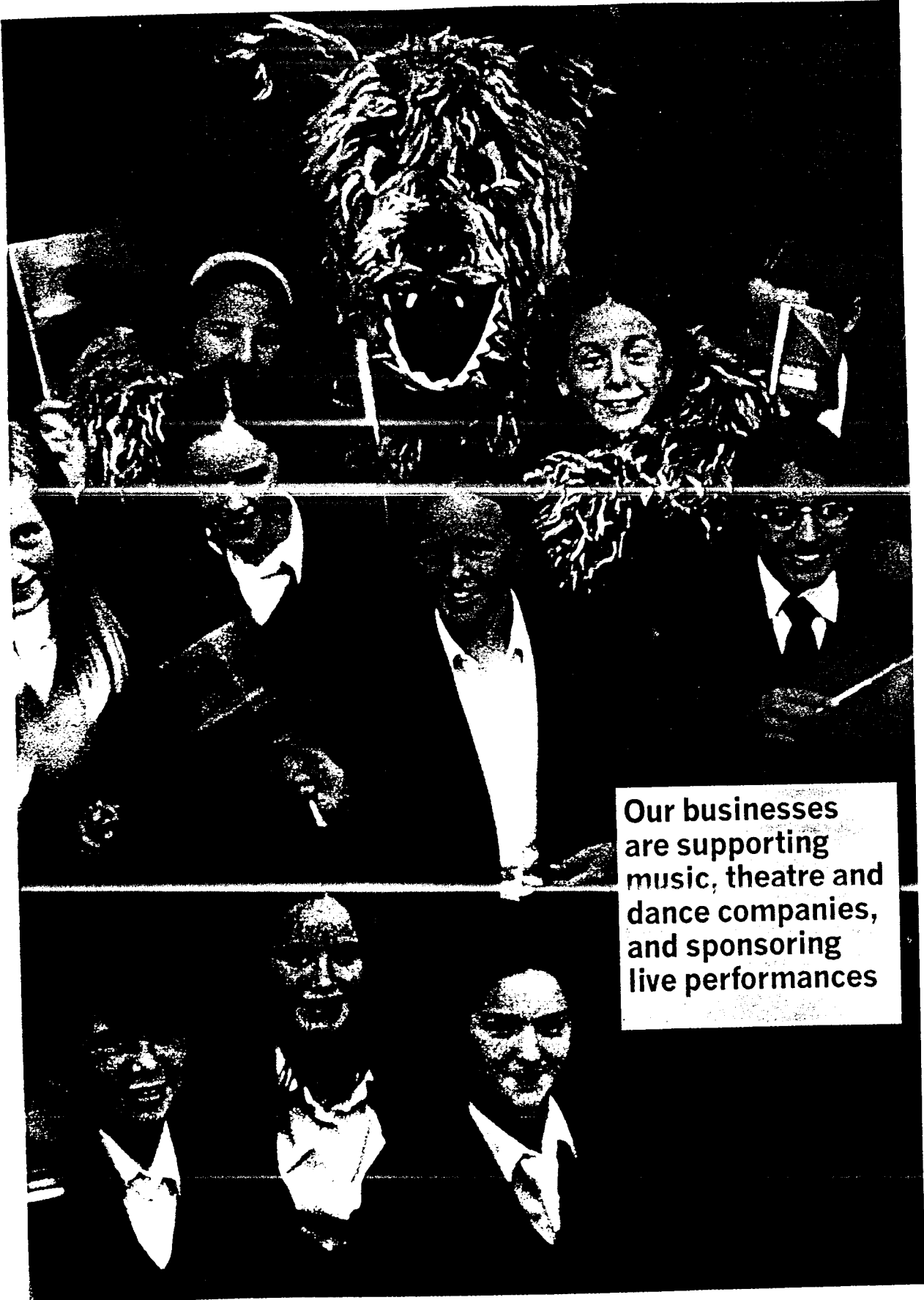
One of the most important contributions we can all make to environmental improvement is by systematically reducing the wasteful use of energy and water resources. We actively promote both these conservation approaches.

On Merseyside, for instance, we work closely with local authority partners in a project aided by the European Regional Development Fund. 'PowerSave' began as a pilot in Knowsley and, since 1995, has helped businesses save £800,000 in energy costs and reduce carbon dioxide emissions by 10,000 tonnes per year. This scheme for small and medium sized enterprises has been described as a 'lead initiative' by the Department of Trade and Industry.

### Energy efficiency

We are also investing £3 million a year in Southern Scotland, North West England and Wales, to promote energy efficiency in the homes of local authority and housing association tenants. Household on state pensions or low incomes should see their average spending on fuel drop from about 12.5% to 8.6% of disposable income with these energy saving measures.

In the same way, we are encouraging all low-income customers in the same areas to use energy more efficiently by replacing old, wasteful domestic refrigerators with modern units. Participants in our Fridgesavers Scheme will save an average of £30 a year or £400 over 15 years in electricity costs.



**Our businesses  
are supporting  
music, theatre and  
dance companies,  
and sponsoring  
live performances**

## Education and employment in the community

### Creating opportunities towards building a vibrant local economy

ScottishPower and ScottishTelecom jointly sponsored the Young Technologist Challenge.



**We are encouraging our employees and their families to develop their full potential by learning new skills**

Education and employment, we believe, are two sides of the same coin: education enhances job prospects; employment is itself a platform for a lifetime of learning.

We are clear about our two principal roles in this. We aim, firstly, to be innovators in developing educational opportunities for our employees and for the young people who are tomorrow's workforce. We seek, secondly, to be imaginative in providing employment opportunities for those without work or the skills to secure rewarding jobs.

#### Learning for all

In this respect, we believe that one of our most significant investments is the £2 million we have this year put behind ScottishPower Learning – our partnership with the Trade Union Congress in Scotland and in England and Wales.

This scheme, named Community Initiative of the Year in the Utility Week Awards, offers around 700 different learning programmes – languages, vocational qualifications, diplomas and degrees – in 46 Open Learning Centres. More than half of our 15,000 employees and over 1,000 family members have so far taken the opportunity to develop their full potential by learning new skills, in their own time and at their own pace.

And in the wider community, more than 2,000 pupils, teachers and members of community groups have benefited from these programmes which we have supplemented by helping to establish Community Learning Centres at Kirkby, Alloa, Kirkintilloch and Knowsley.

As well as this, our Learning business sponsors the Scottish Qualifications Awards for innovative use of vocational qualifications in secondary schools, as well as business links and pan-European activity. This year's winners were Inverkeithing High School, Fife and Trinity Academy, Edinburgh.

#### The 'Techmobile'

We are enhancing the quality of science education for over 4,000 Glasgow primary school pupils with some highly inventive, interactive experiments provided by a mobile technology unit, the 'Techmobile'. And, in another educational initiative, we are working with emergency services and railway companies to establish Scotland's first permanent Community Safety Centre, at Burnbrae Primary School, Glasgow. 'Hazard Alley' will reach 14,000 school children with learning materials and stage-sets which highlight common dangers.

This linkage between schools and broader social issues is one of the key characteristics of our support work. We helped the Scotland Against Drugs campaign to develop an information web site and we support its three-year educational project in Scotland's primary schools.

Invariably, there are mutual advantages. A number of our employees benefit from joining adults with learning disabilities on Outward Bound courses designed to aid personal development both at Loch Eil in Scotland and Aberdovey in Mid Wales. Our support led to the production of an award winning video promoting the Outward Bound organisation in Scotland.

There are other facets of our community programme. People who have suffered from mental illness, for instance, are being helped back to work by our provision of 40 personal computers at Learning Centres in the Glasgow area. We are also trying to improve the employment prospects of under-achievers at secondary schools in Southern Scotland, North West England and North Wales with programmes to develop self esteem, confidence and communications skills.

#### Work experience

Work experience is an invaluable route to permanent employment. Our businesses are providing opportunities for over 250 unemployed young people and adults, leading to nationally recognised vocational qualifications. And, in partnership with local councils, enterprise companies and other support organisations, we are developing training opportunities for people who have been out of work for long periods.

Our interest in career development stems from this. We are encouraging young people to consider careers in the engineering industry, for example, by sponsoring Young Engineers' Clubs and the Young Engineers of Britain. Indeed, our contribution to the Year of Engineering Success (YES) was significantly boosted by two of our own graduate trainee engineers – Kate Boon, based in Aberystwyth, and Phil Manley, in Liverpool. They devised the Engineering Team Challenge to encourage North Wales sixth-formers to think about careers in engineering.



**We supported  
the three day Ayr  
Flower Show  
which attracted  
20,000 visitors**

# Performing arts in the community Enhancing cultural life through enjoyment of the arts

The communities we serve are always looking for inventive ways of expressing their cultural values. So it is a privilege for our businesses to be involved in a range of projects that enrich our musical, theatrical and artistic lives.

## Eisteddfod award

That privilege is all the more rewarding when it is recognised. Everyone involved derived enormous pleasure from the regional award conferred by the Association of Business Sponsorship for the Arts – which singled out our support for the International Eisteddfod's 'Choir of the World' Competition at Llangollen in North Wales.

Some of the greatest rewards, though, are in projects which seize the imagination of the young. With our help, for instance, school pupils in North West England and North Wales enjoy Welsh National Opera's Outreach programme and the charity Live Music Now! which takes performances to children with special needs.

Some 48 Scottish schools hosted informal music workshops by the Royal Scottish National Orchestra, and about 5,000 pupils had the exhilarating experience of attending the ScottishPower Schools Proms.

## Theatre and dance

We are bringing theatre to children, as well. We helped the TAG Theatre Company stage John McGrath's play, 'Worksong', commissioned for the Scottish TUC's centenary. School performances made the significance

of trade unions relevant for young people. And pupils joined drama workshops to develop their confidence and their communications and social skills.

Our two-week Summer Dance School – part of our Edinburgh Festival sponsorship – is like that, too. It draws over 100 enthusiasts aged 8 to 18. And in Chester's Gateway Theatre, the Manweb Studio will be a stage for the city's youth theatre – as well as an attraction for 'fringe' companies.

Theatre audiences of all ages are benefiting from backing we have given to Canterbury's Marlowe 'Street Level' Theatre and to the Lyceum Theatres in both Crewe and Edinburgh.

## Music and fireworks

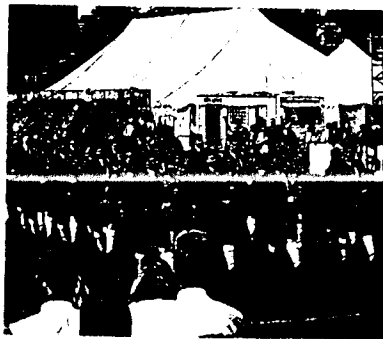
There is also a diverse rhythm to our musical projects – whether it's the ScottishPower Proms in Glasgow, Aberdeen, Dundee and Edinburgh, Manweb's 'Summer Pops' in Liverpool or Scottish Opera's 'Soundbites' concerts in Edinburgh and Glasgow.

Resoundingly, too, more than 4,000 people flocked to Kent's Bawl Water for our summer concert fireworks and laser symphony concert: it featured Humphrey Lyttelton and his Band and the Performing Arts Symphony Orchestra.

Lastly, of course, our award-winning ScottishPower Pipe Band is competing in championship competitions as well as at events in England and North Wales, including the family festival 'Sunday in the Park' which we sponsor as part of the Chester Summer Music Festival.



Over 100 young people participate in the Summer Dance School as part of our sponsorship of the Edinburgh Festival.



Above: The award-winning ScottishPower Pipe Band.

Right: Ian Robinson with TAG drama workshop. Main picture – far right: Pupils from Craigholme School in Glasgow participate in the ScottishPower Schools Proms which involves over 48 schools from across Scotland.





We will extend our range of support programmes to help customers with special needs

# 6

We will extend our range of support programmes and service initiatives aimed at helping customers with special needs. We will also continue to work closely with community groups and support agencies.



Working with Age Concern.

# 7

We will encourage our people to share their business skills to benefit the wider community. Through our support of the Business in the Arts programme we will aim to place up to 10 staff within an arts organisation to encourage the exchange of their business knowledge. We will also continue to develop relationships between ScottishPower senior managers and head teachers in schools.



TAG drama workshop.

# 8

We will encourage our staff to give their time freely to make a difference to the lives of other people, and whenever appropriate, we will support their fund-raising activities through our Charitable Trust fund and staff associations.

We have set a target of 10,000 community hours within our regional operations for staff in both Scotland and North West England to become involved in community projects. We will also provide materials and resource in support of specific projects where appropriate.

And we will increase our commitment to our Learn to Swim programme with a target of 250,000, 4 to 12 year olds successfully completing one of our programmes by 1999.

## Views & Ideas

# 9

We will foster a responsible interchange of ideas and views on environmental issues and we will aim to contain the environmental impact of our activities to a practicable minimum. Environmental targets for our operations have been set and will be delivered through our operational business units, co-ordinated by the company's Environmental Policy Advisory Committee (EPAC).

Details of these targets are contained within our group Environment Report.



Easter 'Eggstravaganza'.

# 10

We will support projects to help encourage utility related curriculum and syllabus development in educational establishments, and the work experience of students. And we will develop learning relationships with an additional 25 schools in our operating area.

Through ScottishPower Learning we will continue to develop initiatives that involve ScottishPower staff in delivering a range of learning based initiatives within the community.

## Serving the community Building partnerships and turning our commitment into action

As part of our support for 'Wheels for All', the cycling project in North West England for people with disabilities, we donated five handcycles which had been specially built for the charity in Liverpool.



## We are supporting our employees' funding raising achievements, matching their donations £ for £



Our aim is quite straightforward: we want to make a difference. That is why we work closely with those who are themselves striving to change things for the better in their neighbourhoods.

There are so many opportunities to provide this kind of help. Sometimes our partnerships are with official bodies: sometimes they are with local charities: often they are with those energetic individuals who contribute so much time and effort to benefit their communities.

Their aim, like ours, is to make a difference. We made a difference for elderly people in Scotland, for instance, by supporting Age Concern's campaign to distribute 'Winter Warmth' leaflets and advice packs. We also provided Powercards to pensioners who were worried about paying their winter heating bills before they received the Government's 'cold weather payments'.

We made a difference for some people with disabilities in North West England by supporting 'Wheels for All' – we donated five handcycles, specially built for the charity in Liverpool.

### Welsh language scheme

We are always making a difference in meeting customers' needs. In Wales, we are the first non-public utility to launch a Welsh Language Scheme – so we can communicate by telephone and in writing with our 300,000 customers in the language they prefer.

Invariably, the difference we make adds real value – like the backing we gave to the highly successful three-day Ayr Flower Show, hosting 'Gardener's Question Time' with Jim McColl from BBC Scotland's televised 'Beechgrove Garden' and attracting over 20,000 visitors from all over the UK. A good deal of our community work is with official organisations. Operation 'Hamelin', for example, was launched in 1997 with ScottishPower's support to target bogus callers. It is the largest police operation ever undertaken in Northern Britain. Its first year success has resulted in it being repeated in 1998.

### Local authority awards

We are making a difference, too, in local government. We work closely with the 32 council Convention of Scottish Local Authorities (CoSLA) in recognising the improvements in customer service and care made by their employees. Our sponsorship of the CoSLA Quality Awards continues – the 1997 winners were the employees of South Lanarkshire Council.

Often, our partnerships reach right to the grass roots. A pilot project with Shropshire community and parish councils recruits local people as Power Wardens. They will be the focal points for their communities if there is widespread

loss of electricity supply during severe weather, and will use dedicated telephone lines to provide vital information to our emergency teams.

### Work with children

Looking to the future, much of our effort is directed towards those working with children. In the Isle of Wight, for instance – where Southern Water is investing some £1 billion over five years – the company has sponsored the 'Kidzone' beach safety initiative at Sandown and Shanklin for two years. Pioneered in the UK by Bournemouth Council, it provides children with zoned wristbands so that any child wandering off alone can be spotted easily by safety personnel and reunited with their parents.

In a quite different initiative for disadvantaged children in Aberdeen, we supplied all the incoming telephone lines for a radio auction which enabled Northsound Radio to raise £32,000. And, for older children at Ramsgate School, Kent, our managers regularly give their time to attend a 'Breakfast Club' where pupils can meet business people and develop their social and communications skills.

This emphasis on learning has a wider application. Last year we used our expertise and resources to help establish four Community Learning Centres in Scotland and Merseyside and we plan to open another three in 1998-99.

### Helping charities

Another natural focus for our work is charity. Our employees raise funds for many good causes and we match their donations £ for £. Among the causes we supported were Hope House Children's Respite Hospice near Oswestry and the Rainbow Children's Ward at Glasgow's Victoria Infirmary. In South East England, our community-wide appeal to support WaterAid, the charity for water and sanitation projects in Africa and Asia, raised more than £340,000.

We are also supporting the achievements of a wide range of voluntary organisations and, at all levels in the business, our employees are giving their own time to make a difference to their communities.

Sometimes the difference we make is part of our own professional development. Three employees – Barbara Jenkinson, John Toms and Mike Young – are a case in point. They won £270,000-worth of funding for Ayrshire Cancer Support Group's three new Care Centres. The National Lottery award followed the development of a business case by the team as part of their MBA studies.

That made all the difference.

## Meeting community needs – delivering value

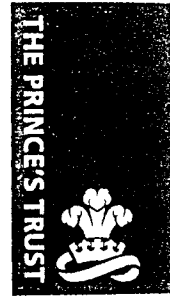
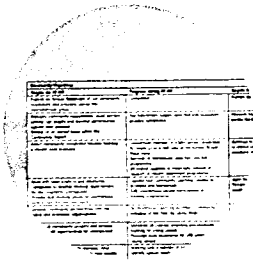
In 1997 we set ourselves demanding targets for our community investment programme. The table below highlights a number of key achievements against those targets and identifies key performance measures for 1998-99.

Community Objectives		
Targets for 97-98	Progress during 97-98	Targets 98-99
Publish an Annual Statement of our community investment and activities across the ScottishPower group	Completed	Publish Community Report
Measure community expectations, audit current activity, set targets and monitor performance against best practice Review on an annual basis within the Community Report	Key benchmark targets identified and evaluation process established	Measure key community performance targets across the businesses
Direct community investment towards building a vibrant local economy	Consortium member of £50m project predicted to create up to 4,000 jobs at the former Rosyth Naval base Member of Merseyside Objective One Aid programme £9 million upgrade of Inverclyde network in support of inward investment programme	Continue to work closely with economic agencies to attract inward investment and encourage economic regeneration of regional economies
Work with local councils and enterprise companies to develop training opportunities for the long-term unemployed Provide 300 training places for unemployed people over the next two years	Opened four Community Learning Centres in Scotland and Merseyside 530 unemployed people participated in training programmes	Open further three Community Learning Centres Provide training places for 400 unemployed people
Develop community partnerships with key social and economic organisations	ScottishPower Learning awarded 'Community Initiative of the Year' by Utility Week	Develop training opportunities for the unemployed in partnership with local councils, enterprise companies and support organisations
Deliver 15 community projects and provide development opportunities for unemployed young people	Delivered 16 courses providing pre-vocational training for young people Provided work experience for 150 unemployed young people	Deliver 25 community projects to provide development opportunities for unemployed young people
Develop partnerships with charities, local organisations, support groups to help people with special needs	Working with a number of caring agencies to identify special needs and requirements	Partnership agreement in place with a number of caring agencies
Organise three outward bound courses for adults with learning disabilities	Delivered four courses in Scotland and Merseyside	Organise five outward bound courses for adults with learning disabilities
Extend range of support programmes and service initiatives aimed at helping customers with special needs and continue to work closely with community groups and support agencies	Extended password scheme to all customer groups In conjunction with Age Concern (Scotland) developed cold weather assistance programme Delivered 2,000 man hours on community projects	Place up to 10 staff within arts organisations Improved services to deaf and blind customer groups Develop current programme for elderly 10,000 community hours for regional staff across the group
Target 225,000 4 to 12 year olds successfully completing the Learn to Swim programme	Over 40,000 children completing Learn to Swim programme annually	250,000 children completing Learn to Swim programme by 1999
Deliver environmental targets as set out within the Group Environmental Report	Business commitment to the Environment Special Award for creation of landscapes on the Firth of Forth and environmental improvements to the Dewar Place substation in Edinburgh, and the Powersave scheme in Knowsley Full details available in Group Environment Report 1997-98	As outlined in Group Environment Report 1997-98
Support projects to help encourage utility-related curriculum and syllabus development in educational establishments and work experience of students	2,000 pupils, teachers and members of community groups benefited from programmes at our Open Learning Centres Major funding partner of Scottish Further Education Unit on 'greening' further education Sponsor of Scottish Qualifications Awards Sponsored Young Enterprise Scotland Sponsor Scottish Youth Business Trust	Implement learning relationships with additional 25 schools in our operating areas Continue to develop assistance for school children making the transition from education to employment

In our desire to be an active, contributing member of the communities in which we operate, ScottishPower has set ten objectives for the coming year. These build on the

# 2

We will measure community expectations, audit current activity, set targets and monitor performance against best practice. This will be achieved via our membership of the London Benchmarking Group.



These objectives will provide a focus for our activities and enable us to measure what we do against the best practice of other national and international companies with an outstanding record of community involvement.

Both as a company and through the enthusiastic support of our staff our overall aim is to make a beneficial positive contribution to society, in addition to what we achieve through our normal day-to-day operations. Our targets are set out below.

# 3

We will direct our community investment towards building a vibrant local economy, which will benefit everyone in the community.

We will provide training places for over 400 unemployed people utilising a range of programmes over the next year. We will work with local councils, enterprise companies, community groups and support agencies to develop training opportunities for the unemployed to be delivered through the New Deal, Employment Zone and Skillseekers programmes.

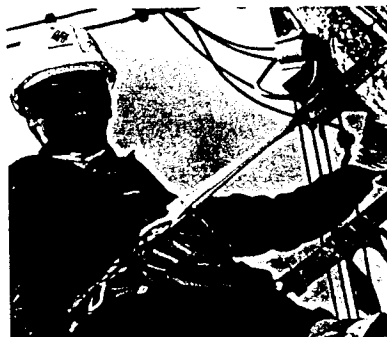
We will seek to develop community partnerships with other key social and economic organisations to ensure the maximum effectiveness of the ScottishPower group community investment programmes. Through our franchise arrangement with the Prince's Trust Volunteers we will deliver 25 community projects and provide a range of development opportunities for unemployed young people.



Outward Bound for adults with learning disabilities.

# 1

We will continue to publish an annual statement of our community investment and activities across the ScottishPower group.



Developing training programmes for the unemployed.

# 5

We will seek to develop partnerships with charities, local organisations and support groups to help people with special needs.

We will commit to organising five Outward Bound courses for adults with learning disabilities during 1998-99.

## Group overview

The ScottishPower group is one of the largest companies in the United Kingdom, with an annual turnover of over £3 billion.

Our activities span electricity, water and waste water services, gas, telecommunications, retailing, technology and contracting services supplied through ScottishPower, Manweb, Southern Water and ScottishTelecom.

We serve 1 in every 5 homes across the UK, with some five million customers in Scotland, Merseyside, Cheshire, North and Mid Wales, Kent, Sussex, Hampshire and the Isle of Wight.

We are committed builders of businesses, in electricity and utility related markets, determined to deliver outstanding performance.

Our mission is underpinned by five values which are at the heart of everything we do. These are:

Well-earned customer loyalty  
Enhanced shareholder value  
Positive working environment  
Trust of communities  
Teamwork and leadership

Within the group, we have five core values which are the guiding principles of the way we work together to run our business. One of our values is to earn the trust and respect of the communities in



1997-98 was a successful year for ScottishPower. We continued to build partnerships with local communities across Britain which support social and economic regeneration, and contributed to a great many local initiatives. Our employees have participated in a range of community programmes, which have helped them in developing their full potential as well as providing benefit to the local community. Through these activities we seek to earn the trust of the communities in which we operate.

ScottishPower aims to achieve best-in-class performance in all aspects of our business and we benchmark performance against the very best international companies. As part of that programme we are also benchmarking our community activity to ensure that we are delivering value to shareholders and customers and meeting the expectations of the

communities we serve. We are committed to building the ScottishPower group into a business that is universally respected and admired. We believe this means both meeting business objectives and making a real and lasting impact on community needs.

In this, our second Community Report, we aim to demonstrate the ways in which we are seeking to achieve our objectives.

We recognise the importance of being responsive to local needs and issues and remain fully committed to all the communities we serve.

A handwritten signature in dark ink that reads "Ian Robinson".

**Ian Robinson**  
Chief Executive

## Review of performance

### Performance against objectives 1997-98

The ScottishPower group has a significant effect on the UK economy, accounting for £5.6 billion of output in the economy, both directly and indirectly, and supporting a total of 153,150 jobs (in terms of full time equivalents).

Community programmes completed during 1997-98 included support for education and employment initiatives, charities and caring organisations representing children and young people, people with disabilities, older people, and the disadvantaged. In addition we sponsored the performing arts, sport and recreation.

In 1997-98 we worked closely with a number of economic agencies to rebuild and create employment and career opportunities within the local community. Through ScottishPower Learning we supported training for more than 530 unemployed people. This exceeded the initial target of 300. The majority of training programmes were delivered 'in-house', supported by external training organisations.

We supported unemployed people by providing assistance through a range of programmes that included the

provision of vocational qualification training material for the 'Scottish Out of School Care Network', an organisation that cares for children after school until their working parents arrive home.

Through our Prince's Trust Volunteer franchise we delivered 16 pre-vocational training courses, exceeding our 1997-98 target of 15. These courses involved a number of ScottishPower staff in a training and support role to the young people who participated.

Our Open Learning Centres are also open to members of the community. Through enrolment in the Government's 'IT for All' initiative, we provide 'IT tasters' at our Learning Centres for members of the public, who can book time in the Learning Centre to explore a series of computer applications including access to the Internet.

The success of ScottishPower's community investment and involvement was further recognised by the award of an MBE to Gordon Christie, a senior manager within our Power Systems business. Within Power System's Southern Region over 2,000 voluntary hours were undertaken by staff members on a range of community projects.

**Community Report  
1997-98**



## **Our mission**

**To earn the trust and respect of our communities through recognising and responding to the needs of both the local and wider environment.**

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**Availability** A measure of the time the supply is not available. This is generally expressed as the average number of minutes for every connected customer the supply is **not** available.

**Automation** The automatic alteration of the system to restore supplies.

**CHL** Customer hours lost

**CI** Customer interruptions

**CML** Customer minutes lost. This is generally expressed as the average number of minutes for every connected customer the supply is **not** available.

**Extra high-voltage (EHV)** Operating at more than 22,000 volts but less than 132,000 volts. This usually refers to 33,000 volts.

**Incident** An event which causes an uncontrolled flow of electrical current followed by supply disconnection.

**High-voltage (HV)** Operating at greater than 1000 volts but less than 22,000 volts. This usually refers to 11,000 volts.

**Kilovolt (kV)** 1000 volts

**Load-related work** Necessary work to meet changes in the power needs of a network.

**Non-damage incident** An incident which causes no permanent damage to equipment and so no repairs need to be carried out.

**Handed related work** Necessary work to keep the network reliable and to improve its performance.

**Outage free** Methods of carrying out work on 11,000 volt equipment without interrupting supplies to customers.

**Outage** A loss of electricity supply.

**Overhead protection policy**

Using electronically-controlled links and automatic switches to restore supplies following an incident and, where necessary, disconnect damaged equipment leaving the minimum number of customers without supply.

**Pre-arranged** We use this term to refer to planned interruptions in supplies to customers where we contact the affected customers at least five days beforehand.

**Refurbishment** Replacing equipment which is no longer reliable.

**Security** We use this term to refer to the number of supply interruptions. We usually measure these as the number of supply interruptions for every 100 customers.

**Substation** Premises containing either one or more transformers or switchgear.

**Switchgear** Automatic or manual mechanical devices for controlling the flow of electrical energy into a circuit or item of equipment.

**Transient interruptions** Interruptions to customers supplies which last less than 60 seconds but usually for about 10 seconds.

**Underlying performance** A way of measuring the performance of the system which does not include the effects of exceptionally severe events. This removes the variations caused by severe weather.

**Voltage dip** A sudden, but temporary, lapse in the voltage.

**Wayleave** A landowner's legal agreement to install and maintain our equipment.

# New regional structure

By the time you read this report we will have restructured our regions to meet our customer needs. The map shows the new boundaries for 1998/1999 with main offices in Glasgow, Portobello and Dumfries.

## How to contact us

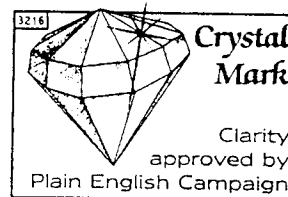
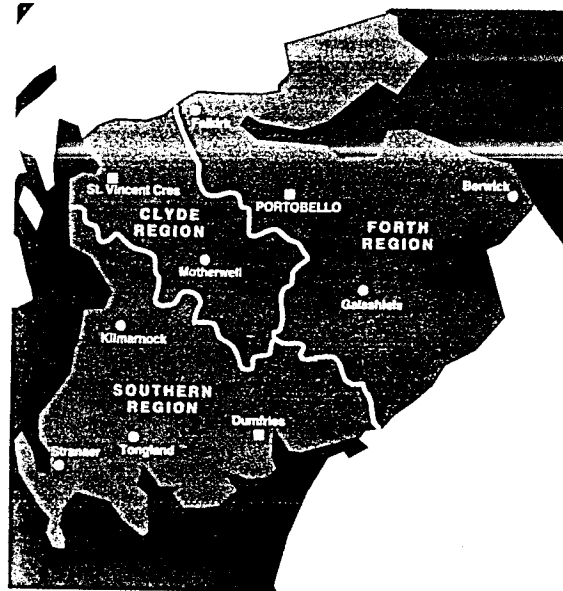
If you have any questions or comments following your study of this report, please contact the Regional Manager at your local regional office.

To find the correct regional office, please refer to the map and write to one of the addresses below.

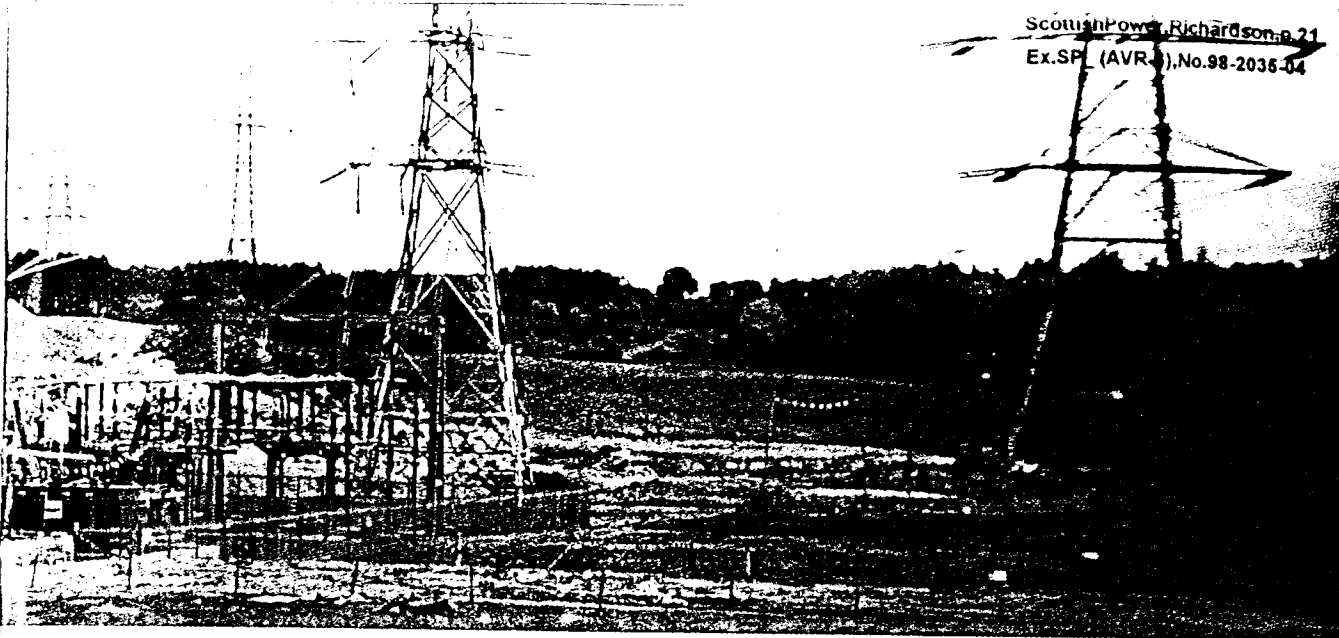
Scottish Power plc  
Clyde Region  
St Vincent Crescent  
Glasgow G3 8LT

Scottish Power plc  
Forth Region  
10 Fishwives Causeway  
Edinburgh EH19 1EP

Scottish Power plc  
Southern Region  
Leafield Road  
Dumfries DG1 2DN



A summary of this report will also appear on our Internet web-site at [WWW.scottishpower.plc.uk](http://WWW.scottishpower.plc.uk)



**Our achievements in 1997/1998 and the work planned during 1998/1999**

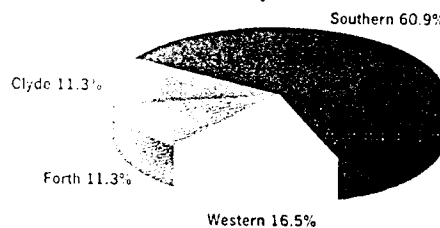
In 1997/1998 we have made significant progress with our programme of work to replace inadequate network assets which are no longer reliable.

During 1997/1998 we:

- invested more than £100,000 every day to make sure that we maintained supply to our existing customers;
- provided more than 19,000 new housing connections;
- installed more than 180MVA of extra transformers to meet increased requirements for customer demand;
- rebuilt or refurbished more than 100km of 33kV overhead line;
- rebuilt or refurbished more than 450km of 11kV overhead line;
- installed more than 90km of underground cable;
- replaced or refurbished more than 5000 domestic connections;

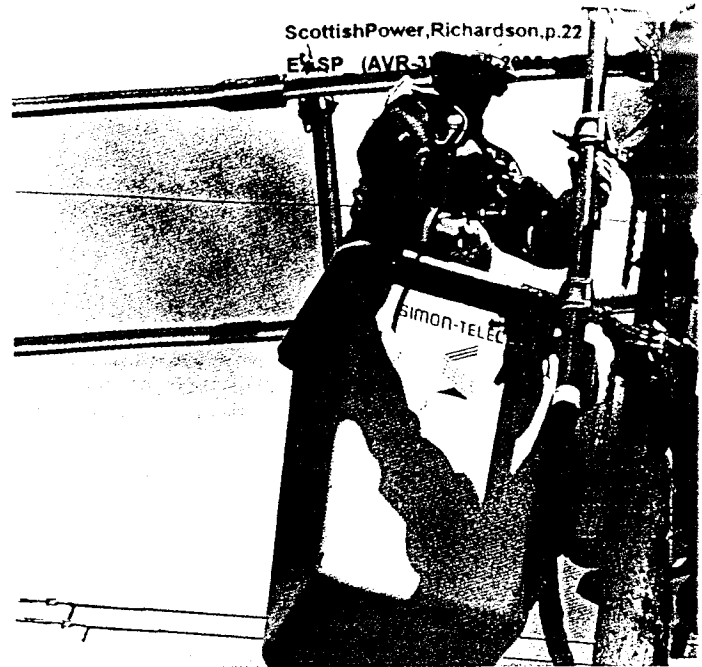
- replaced switchgear at more than 450 distribution substations; and
- spent more than £350,000 on installing anti-oil pollution at transmission substations.

1997/1998 Non-load capital spending for every customer



This chart shows the capital spending profile for each customer across the four ScottishPower Regions and our commitment to investments for improving the quality of supply in our rural areas.

We will continue this programme of work during 1998/1999 and we will report on our progress in next year's quality of supply report. In tables 1 and 2, we show a selection of major projects (each costing more than £100,000) which we completed during 1997/1998 and have planned for 1998/1999.



**Table 1: Examples of major projects we completed during 1997/1998**

Region	Project description
Clyde	Replacing 33kV Switchgear at West George Street substation.
Clyde	Reinforcing an 11kV network in Inverclyde Area, Greenock.
Clyde	New supply to Killermont Science Park.
Forth	Reinforcing Calais primary substation.
Forth	Reinforcing a 33kV network from Glenniston to Inverkeithing.
Forth	Reinforcing an 11kV network from Slamannan to Muckraw.
Southern	Replacing 11kV switchgear at Cargenbridge primary substation.
Southern	Rebuilding a 33kV overhead line from Newton Stewart to Gatehouse.
Southern	Uprate the supply to ICI, Dumfries.
Southern	Replacing an 11kV overhead line from Selkirk to Ettrick.
Southern	Replacing an 11kV overhead line from Penpont to Dalpeddar.
Western	Replacing 33kV switchgear at Newarthill grid supply point.
Western	New supply for Chunghwa, Mossend, Bellshill.
Western	New supply to Egger Chipboard, Barony, Auchinleck.

**Table 2: Examples of major projects planned during 1998/1999**

Region	Project description
Clyde	New supply for Braehead Capital Shopping Centre, Braehead.
Clyde	Reinforcing a 33kV network in Inverclyde Area, Greenock.
Clyde	Replacing 11kV switchgear at Blackhall Street primary substation.
Forth	Reinforcing a 33kV network in the Stirling area.
Forth	Uprate primary switchgear to supply Thistle Court, Edinburgh.
Forth	Reinforcing an 11kV network in Blackwood area, Cumbernauld.
Southern	Reinforcing an 11kV overhead line network from Ettrick to Yarrow.
Southern	Reinforcing an 11kV network from Lockerbie to Lochmaben.
Southern	Replacing 11kV switchgear at Marchmount primary substation.
Southern	Rebuilding an 11kV overhead line network from Hawick to Robertson.
Southern	Rebuilding an 11kV overhead line network from Leadhills to Enterkinfoot.
Western	New supply for Shanks & McEwan windfarm at Greengairs.
Western	Replacing 11kV switchgear at Allanbank primary substation.
Western	Replacing 11kV switchgear at Kirkintilloch primary substation.

# Capital spending

## Actual and planned investment for a five-year period (1995/1996 to 1999/2000)

In October 1995, OFFER announced that, in setting our price control, they had assumed we would need to spend £443.5m on the distribution network from 1995/1996 to 1999/2000.

## OFFER's published price control assumptions (1997/1998 prices)

Load related	£239.3m
Non-load related	£204.2m
Total	£443.5m

A part of the non-load related spending is specifically available for quality improvement initiatives. As a result of efficiencies, we have been able to spend more on quality improvement initiatives than we were allowed by OFFER in the price control review. This focused investment has clearly improved our performance and this is demonstrated throughout this report.

We have already delivered a range of efficiency improvements to benefit our customers. These are as follows.

We have:

- ▶ developed new, more cost-effective designs, materials and techniques;
- ▶ installed new information technology systems which provide more detailed information about our network and allows us to prioritise and target investment more effectively; and
- ▶ improved work management systems and practices.

We will continue to improve efficiency and we have planned further savings for the future.

We will achieve the following.

- ▶ Save costs through buying goods at better prices.
- ▶ Reduce costs by using computer technology as much as possible and improving our working methods.

Target investment by monitoring the condition and performance of our assets.



Against the background of cost savings, we have set our capital spending projections as follows.

**ScottishPower's network capital spending (1997/1998 prices)**

	Actual spending			Planned spending		Total
	1995/1996	1996/1997	1997/1998	1998/1999	1999/2000	
Load related	£45.8m	£43.2m	£43.1m	£47.3m	£47.6m	£227.0m
Non-load related	£40.0m	£38.4m	£39.8m	£35.5m	£36.8m	£190.5m
<b>Total</b>	<b>£85.8m</b>	<b>£81.6m</b>	<b>£82.9m</b>	<b>£82.8m</b>	<b>£84.4m</b>	<b>£417.5m</b>

We have seen a growth in the number of requests for new connections in certain areas, particularly in Forth Region. This, together with new business projects, which we expect to begin in 1998/1999 and major reinforcement projects has resulted in an overall decrease in load-related investment compared with last year's projections. During 1997/1998 we increased non-load related investment which showed our commitment to quality of supply improvement initiatives.

**Reasons for investing in the network**

► Load-related spending is necessary to meet customer requests for:

- new connections;
- increased supply; and
- extra power demand which requires the distribution network to be reinforced.

► We base our predictions for future spending on local economic trends, customer requirements and movements in the areas of changing demand for power. This demand may not happen in the future and our predictions depend on constant review and updating.

► Most of the non-load related investment programme is directed towards maintaining the distribution network. We need to spend money in order to maintain safe supplies to customers and to meet our obligation to make sure our staff and the public are safe. We will also meet environmental law.

## Areas we will target in 1998/1999

Region	Circuit	Customer hours lost	Customer interruptions	Number of incidents	Proposed work
Southern	Johnstonebridge	481	183	2	Installing an automatic reclosing system
Southern	Moffat	1014	237	2	Installing an automatic reclosing system
Southern	Gatehead, Drybridge	616	439	5	Installing an automatic reclosing system
Southern	New Cumnock	1500	285	4	Installing an automatic reclosing system
Southern	Annbank, Joppa	1638	963	6	Installing an automatic reclosing system
Southern	Coylton	908	1095	5	Installing an automatic reclosing system
Southern	Ochiltree	631	415	4	Installing an automatic reclosing system
Southern	Cumnock, Skares	609	249	6	Installing an automatic reclosing system
Southern	Durisddeer, Wanlockhead, Leadhills	4,061	1,929	8	Phase 2 of reconstructing an overhead line
Southern	Castle Douglas, Crossmichael, Laurieston	8,690	4,001	16	Phase 2 of reconstructing an overhead line
Southern	Old Daily to Barr	4368	1346	6	Reconstructing an overhead line and building a link line
Southern	Lethanhill to Dalmellington	1575	497	4	Overhead line reconstruction
Southern	Twynholm				Installing cable to remove a low-voltage overhead line
Southern	West Linton				Installing cable to remove a low-voltage overhead line
Southern	Dalrymple	4397	1329	7	Network automation
Clyde	Houston	803	567	3	Installing an automatic reclosing system
Clyde	Baillieston	508	270	3	Installing an automatic reclosing system
Clyde	Lanark	6824	2840	4	Installing an automatic reclosing system
Clyde	Corra Linn, Lanark	1656	1035	4	Installing an automatic reclosing system
Clyde	Milton of Campsie	1888	1139	10	Installing an automatic reclosing system
Clyde	Netherton	1904	1144	2	Installing an automatic reclosing system
Clyde	Kirkfieldbank	1209	611	5	Installing an automatic reclosing system
Clyde	Milton of Campsie	6828	1555	4	Installing an automatic reclosing system
Clyde	Kirkintilloch	2183	956	8	Installing an automatic reclosing system
Clyde	Glassford	2404	607	5	Installing an automatic reclosing system
Clyde	Dolphinton	6278	1676	14	Network automation
Clyde	Law				Installing cable to remove a low-voltage overhead line
Clyde	Glassford				Installing cable to remove a low-voltage overhead line
Clyde	Twechar				Installing cable to remove a low-voltage overhead line
Forth	Norham, Ladykirk	1170	835	3	Installing an automatic reclosing system
Forth	Hownam	223	100	3	Installing an automatic reclosing system
Forth	Ayton	695	207	2	Installing an automatic reclosing system
Forth	Newmill	3108	1045	5	Installing an automatic reclosing system
Forth	West Linton, Lamancha	895	344	7	Installing an automatic reclosing system
Forth	Stow	784	407	3	Installing an automatic reclosing system
Forth	Pease Bay, Cockburnspath	4682	1173	6	Installing an automatic reclosing system
Forth	Damhead Holdings	1194	446	3	Installing an automatic reclosing system
Forth	Nine Mile Burn Village	2163	781	4	Installing an automatic reclosing system
Forth	Garleton, Ballencrieff	2500	1544	7	Installing an automatic reclosing system
Forth	Lennoxton	995	643	7	Installing an automatic reclosing system
Forth	Torrance	7325	4440	4	Installing an automatic reclosing system
Forth	Shieldhill	3687	1803	3	Installing an automatic reclosing system
Forth	Queenzieburn	1484	959	8	Installing an automatic reclosing system
Forth	Ladybank	1120	1090	6	Installing an automatic reclosing system
Forth	Collessie	1351	409	4	Installing an automatic reclosing system
Forth	Cambusbarron	1440	545	4	Reconstructing an overhead line
Forth	East and West Saltoun	6251	3386	5	Reconstructing an overhead line
Forth	Longnewton, Longyester	5869	3546	12	Reconstructing an overhead line
Forth	Arncroach, Largoward	1224	504	7	Reconstructing an overhead line
Forth	Stow	784	407	3	Network automation

# System performance statistics

	Clyde	Forth	Western	Southern	Company
<b>Table 1 Customer numbers</b>					
Number of customers	590,360	697,108	428,966	143,803	1,860,237

## Table 2 Security

Number of supply interruptions for every 100 connected customers due to the following.

### (a) Distribution faults

Low-voltage (including services)	9.4	7.0	7.7	6.3	7.9
High-voltage overhead	1.2	18.7	18.3	53.1	15.7
High-voltage underground	23.1	22.0	24.2	19.0	2.7
High-voltage other	6.4	12.4	16.0	21.0	12.0
High-voltage total	30.7	53.1	58.5	93.1	50.4
Extra high-voltage	4.4	14.0	10.8	14.1	10.2
Other systems					2.5
Total from faults	44.5	74.1	77.0	113.5	71.0

### (b) Planned outages

(b) Planned outages	1.0	1.3	0.9	13.8	2.0
<b>Total from all causes (a)+(b)</b>	<b>45.5</b>	<b>75.4</b>	<b>77.9</b>	<b>127.3</b>	<b>73.0</b>

## Table 3 Availability

Number of supply minutes lost for every connected customer due to the following.

### (a) Distribution faults

Low-voltage (including services)	10.8	8.7	9.5	10.6	9.7
High-voltage overhead	2.3	19.7	22.4	63.1	18.2
High-voltage underground	22.8	24.7	28.4	13.2	24.0
High-voltage other	6.3	11.0	14.4	21.6	11.1
High-voltage total	31.4	55.4	65.2	97.9	53.3
Extra high-voltage	4.0	7.7	7.0	12.7	6.8
Other system					2.6
Total from faults	46.2	71.8	81.7	121.2	72.4

### (b) Planned outages

(b) Planned outages	1.1	2.7	1.9	40.7	5.0
<b>Total from all causes (a)+(b)</b>	<b>47.3</b>	<b>74.5</b>	<b>83.6</b>	<b>161.9</b>	<b>77.4</b>

## Table 4 Voltage complaints

Confirmed number of voltage complaints  
 for every 10,000 connected customers

Confirmed number of voltage complaints for every 10,000 connected customers	0.03	3.0	4.1	4.1	2.4
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# Regional performance

## Main improvements

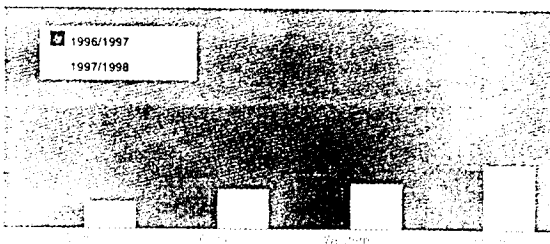
- ▶ Unplanned CML continues to fall.
- ▶ Networks continue to deliver secure supplies.
- ▶ Pre-arranged CML continues to fall.



## Customer minutes lost for every connected customer (CML)

The regional performance has improved and the chart shows the figures for this year compared to the same figures for last year.

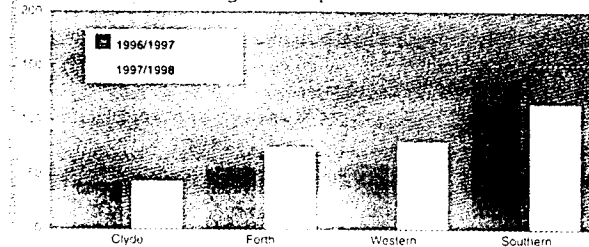
Regional unplanned CML



## Customer interruptions (CI)

The customer interruptions show a small increase in Western and Forth Regions where we have been aware of a significant number of faults affecting a larger number of customers than would be normal. We aim to meet our target for the year 2000.

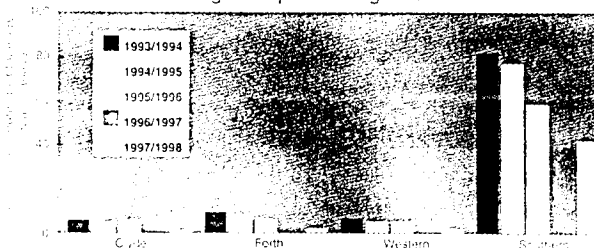
Regional unplanned CI



## Pre-arranged CML

In aiming to improve customer service and reduce the effects of our work on the network, you can clearly see the effect on pre-arranged CML from the graph.

Regional pre-arranged CML



## Update on 1997/1998 quality of supply circuits

Region	Circuit	Proposed work	Status
Southern	Selkirk to Ettrick Bridge, Deloraine, Tushielaw, Ettrick	Line rebuild and overhead protection policy	Complete
Southern	Duns Castle, Borthwick Quarry, Hardens, Gavinton, Polwarth	Overhead protection policy	Complete
Southern	Denholm to Bonchester Bridge, Fodderlee, Bedrule	Line rebuild and refurbishment	Complete
Southern	Chapel on Leader, Birkenside, Blainslie	Overhead protection policy	Complete
Forth	Cowstrandburn, Kinnedar, Saline, Steelend	Overhead protection policy	Complete
Forth	Kingston, Brownrigg, Whitekirk, Leuchie, Rhodes Holdings, Newmains	Overhead protection policy	We aim to complete in June 1998
Forth	Longniddry, Gosford, Aberlady	Overhead protection policy	Complete
Clyde	Clynder, Rosneath, Kilcreggan	Overhead protection policy	Complete
Southern	Crossmichael, Laurieston	Line rebuild	Two-year project on target. We aim to complete in July 1998
Southern	Boreland, Sibbaldie, Millbank	Overhead protection policy	Complete
Southern	Holywood	Line rebuild	Complete
Southern	Lochfoot, Shawhead	Line rebuild	Two-year project on target. We aim to complete in July 98
Southern	Scaur Glen, Wanlockhead, Leadhills, Enterkinfoot, Durisdeer	Line rebuild	Two-year project on target. We aim to complete in September 1998
Southern	Tarff to Bridge of Dee	Line rebuild and overhead protection policy	95% of the work is complete. We have had delays due to site access conditions. We aim to complete in July 1998
Western	Killoch Colliery, Drongan, Ochiltree rural	Overhead protection policy	Complete
Western	Part of Troon and Barassie, Dundonald rural, Symington rural	Overhead protection policy	Complete
Southern	Biggar to Drumelzier, Tweedsmuir, Kindledores	Line rebuild and refurbishment	Complete
Western	Corra Linn to Towers, Rigside, Lanark and Douglas rural area	Line rebuild	Awaiting Wayleave clearance. We aim to complete in July 1998
Western	Towers to Poneil, Lanard and Douglas rural area	Line rebuild	Awaiting Wayleave clearance. We aim to complete in July 98.
Western	Part of Kirkintilloch, Low Moss Prision	Overhead protection policy	Complete
Western	Forth, Tarbrax, Braehead	Overhead protection policy	Complete
Forth	Sauchie, parts of Alloa	Overhead protection policy	Complete
Forth	Ecclesmachan, parts of Broxburn and Dechmont	Overhead protection policy	Complete

# Distribution system performance 1997/1998

## Main improvements

- The distribution network continues to deliver improved CML performance.
- Customer interruptions continue to fall.

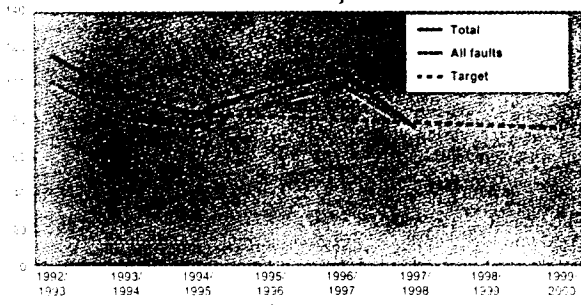
## Availability

This graph shows the effects of the storms of recent years and shows the underlying CML figures meeting with trends towards our year 2000 target. The figures for 1997/1998 confirm the trend towards the targets set for the year 2000.

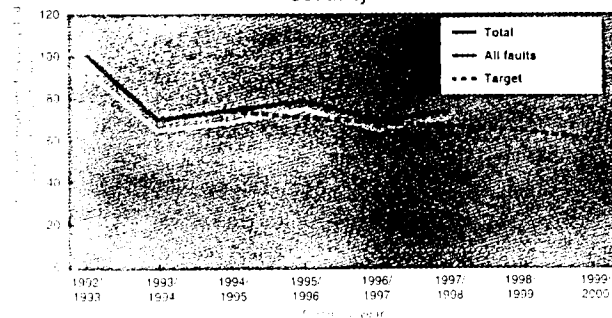
## Security

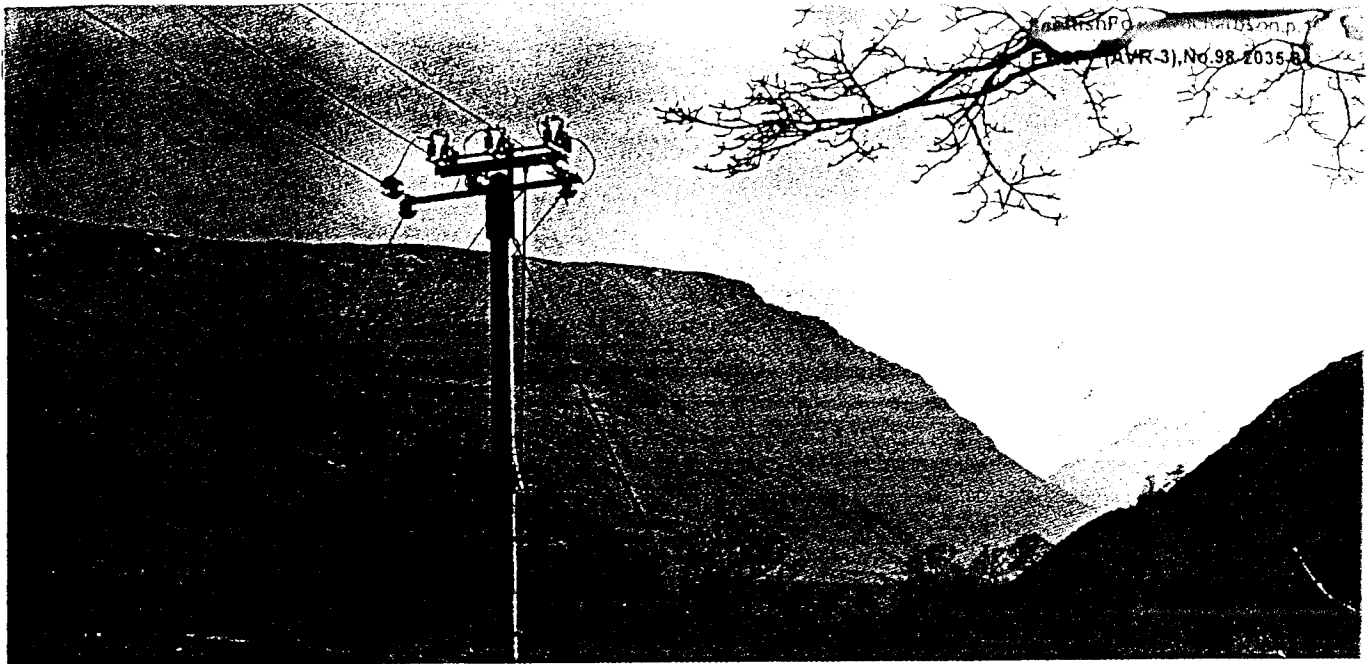
Over the last five years the security of supply from unplanned interruptions continues a trend towards our year 2000 target. In 1997/1998 we experienced several faults where large numbers of customers lost supply for a short period. This is reflected in this years increase in the number of customers interrupted.

Availability



Security





### **Quality of service**

As soon as we are aware that an incident has happened which disrupts supply to customers we respond as quickly as possible. To help us monitor how quickly we respond, we record the time it takes to restore supply to each customer. We have a target to restore 80% of supplies within three hours and 99% of supplies within 24 hours. During 1997/1998 we beat both these targets by restoring 88.1% within three hours and 99.98% of all supplies within 24 hours. As stated earlier, we have tightened our target for forthcoming years.

### **Significant events**

In April 1997 there was a problem with the generating station at Tongland which resulted in over 11,000 customers in Dumfries and Galloway being without power for up to 8 hours. This contributed 2.5 minutes to the Company CML and appears under 'Other systems' in the table of performance statistics.

### **Voltage complaints**

(See table 4 on page 16 of this report.)

Domestic customers make up the majority of our 1.8 million customers and we deliver the supply at 230 volts. European law requires this voltage to be between minus 6% (216.2 volts) and plus 10% (253 volts). We design our networks to maintain supply voltage within this range under normal circumstances. However, due to increased power demand on our network, customers may complain to us about problems related to voltage.

Last year we investigated 1042 complaints. We found 444 were valid and took action to sort out the problem. We have dealt with 416 of these complaints and the rest are still being looked at.

From 1998/1999, OFFER has set a standard that asks us to deal with every valid complaint within six months. We will take appropriate steps to review our complaint handling procedures and we aim to meet this target.

number of electronics manufacturing industries in Europe, for example nearly 40% of all European PCs are manufactured here. To make sure we detect the cause and effect of voltage dips, some of which happen in England or North Scotland, we have created a network of power-quality monitors.

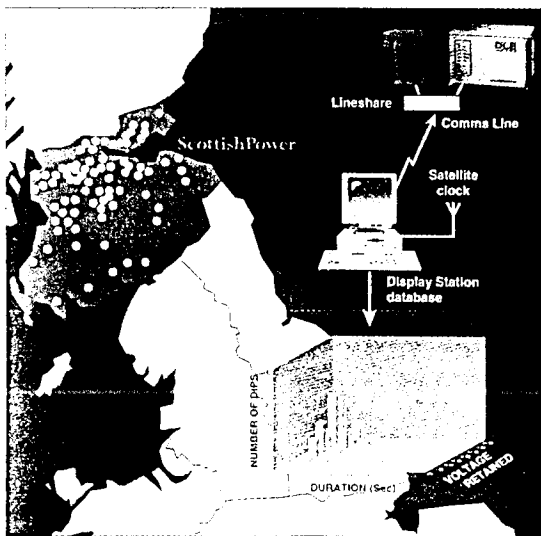
Our monitoring equipment produces power-quality reports that show how many voltage dips happen, how long they last and how severe they are. We use this information to make sure we deliver high-quality supplies and to help

customers to understand their own protection needs. We have started to expand the network coverage during 1997 and continue to do so.

### Customer service systems

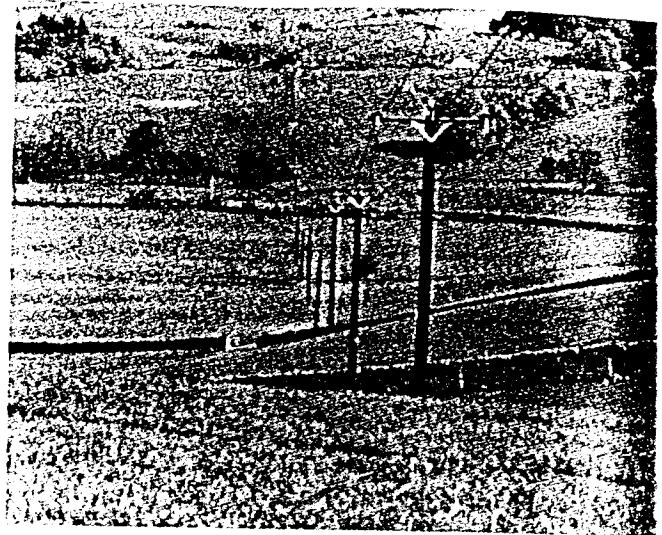
'Prosper', installed in April 1997, is our new faults database which improves our ability to focus on our customers when we target our quality of supply improvement initiatives. All network faults are logged in this computer system and we can identify the worst-served networks to allow us to focus on areas where we can improve.

The 'TroubleCall' system manages the calls we get from customers reporting loss of supply and automatically identifies the extent of a fault. Single losses of supply need the services of an electrician whereas widespread loss of supply may need linesmen or engineers, or both. TroubleCall helps our staff to send the correct repair crews to the fault. The system is designed to make sure all our customers receive a high-quality response.



Our goal is to deliver excellent customer service and to make sure that our customers receive a continually high quality of supply.

# System performance



## Company targets

The 'Prosper effect', as mentioned earlier in this report, has moved our targets to a new level and trend graphs are established to let us compare years. We have tightened our targets for 1999/2000, the most notable of which are as follows.

By the year 2000, we aim to reduce the total underlying CML for every connected customer by 20% compared to 1991/1992 to between 65 and 75 minutes.

By the year 2000, we aim to reduce the total underlying customer interruptions to between 55 and 65 for every 100 connected customers.

By the year 2000, we aim to target improvements to those customers who experience more than an average of three unplanned incidents in each separately protected section of high-voltage network used to provide their supply.

From April 1998, we will restore supplies to over 85% of our customers within 3 hours. These are consistent with regional performance targets in line with the tables below.

## Availability

Region	Customer minutes lost for every connected customer by the year 2000
Clyde	45 to 52
Forth	70 to 85
Western	72 to 87
Southern	175 to 210

## Security

Region	Interruptions for every 100 connected customer by the year 2000
Clyde	38 to 43
Forth	65 to 78
Western	56 to 65
Southern	127 to 150

We will continue to review the targets to make sure that our customers get the highest possible quality of supply.

Our energy businesses, including Generation, Power Systems and Energy Supply, are at the core of the ScottishPower and Manweb operations. They are at the heart of the liberalisation of gas and electricity markets, and work practices are continually changing accordingly. Major ongoing investment in new technologies requires an equivalent development of core skills in many areas of operation.

New skills are being required too in Southern Water, particularly where the company seeks a greater focus on customer service. And in our newly-developing business, such as telecommunications, our staff face new demands caused by technological change and a fiercely competitive market.

All of this implies that ScottishPower must pay the greatest attention to recruiting and retaining the best people, as well as offering existing staff proper opportunities to realise their full potential. The company's response to that challenge has been robust, innovative and – above all – achieved through working together to a clear and common purpose.

## Further Information

If you would like to know more about  
the ScottishPower group please contact  
us at the addresses below:

ScottishPower  
Corporate Human Resources  
1 Atlantic Quay  
Glasgow G2 8SP  
Telephone 0141 248 8200

Graduate Recruitment  
1 Atlantic Quay  
Glasgow G2 8SP  
Telephone 0141 248 8200

Or visit our web site  
[www.scottishpower.plc.uk](http://www.scottishpower.plc.uk)



Employment Service, to ensure that we can continue to meet and maintain best practice across the whole spectrum of equal opportunities. An equal opportunities awareness programme has been developed in conjunction with these bodies, initially targeted at managers and team leaders, but with plans to 'cascade' relevant information throughout the group.

The group operates a 'career-break' scheme and is an active member of the Employers' Forum on Disability. ScottishPower hosted the Forum's first Scottish 'regional briefing', which was attended by representatives of companies throughout Scotland.

The group is also a member of both the Equal Opportunities' Equality Exchange and the Women's Engineering Society, the latter of which pursues the aim of promoting the study and practice of engineering amongst women. Equal opportunities' training is an integral part of the overall strategy, and specific courses have been developed and are run on an ongoing basis.

**Communication**

Effective communication with employees is vital in a company of ScottishPower's size and breadth of activity. Several methods are employed to ensure that our employees are kept informed of company news, and that the company is tuned in with the views of employees.

Each division produces its own employee magazine, edited by professional communications staff and published on a monthly or bi-monthly basis. Many divisions also publish newsletters on a more frequent basis. Publications are sent to retirees as well as current employees. Since the spring of 1997 employees have also received a group-wide publication, 'The Magazine', each quarter.

Each month a briefing document is sent to all managers in the ScottishPower group to enable them to hold useful team briefings on important company news and business issues.

Employees do get the opportunity to tell the company what they think as part of this policy. Divisions periodically conduct surveys of employee attitudes in order to keep in touch with their staffs' opinions and views.

A recent survey of staff opinion of 'The Magazine' found that 89% of those surveyed agreed that it "keeps employees informed about the goals and direction of the company as a whole". As Lesley Sawers, Head of Corporate Communications, explains: "The role of 'The Magazine' is to keep employees informed about the activities of the group as a whole, with the publications of the individual businesses focusing on the local issues."

Technology is also being used to keep employees informed, with the use of electronic mail and the introduction of a corporate 'Intranet', an internal system similar to the Internet.

Division	Magazine
Energy supply	<i>Energise</i>
Technology	<i>Technology Review</i>
Power Systems	<i>Network</i>
Information Systems	<i>Browser</i>
ScottishTelecom	<i>Messenger</i>
Manweb	<i>Contact</i>
Southern Water	<i>Southern Water News</i>
Retail	<i>Trading Post</i>
Generation Wholesale	<i>Generation News</i>

A recent survey of staff opinion of "The Magazine" found that 89% of those surveyed agreed that it "keeps employees informed about the goals and direction of the company as a whole".



## Employee Support

**"As a major employer we recognise that both the company and workforce can benefit from our provision of support to each individual employee in reaching and sustaining a healthy and balanced lifestyle. To this end we provide a variety of health-enhancing services and facilities for staff to use both within and outside working hours."**

The ethos behind our Occupational Health function is that we must encourage our employees to consider carefully their lifestyles. One of our main aims – under the banner of 'Employee Support', and Occupational Health specifically – is to create a 'healthy culture' within the ScottishPower group.

The reason for this is very simple: we believe that a healthy and fit workforce is much more likely to be a productive one.

The Occupational Health service in ScottishPower is not just about health and safety at work. It embraces the overall social, mental and physical well-being of all of our people. The service is managed by an Occupational Health physician, supported by professional staff covering a wide range of disciplines.

The services offered at the Occupational Health main office in Cathcart, Glasgow, include physiotherapy and ergonomics, chiropody, ophthalmic services, dentistry and complementary health therapies. Occupational Health centres are also found in locations throughout the UK, and the company operates mobile units to ensure that even those employees in outlying areas can access the support on offer.

Services are grouped under three main banners: ill-health prevention, health promotion and coping strategies.

Ill-health prevention focuses on preventing work-related illnesses such as repetitive strain injury (RSI), back problems and stress. Certain jobs within the ScottishPower group require employees to have regular health checks: for example, those employees who work

with hazardous materials. These are supervised by the Occupational Health group, which also organises campaigns and workshops dealing with specific issues.

The health promotion initiative aims to encourage a positive and healthy lifestyle, focusing on such topics as nutrition and exercise. In January 1997, we launched a fitness club for employees, Powerclub. Currently operating in a number of sites in Scotland, Powerclub offers a range of services including fitness suites, aerobics, health evaluation and fitness assessment, nutritional and dietary analysis, beauty and massage therapies, and specific activity classes such as self-defence and ski fitness. It has proved to be extremely popular, with more than 1,000 members in the Cathcart office alone. There are seven fitness centres in the Manweb area, and we plan to extend the service to the Southern Water area.

In 1993, ScottishPower introduced Wellscreen. This is a free, totally confidential and voluntary health check offered to all employees. It is carried out in the Occupational Health centres and, for those employees who cannot visit the office, the mobile Wellscreen unit. The programme is designed to help employees follow a healthy lifestyle. A number of tests are carried out and the results are given to employees in a detailed report, which – with the employee's permission – is sent also to their own doctor.

The company recognises that we are all living in a period of enormous change. Many of the certain, solid rules which governed working and personal lives have changed and, as a consequence, more and more people find themselves at some time or other experiencing stress to a level which affects their health and their work.

Under the banner of coping strategies, the Occupational Health service operates a number of services, including workshops on managing pressure and a 24-hour independent employee counselling service.

Overall, the Occupational Health service is an extensive one. But we remain convinced that they will be effective if they are genuinely valued by our staff. Feedback is gathered through employee focus groups and surveys, the aim being to make further improvements. "The service has definitely had a positive impact on both sickness absence and retention," says Dr Bob Phillips, company medical advisor.

The ultimate decision to follow a healthy lifestyle lies with the individual. We hope that by providing a comprehensive range of quality services we can make that decision easier for all ScottishPower employees.



**We believe that a healthy and fit workforce is much more likely to be a productive one.**

ScottishPower Learning's community initiatives offer our staff the opportunity to develop new skills in situations that are challenging because of the differences in situation and culture. For example, in our work with those with learning difficulties, the challenge is to complete tasks in situations where communication is difficult and complex: new methods have to be devised to overcome obstacles of disability.

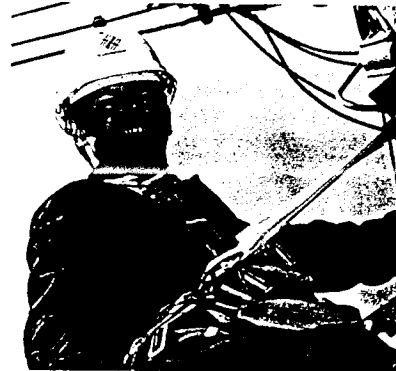
Some of our staff are also helping school children to understand business through the Young Enterprise Scotland organisation. A number of our senior managers are working with head teachers to solve management problems within their schools.

Southern Water launched two schemes in 1997 under the ScottishPower Learning initiative, which bring Southern Water staff together with unemployed people. Forty-three school leavers have been each assigned a mentor, a Southern Water employee who is responsible for their day-to-day supervision and support. The mentors are volunteers who receive training in coaching and supporting young people. While the scheme gives employees the chance to develop their supervisory and coaching skills, they can also 'give something back' to the local community.

Nine long-term unemployed people aged between 20 and 52 are receiving six months' training on leakage detection with Southern Water, an initiative known affectionately as the Leak Busters Programme. During their training they are managed by team leaders from Southern Water: again giving employees the chance to develop their supervisory skills whilst passing on valuable knowledge and skills.

#### Recognition

The company's many achievements in the field of learning have not gone unrecognised: "ScottishPower Learning continues to pioneer life long learning among the company's employees and in the wider community. The Trade Union world is proud to be involved in this work," John Monks, General Secretary of the TUC.



ScottishPower Learning's community initiatives offer our staff the opportunity to develop new skills in situations that are challenging because of the differences in situation and culture.

## Employee Relations

**We have worked very hard to achieve our aim of keeping our staff informed and involved as fully as possible about developments involving the ScottishPower group.**

**"We foster a sense of involvement among employees across the whole spectrum of business activities. We sustain positive relationships with Trade Unions – where they represent our employees – in the belief that this relationship can be mutually beneficial as we continue the drive towards achieving best-in-class working practices. We believe also that we must be proactive in developing and adopting employment policies and practices which are in line with changing social, legislative and regulatory environments."**

### Consultation and Negotiations

We have worked very hard to achieve our aim of keeping our staff informed and involved as fully as possible about developments involving the ScottishPower group.

This has been achieved through the creation of a consultative framework which brings together the Trade Unions and management for talks and negotiations, enabling full, frank and open discussions about the progress of the company.

An informal Chief Executive's Meeting brings together the Executive Directors with the full-time officers of all those Trade Unions who enjoy formal recognition within the company. The purpose of this informal meeting is to share with the Trade Union representatives some of the detail of the company's broad strategy in its various activities, providing them with an update of our performance and allowing time to highlight any particular issues which the company might face.

In this way the Trade Unions can provide input and comments on the performance of the company from their particular perspective, as well as having the opportunity to raise issues that they may have. The meetings take place normally two or three times each year, and are very well received as an open and practical demonstration that the company's commitment to employee involvement is observed at the highest levels of management.

The company has established or is establishing Company Councils within each subsidiary operation, such as ScottishPower (Scotland), Manweb and Southern Water. This is a further demonstration of our emphasis and commitment to employee involvement.

Within these Councils, full-time union officials, lay staff representatives and management come together formally to discuss and consult on business issues relative to each of these larger business groupings. These meetings allow for consultation and negotiations not necessarily dealt with within the separate business units, such as important questions including pensions and sickness absence schemes.

The Company Council in Scotland meets on a quarterly basis to discuss these issues for all of the Scottish based businesses. In Manweb, the Common Interest Forum is replacing the Manweb Joint Council. This is the final piece in the jigsaw in the move to devolve bargaining from the centre in Manweb to the new integrated businesses of Power Systems, Energy Supply and Information Systems. The Partnership Agreement within Southern Water will create a framework which – as in Manweb and ScottishPower – aims to put our relationship with the Trade Unions and staff on an excellent footing.

Consistent with this approach to devolving bargaining to business unit level is the creation of 'business-specific' bargaining machinery. The main pay and conditions' negotiations occur at this level, as well as relevant consultation on specific issues which arise.

### Equal Opportunities

It is ScottishPower's policy to promote equality of opportunity in recruitment, employment continuity, training and career development. The policy is designed to ensure that equal opportunity in these areas extends as far as practicable to people with disabilities.

The company works closely with the Commission for Racial Equality, the Equal Opportunities Commission, and the

Open Learning was established as part of the company's commitment to lifelong learning for staff and their families in 1993. It offers a highly flexible approach to acquiring new skills and knowledge, or simply to help people brush up on old ones, using a range of computer-based, distance learning, audio, video and text-based materials. The aim is to offer employees the opportunity to control their own learning and development. There are no barriers to entry.

The programme's resources are now being shared and enjoyed by an even wider audience. Schools, youth and adult unemployed, and the wider community – from small businesses to local charities – now make use of our facilities. Courses range from garden design to a BSc in Electrical Engineering, and many are run in conjunction with the Open College.

Open Learning staff also support ScottishPower Businesses' own training and development plans by providing 'just in time' access to learning materials and resources in a growing number of vocational areas. Support is also given to operations seeking 'Investors in People' status, supplying appropriate learning resources.

A number of divisional training programmes have integrated open learning resources with tutor-led programmes. Staff can develop their skills using Open Learning resources pre and post conventional training courses. New recruits are introduced to Open Learning during their induction into the company, and encouraged from the start to take advantage of the wide range of programmes available in both vocational and non-vocational subjects.

Open Learning Centres work in partnership with business units by supporting training and development initiatives, and jointly marketing and promoting key events. A typical example is the partnership with our Occupational Health Department: Open Learning Centres hold promotional literature linked to national health campaigns, and employees can also access a multi-media health education package. The department's human

resources staff will organise 'local' events, backed by Open Learning advisers.

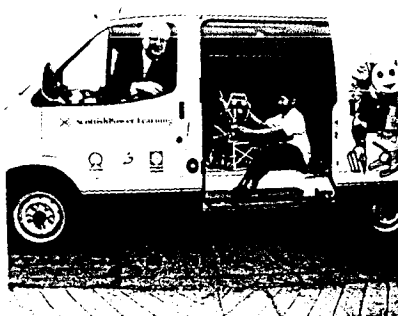
'Personal development planning', a theme adopted across the group, is also supported by Open Learning Advisers who can help learners to prepare their plans and customise programmes appropriately. Printed planning manuals are available, with a multi-media version planned to be available soon.

Learning has become a way of life for the hundreds of people at Manweb Contracting Services. More than three-quarters of all staff there have joined courses at the Open Learning Centre. "They have been studying in the evenings and at weekends to complete their individual courses for their own well-being, as well as work-related issues," said Alan Littler, MCS Director.

College courses are also very popular: last year 180 Manweb staff enrolled with local colleges, in courses as diverse as business studies, Welsh, personnel practice, car maintenance and bricklaying.

Jack Kelly, Managing Director of ScottishPower's Learning Business, believes that the duty of management is to provide and sustain an environment in which staff will recognise the value of personal and career development. "People will have to learn, un-learn, then re-learn if they are to stay ahead of the game. Nobody comes to work as, say, a mechanical engineer knowing everything there is to know about the subject," he points out. "It is all about self-confidence in learning. The vocational courses keep staff abreast of the latest trends and developments in their field," adds Jack. "I'm a great believer in the idea that if people have self-confidence and self-awareness they will become high achievers: nothing can stop those sort of people. They take initiatives on their own, they arrive in your offices with solutions – not with problems. When you have staff like that an organisation really buzzes."

Facts: 46 Open Learning Centres have opened to date. 54% of ScottishPower employees so far have enrolled in or



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completed an Open Learning programme. There are more than 700 programmes available.

ScottishPower Learning launched its own Prince's Trust Volunteers Initiative in January 1997. Employees are seconded for one year on full pay to work as team leaders or project members of a programme designed to give young people opportunities to develop their skills, confidence and teamworking. The secondees learn how to recruit, coach and lead teams of employed and unemployed people between the ages of 16 and 25 working on a wide variety of community projects. Before they begin, staff receive general training from the Prince's Trust organisation, as well as training on First Aid and health and safety skills. The secondments provide a first-class opportunity to develop supervisory and management skills in what can be very challenging situations.

Last year 78 young people from our local communities participated with five seconded team leaders (from ScottishPower and other employers) in central Scotland. A further 78 in the Manweb area participated in programmes run by ScottishPower staff during the same period.

ScottishPower Learning also piloted an initiative in October 1996, to bring together ScottishPower employees and people with learning disabilities in a week-long outward bound event, in conjunction with the Outward Bound Trust. The pilot proved to be so successful that three more were run in 1997 and four are planned for 1998.

During their week's duties ScottishPower employees learn the important lesson that every individual can make a valuable team member, and that people are often capable of doing far more than first impressions suggest. Barriers and stereotypes are broken down as the team work together on challenging tasks including raft building, abseiling and camping out in places like Loch Eil on the west coast of Scotland and Aberdovey in Wales.

After the first event to be run in the Manweb area, co-ordinator Pat Lewis said: "The aim of the programme was to provide meaningful, challenging and enjoyable personal development opportunities both for the staff taking part and those with special needs. It was all about teamwork, communication, confidence building and problem-solving, and everyone who took part got something different out of the programme."

as being in electrical engineering, he took up the chance to work in other areas of the company with enthusiasm.

"In the old days the only way to get promotion was to wait for someone to retire. Then you might get one more step up the ladder," remarks Frank. "The 'Realising Potential' programme gives people a chance to show what they can do at a much earlier stage in their career."

He first took part in a workshop designed specifically to identify his own strengths and weaknesses.

"The idea was to put you under pressure and break down your facade. On the first day I thought I handled things quite well, but the second day was more challenging than I thought it would be. But it was a great experience."

Frank had to put together a personal development plan, which was then agreed with his divisional Managing Director.

Now Frank is building experience and making new contacts in other parts of the group. "I always thought that I would end up applying my engineering skills to energy supply. I never dreamed that I could end up working in areas like human resources, gas or marketing," he adds.

Other programmes designed and run by the group Management Development team include: The Business Leadership Programme, an initiative designed in conjunction with the Wharton Business School of the University of Pennsylvania – one of the world's leading business schools. Targeted at senior managers with the potential to achieve director level, the programme brings together senior managers from around the group in order to broaden perspectives and develop leadership abilities consistent with the company's Values programme. Managers gain greater understanding of their own behaviours and motivations, and develop competence in advanced concepts as well as gaining greater insight into the key strategic issues facing ScottishPower.

Wharton Business School's involvement has been complemented by inclusion of programmes run by the Kellogg School in Illinois, London Business School and INSEAD in France.

The Consortium MBA was introduced in 1993 and is designed for employees in management positions looking to strengthen their all-round management skills and knowledge. Run in partnership with Edinburgh Business School, it also involves Hewlett Packard, the Bank of Scotland and the National Health Service in Scotland. Participants have a maximum of five years in which to complete their MBA whilst working for ScottishPower full time.

The three-year Integrated Graduate Development Scheme (IGDS) provides graduate engineers in the electricity industry with the appropriate business, technical and IT skills to enable them to manage technology in competitive environments. The scheme, which offers an MSc in Electricity Industry Management and Technology, was



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**ScottishPower's Retail Business has developed a unique Diploma in Retail Management in conjunction with Glasgow Caledonian University: the first of its kind in the UK.**

**ScottishPower has shaped its Graduate Development Programme around two main aims: to help graduates make the maximum contribution to the company's future, and to help them get the most out of their careers.**

**We have created a Values Based Leadership Development process to help managers understand our stated Values more deeply, and to encourage them to implement fresh personal actions.**

developed in conjunction with Strathclyde University, Strathclyde Graduate Business School, National Grid, Eastern Electricity, SWEB, Scottish Nuclear and Scottish Hydro Electric.

ScottishPower has shaped its Graduate Development Programme around two main aims: to help graduates make the maximum contribution to the company's future, and to help them get the most out of their careers. The programme, which is placement and project-based, allows our graduates to build a sound technical knowledge and business awareness and to develop a clear understanding of our organisation as a whole. Graduates get the chance to get their teeth into real challenges early on. Each graduate is paired with a 'mentor' to help and advise them through their early years with the company.

Alan Coburn, aged 27, a graduate trainee with Information Systems, says he was attracted to the company by its reputation for training and development. "I have definitely not been disappointed," says Alan. "Not only have I benefited from the diversity of experience that I have gained within my own division, but I have also been part of a company-wide graduate programme that is one of the best in the country."

ScottishPower developed a set of Values in 1996 to which all of us in the company are totally committed. The underlying conviction was that the company felt that as our operations grow and develop it is important to set out in clear and simple terms where we are going, and to define the Values in which we really believe. It is the responsibility of every manager to make these Values 'live' in our day-to-day practices and behaviour.

We have created a Values Based Leadership Development process to help managers understand these stated Values more deeply, and to encourage them to implement fresh personal actions which support the Values in their own working environment.

Managers attended a Putting Values Into Action workshop which introduced them

in depth to the company's Values. They were able then to choose from a menu of five separate workshops, each built around one of the company Values: for example, Well-Earned Customer Loyalty, Shareholder Value. So far more than 170 managers have participated, and feedback has been very positive.

Rod Matthews, Chief Executive ScottishTelecom, believes, "Cross business initiatives are particularly important for the group as we push forward with our multi-utility strategy. I like the idea of managers from across the group coming together for short, sharp sessions to learn more about our Values and to focus on what they imply personally in terms of our own roles and leadership behaviour.

"I also like the idea that individual managers undertake fresh actions in support. I contributed to both the Customer Loyalty and Teamworking/Leadership workshops, and I was impressed by the positive reaction and enthusiasm towards the process. What's more the events were great fun!"

Morag Liddell, an Information Systems manager, says, "After attending the workshops I volunteered to get involved in the programme and I am now an accredited facilitator. This has given me further opportunities to network within the company and keep the momentum with my own personal development plan."

ScottishPower Learning, a joint venture with the Trade Unions, was launched as a separate Division in 1996. It also took over management and development of the company's existing Open Learning operations. ScottishPower Learning has thus two key complementary areas of activity:

- supporting the development of the staff across the group through Open Learning
- helping the company strengthen links with local communities by offering learning and development opportunities for disadvantaged community members in conjunction with community groups, charities, local enterprise companies, Trade Unions and Government.



**The PowerLearning training centres are used by many ScottishPower Businesses, as well as external companies, Trade Unions and local communities.**

The initiative involves 15 days off-the-job training, over a period of around nine months, covering such topics as personal development and learning styles; customer care; influencing skills; presentation; decision making; and managing people's performance. Extensive use is made of practising fresh standards of behaviour, and giving and receiving feedback. A recurring theme is the 'unpacking' of implicit knowledge about the way people influence each other, and how it is possible to bring the relevant behaviours under conscious control. Participants also get the opportunity to consider what ScottishPower needs now and in the future from its managers, and to assess themselves against these requirements.

*PowerLearning* is Power Systems' own training business, operating a number of training centres throughout the UK. These include Dealain House in Scotland which is regarded – both internally and externally – as a state-of-the-art facility.

Dealain House ('Dealain' is Gaelic for 'electric') offers managerial, technical, non-technical and industrial training. Its facilities are fit for the 21st century, and include classrooms, meeting rooms, Open Learning Centres, 'break-out' areas and a real live 11,000 volt electricity network established specifically for training.

A new £1m investment is also being made within the Manweb area, providing a similar training facility on the Wirral. Training facilities within Southern Water are to be upgraded.

The PowerLearning training centres are used by many ScottishPower Businesses, as well as external companies, Trade Unions and local communities. They form a visible cornerstone of ScottishPower's commitment to excellence in training and development.

Our *Energy Supply* Business has focused on developing and coaching employees using a new approach to Performance Management. This two-way process was developed in consultation with a number of professional bodies and Trade Unions.

It allows each employee the opportunity to discuss their performance, development and any work-related training needs directly with their manager. Appraisal sessions take place at least once a year and all employees and managers are trained in the process. Staff are assessed according to key performance areas identified in advance by the Business as being important in all areas of work, and include communication, customers, people, performance and teamwork. Leadership development rather than management training is seen as a key differentiating factor of this initiative.

This customised approach to performance management has been introduced to more than 900 staff through workshops at Cathcart, Chester and Rhostyllen.

At *Southern Water* a Multi-Skilling Programme includes several training modules whose aim is to help employees either to develop their existing skills and knowledge, or to acquire an entirely new set of skills. Its target is to assist Southern Water staff to acquire new skills which will lead the business forward.

Team working is also seen as a key way of releasing the full potential of all Southern Water employees. Southern Water is introducing Self Managed Teams, whose creation is rooted in the philosophy that staff should be trusted and encouraged to 'take ownership' of their work, and assume responsibility for getting the job done. Training will be available to all employees, and will be accompanied by careful assessment and constructive feedback. Teams will be provided with specific training to improve relationships within their own structure, and with other teams in operation.

*Scottish Telecom* bases its training and education strategy on the belief that when individuals in an organisation take responsibility for their own development the cumulative benefits ripple out into the organisation as a whole.

The Business, which has experienced substantial growth since its creation in

1995, has established its own Self Development Programme for employees. Participation offers the provision of a set of tools and freshly clarified 'personal objectives' aimed at helping employees to take advantage of new and exciting opportunities both within and outside the workplace.

ScottishTelecom's strategy remains that it must build a business that aims to lead the way in setting new standards for costs, customer service, innovation and the introduction of new quality services. Improvements can always be made to the way things are done: with this in mind ScottishTelecom introduced its Bright Ideas initiative in June 1997. Designed to encourage employees to put forward their own proposals on how work-related problems might be solved, or how current practices might be optimised, it ensures that staff receive recognition for their own good ideas. Each successful suggestion receives an award, and all of them are entered into a 'Bright Idea of the Year' competition, with further prizes.

The *Excellence Award* scheme gives employees the chance to nominate a colleague whom they believe to have demonstrated excellence at work. ScottishTelecom has identified 'role model' behaviours to help employees decide who are potential award winners, including:

- having a can-do attitude
- making a significant and lasting contribution to customer satisfaction
- displaying integrity in their dealings with people
- demonstrating creativity and innovation
- setting and delivering high standards in everything they do.

The *Information Systems Business* sponsors students as part of its commitment to training and development. Examples include Chris Wallace and Pauline McQuade, who are studying for degrees in Computer Studies at Glasgow Caledonian University. The five-year course includes a year on industrial placement in a computing environment. Both spent their placement year within the Business, and are being sponsored for their final university year.

Chris, who spent his placement with the projects and consultancy section, is very enthusiastic: "The time I have spent with ScottishPower surpassed the expectations of both myself and the University in terms of gaining new knowledge and experience. Information Systems has given me the opportunity to combine my honours' year project with a section of work related to the business. This will provide me with an ideal environment to complete my studies successfully to a very high standard, and is providing a firm basis for both my future academic and working careers."

ScottishPower's Retail Business has developed a unique Diploma in Retail Management in conjunction with Glasgow Caledonian University: the first of its kind in the UK. The diploma course is run in-house, and supervised for quality by the university and an external assessor. It covers a diverse range of subjects including: introduction to management; customer relations; communications; consumer studies; retail environment; employee interaction and management; retail marketing; finance and IT.

The business also offers Vocational Qualifications (VQs) in several areas, including retailing, support services and warehousing. So far more than 540 employees have either completed or are completing their studies.

Training and business education can take many forms. In 1997 the Technology Business staff conference on 'Money Matters' focused on the need to increase efficiency, and identify and manage areas of potential risk. Staff debated scenarios in a 'business simulation' which concentrated on:

- Management of customer relationships
- Compliance with contract conditions
- Management of cash flow
- Effective project management
- Management of supplier relationships

Employees split into five teams of 14 people - 'Contracting Companies' - who had to build a bridge by the end of the conference's second day. The 'company' with the best results would be contracted to build a further five

bridges. External guests were invited along to act as 'clients', judging the teams as well as giving advice on how best to reduce the risks involved with these higher value contracts. The conference was a great success: apart from learning about risk management, staff managed to have some fun too!

The Technology Business has achieved the Investors in People award, joining several other ScottishPower divisions. This is an important development, given the challenges of the division's considerable growth and its determination to update and improve organisational efficiency and performance on a continuous basis.

Our group Management Development team, based at ScottishPower's corporate headquarters in Atlantic Quay, Glasgow, create and manage an exciting range of cross-business development courses and services. A number of tailor-made programmes are offered for key managers and employees with management potential.

The team provides a facilitation service to the rest of the company, sourcing training solutions, advising on management development issues, and developing tailor-made courses. It also provides a forum on strategic human resource development issues with senior staff from across the group. The underlying theme is the successful development of our top-class people as well as encouraging all employees to take personal responsibility for fulfilling their potential.

One important initiative is the Realising Potential programme, aimed at identifying highly-motivated staff with an existing track record of achievement, and then accelerating their development by giving them new and stretching challenges. These staff are not just thrown in the deep end: we ensure that they receive suitable support and training.

One of the first to participate was Frank Mitchell, an electrical engineer in Power Systems and now Business Programme Manager for ScottishPower/Manweb 1998. Although Frank had seen his career

### 1 Employee Development

Our employees create the value we deliver to customers, and our role is to strengthen their ability to contribute further by providing focused, business related skills training. We believe firmly in helping our employees to realise their potential by providing a wide range of opportunities for personal development and career progress. As a company we support and are committed to the Investors in People programme.

### 2 Employee Relations

We foster a sense of involvement among employees across the whole spectrum of business activities. We sustain positive relationships with Trade Unions – where they represent our employees – in the belief that this relationship can be mutually beneficial as we continue the drive towards achieving best-in-class working practices.

We believe also that we must be proactive in developing and adopting employment policies and practices which are in line with changing social, legislative and regulatory environments.

### 3 Employee Support

As a major employer we recognise that both the company and workforce can benefit from our provision of support to each individual employee in reaching and sustaining a healthy and balanced lifestyle. To this end we provide a variety of health-enhancing services and facilities for staff to use both within and outside working hours.

## Employee Development

"Our employees create the value we deliver to customers, and our role is to strengthen their ability to contribute further by providing focused, business related skills training. We believe firmly in helping our employees to realise their potential by providing a wide range of opportunities for personal development and career progress. As a company we support and are committed to the Investors in People programme."

*Generation Wholesale* runs an innovative problem-solving programme called 'Team Power'. The scheme encourages teams to identify issues or problems that cause them difficulty at work, and then provide solutions. Staff working in teams benefit by developing their abilities to solve problems and learn new working methods, meanwhile enhancing the profitability of the Business. Each year all projects successfully completed are judged as part of an internal competition, and members of the best team can win holidays worth £2,000.

A *Personal Development* programme has also been established within *Generation Wholesale*. Its aim is to help individuals to make the most of their skills and abilities, and to expand their knowledge and confidence in tackling problems both inside and outside the workplace. The programme is open to all employees, their commitment being that all such training takes place in their own time. It offers £500 towards the cost of Vocational or Non-Vocational training and education of their choice, subject to approval.

Some of *Generation Wholesale's* engineers have developed and piloted a scheme which has been adopted as a *National Vocational Qualification (NVQ)*. The course includes a number of units which are focused on technical skills, but also includes a number of management units, reflecting the changing role of engineers in today's business environment. Manager John Handley explains:

"When we reviewed what was happening nationally, we found there was nothing suitable for our needs, so we developed the Vocational Qualification ourselves using the Engineering Services Standing Conference draft standards for technical qualifications as a base."

The VQ has been adopted by the Electrical Training Association (ETA) and its development was welcomed by engineering institutes.

*Power Systems* has been gearing up for the challenges of the next century with its *Managing in the Millennium* programme. Focusing on the theme of personal development, it is designed for staff who may not have any formal qualifications but who show the potential to move into management or supervisory positions in the future.

By the end of 1998, it is expected that around 70 people from the Businesses' operations in Scotland and Manweb areas will have completed the intensive programme, which has proven to be popular and is often over-subscribed.

By the end of 1998, it is expected that around 70 people from the Businesses' operations in Scotland and Manweb areas will have completed the intensive *Managing in the Millennium* programme, which has proven to be popular and is often over-subscribed.



## Chief Executive's Introduction

It is the norm for Chief Executives and Chairmen of large companies to describe their employees as their companies' most valuable and important assets, but in ScottishPower this is more than rhetoric: it has always been our belief.

This attitude is reflected in our Values and in our established Human Resources strategy. These provide a framework which enables each of our people to achieve personal growth, to gain recognition and reward, to have the healthiest possible working life, and to contribute to the company's success.

In this report, we aim to illustrate the wide range of initiatives and practices which exist to encourage employee creativity and personal contribution. We are very proud of what we are achieving and it is our intention to continue to support our people in meeting their current and future challenges by being innovative and bold in this area.

I hope you find this material interesting and of value.



Ian Robinson  
Chief Executive

## Human Resources Strategy Overview

ScottishPower's ambition is to confirm its position as a leading UK multi-utility company, and to seek new market opportunities both at home and abroad. We require skilled, committed and innovative people to achieve this. This report offers many examples of our implementation of an integrated Human Resources strategy which is key to that ambition. The strategy includes three core themes:

## Employee Review

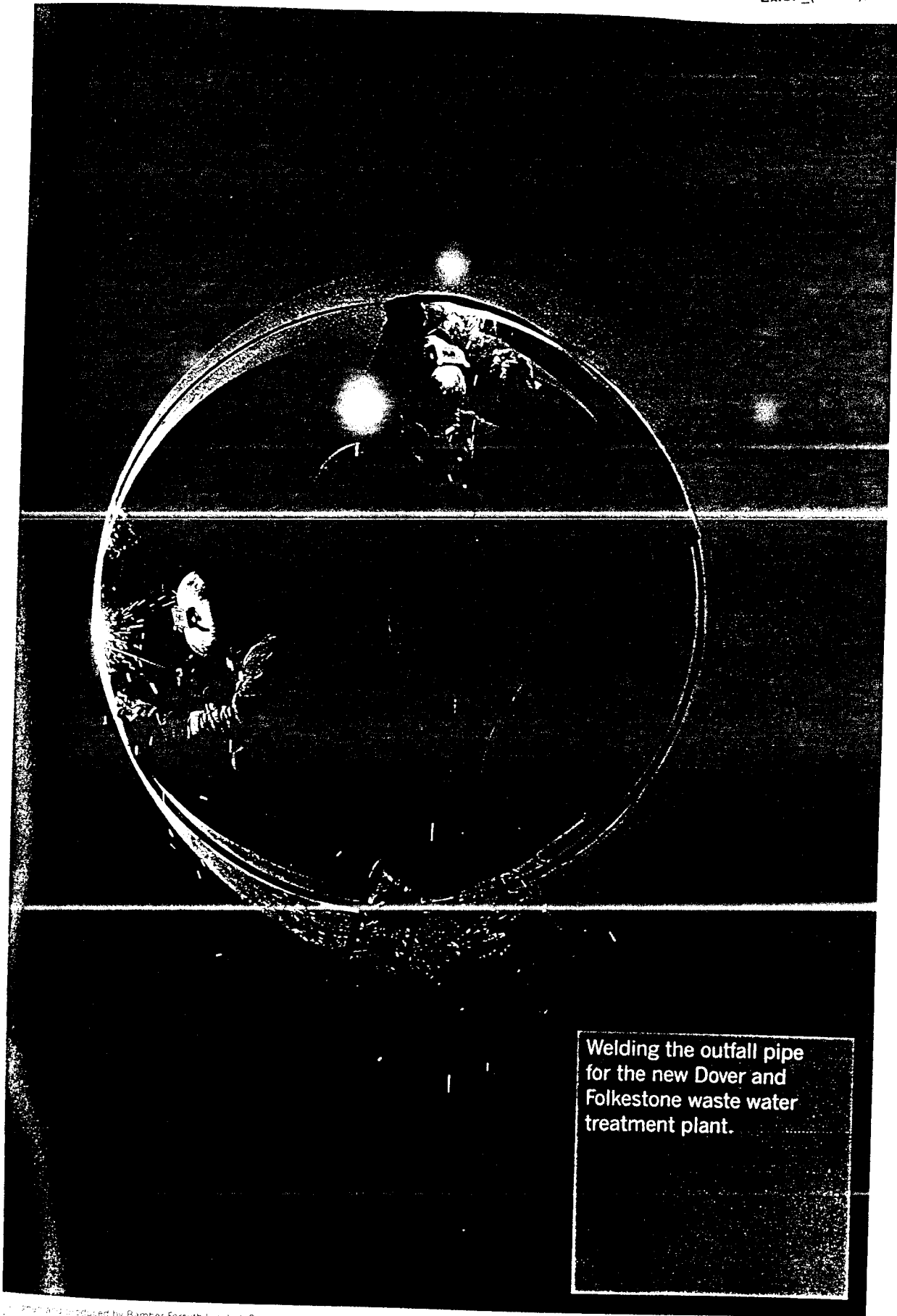
ScottishPower  
are committed  
builders of businesses  
in electricity and  
utility-related markets.  
We require a skilled,  
committed and  
innovative  
management  
and staff team to  
achieve that.



Prepared for competition  
We are committed builders of businesses in electricity and utility-related markets, determined to deliver outstanding performance.

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**Welding the outfall pipe  
for the new Dover and  
Folkestone waste water  
treatment plant.**

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ScottishPower's Report is made from 75% recycled post-consumer waste and the remaining  
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**Further information and  
contact details**

We hope that you have found this Report informative and interesting. Our aim has been to provide readers with an understanding of the environmental issues surrounding our multi-utility business, our strategy for managing them and a review of our performance during 1997-98.

We would very much welcome your feedback on this publication.

To help us make improvements to next year's Report, we invite you to complete and return the enclosed reply card or contact us directly by telephoning Fred Dinning, Corporate Environment Adviser, on 0141 568 2835.

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To help ScottishPower improve future environment reports, we would welcome your views on this publication. If you have any comments, or would like further copies, please complete this card and return it to the address overleaf. No stamp or envelope is required.

Please circle your score on the following:

	excellent	above average	average	below average	poor
Overall opinion of the report	5	4	3	2	1
Range of environmental issues covered	5	4	3	2	1
Content and level of detail	5	4	3	2	1
Understandability of text and data	5	4	3	2	1
Design and presentation	5	4	3	2	1
Usefulness of the information	5	4	3	2	1

Do you have any further comments or questions:

I would like \_\_\_\_\_ further copies of ScottishPower's Environment Report.  
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Position \_\_\_\_\_

Organisation \_\_\_\_\_

Address \_\_\_\_\_

Postcode \_\_\_\_\_

Telephone \_\_\_\_\_

Fax \_\_\_\_\_

## Glossary

- AFR** Accident Frequency Rate, the number of lost time accidents per 100 employees
- AMP 3** Asset Management Plan 3, future investment plans submitted to OFWAT
- BS 7750** The British Standard for EMS, now converted to ISO 14001
- Bunding** Systems of walls, channels and impervious material to ensure that leaks and spillages are fully contained
- BCE** Business Commitment to the Environment
- BiE** Business in the Environment
- CBI** Confederation of British Industry
- CCGT** Combined-Cycle Gas Turbine, uses gas as the primary fuel with heat recovered from the turbine exhaust used in a steam turbine
- CFCs** Chlorofluorocarbons, ozone-depleting gases being largely phased out worldwide
- CHP** Combined Heat and Power, an installation for the on-site simultaneous generation of useful heat and power
- CNG** Compressed natural gas
- CoTC** Certificate of Technical Competence
- CO<sub>2</sub>** Carbon dioxide, a greenhouse gas contributing to global climate change
- DETR** Department of the Environment, Transport and the Regions
- DG** Director General
- DHSEC** Generation Wholesale Health, Safety and Environment Committee
- DTI** Department of Trade and Industry
- EA** Environment Agency, the environmental regulator
- EESoP** Energy Efficiency Standards of Performance, a regulatory requirement for achieving customer energy savings through approved national and regional schemes
- EMAS** Eco-Management and Auditing System
- EMFs** Electric and Magnetic Fields
- EMS** Environmental Management System
- EPAC** ScottishPower's Environmental Policy Advisory Committee
- ESI** Electricity Supply Industry
- EU** European Union
- FBA** Furnace bottom ash, a residue generated by coal-fired power stations
- FGD** Flue Gas Desulphurisation, equipment to reduce emissions of sulphur dioxide from fossil-fuel power generation
- Gas reburn** Technique to reduce nitrogen oxide emissions from coal-fired power stations, which involves the injection of natural gas to convert nitrogen oxides into nitrogen and water vapour
- GIS** Gas Insulated Switchgear
- GWh** One Thousand MWh
- GWP** Global warming potential, a measure of the potential of different gases to contribute to global climate change relative to carbon dioxide, which has a GWP of one
- HNC** Higher National Certificate
- IOSH** Institute of Occupational Safety and Health
- IPC** Integrated Pollution Control, this concept considers major emissions simultaneously rather than in isolation
- ISO 14001** International standard for EMS
- KPI** Key performance indicator
- kV** Unit of measurement for electrical voltage
- kWh** Unit of measurement for energy (1,000 watts used for an hour)
- Low NO<sub>x</sub> burners** Equipment to reduce emissions of oxides of nitrogen from coal-fired power stations.
- LPG** Liquid Petroleum Gas
- LTA** Lost Time Accident, accident resulting in an absence from work of one day or more
- MORI** Market and Opinion Research International
- MW** Unit of measure for generating capacity (one million watts)
- MWh** One thousand kWh
- NEBOSH** National Examination Board of Occupational Safety and Health
- NHS** National Health Service
- NO<sub>x</sub>** Oxides of nitrogen, which contribute to acid rain causing damage to vulnerable freshwater systems, forestry and buildings; also leads to poor air quality
- OFFER** Office of Electricity Regulation
- OFTEL** Office of Telecommunications
- OFWAT** Office of Water Regulation
- OHL** Overhead lines, electrical conductors supported above ground on wood poles or steel towers, more commonly known as pylons
- Population equivalent** Relates to the population served and the non-domestic pollution load on the waste water treatment works
- PCBs** Polychlorinated biphenyls, previously used as an insulating material but since found to be a persistent bio-accumulative pollutant
- PFA** Pulverised fuel ash, a main waste generated by coal-fired power stations
- pH** Measure of acidity and alkalinity
- ppm** Parts per million
- RoSPA** Royal Society for the Prevention of Accidents
- SEPA** Scottish Environment Protection Agency
- SF<sub>6</sub>** Sulphur hexafluoride, a gas used for electrical insulation in switchgear, with a high GWP
- Sour gas** Natural gas which contains a small percentage of hydrogen sulphide
- SO<sub>2</sub>** Sulphur dioxide, which contributes to acid rain and can affect local air quality
- SSSI** Site of Special Scientific Interest
- THERMIE** EU funded programme for clean combustion technology
- UWWTD** Urban Waste Water Treatment Directive
- WWTWs** Waste water treatment works

All data in this Report is based on the financial year to 31 March 1998, except for data subject to regulatory compliance, such as power generation emissions, packaging obligations and drinking and waste water data, which are based on the calendar year.

# Validation Statement

## Role and scope of validation

Aspinwall & Company has provided environmental consultancy advice to ScottishPower in the planning and production of this Environment Report. We have also conducted a Corporate Environmental Governance Review which assessed top level compliance with the requirements of policy guidelines and checked the effectiveness of management action in relation to environmental issues. The findings of the Corporate Environmental Governance Review were as follows:

- environmental issues are becoming integrated into business decision making at senior management level;
- there is a high level of compliance with environmental policy guidelines across the company;
- appropriate systems and structures are in place but require further development;
- there is evidence of commitment to continuous improvement of environmental performance.

As a result of our involvement in these activities we are in a strong position to evaluate ScottishPower's environmental management performance and form judgements on the accuracy and completeness of this Report. Our judgements have been formed from an independent and objective standpoint but we have not carried out a formal verification of statements and quantitative data within the scope of the validation. This has been conducted through an internal verification audit which we are satisfied has been robust and covered all significant areas within the scope of this Report.

## Reporting process

The requirements for the Report were derived as a result of stakeholder consultation and feedback on the 1996-97 Report, established through structured interviews and consultation with ScottishPower's EPAC. Data was

collected from each business through questionnaires. Report text and data were initially confirmed and checked by EPAC members and the Corporate Environment Adviser. Statements and data contained in the Report were subject to an internal verification audit and were either verified, amended or qualified.

## Opinion

### Accuracy and completeness of report

This is the second Environment Report produced by ScottishPower covering the combined activities of all businesses. We note that additional activities have been reported particularly in the Southern Water business and the inclusion of health and safety for the first time. We believe that all significant environmental aspects of ScottishPower's business activities have been included within the scope of this Report.

We believe that the reporting process and reliability of data have been greatly enhanced as the result of the internal verification audit and the willingness of ScottishPower to accept and report both success and failure. Data sets were reliable and comprehensive for regulated activities such as emissions to air and discharges to water. However, the process of data collection requires further development in some businesses, particularly in non-regulated activities.

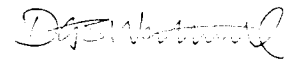
### Recommendations for future environmental reports

The success of the internal verification audit and the improvements to data collection and reliability should be continued and reinforced in subsequent years.

### Recommendations for ScottishPower's environmental programme

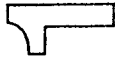
ScottishPower has made an encouraging commitment to achieving the goal of sustainable development and interpreting what this means in practical terms for group strategy. We further welcome the establishment of an external Environment Forum to encourage wider perspective on sustainability issues. We therefore

anticipate that ScottishPower's objectives and targets will relate more closely to sustainable development goals in future years. The setting of objectives and targets should also drive management action more closely, particularly in non-regulated areas of the business. A move towards setting more quantitative targets would also assist in the process of continuous improvement of data collection.



**David Westwood**  
Director  
Aspinwall & Company Ltd.  
June 1998





Fred Dinning  
Corporate Environment Adviser  
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Appendices

In striving towards the aims of sustainable development, 'green accounting' is developing to enable economic issues to be balanced with environmental and social priorities. ScottishPower recognise the importance of this and via EPAC have appointed a member of our accounting staff to address this area. We are seeking to be able to track environmental expenditure, liabilities and costs and incorporate this data into our accounting processes. Appendix 3 lists areas of major capital expenditure in 1997-98; it is not exhaustive and does not include operating and revenue costs.

Appendix 3

1997-98 Capital Expenditure on environmental improvement		
	Capital spend (£'000s)	Project description
Southern Water	71,606	Bathing water quality improvement schemes
	44,326	Waste water treatment schemes to meet the requirements of the UWWTD
	27,970	Sewage sludge treatment and disposal schemes
	22,772	Improvements to Combined Sewer Overflows
Power Systems (Scotland and Manweb)	749	Substation oil bunding programme
	135	Fife refurbishment project environmental consultation and design
	89	Landscaping works at proposed Eccles substation site
	30	Inverclyde substation project environmental consultation and design
Generation Wholesale	143	Longannet oil interceptor and monitored outfall system
	1,010	Longannet waste oil system improvements
	1,207	Replacement and upgrading projects on the precipitator and Unit 3 at Cockenzie which have resulted in improved furnace combustion efficiency and reduced air emissions
	378	Cockenzie power station lighting improvements
	70	Longannet river waste segregation improvements
	70	Installation of oil detection equipment and oil spill response plan at Cruachan
Energy Supply	2,471	North Hampshire Hospital CHP installation
	992	CHP installation for a market gardener
	384	CHP installation for London Borough of Barnet

## Appendices

## Appendix 4

1997-98 External Sponsorship and Consultation		
Statutory consultees and other major environmental groups including:	Corporate membership	Organisations sponsored
→ Scottish Natural Heritage	→ Electricity Association	→ Consumer Association
→ English Nature	(our Executive Director chairs the Environmental Steering Group)	(Dry Gardens Sponsorship)
→ Historic Scotland		→ British Trust for Conservation Volunteers (BTCV) (Pond Week)
→ Welsh Historic Monuments	→ Confederation of British Industry (CBI)	→ Local schools
→ The Fisheries Board	→ Engineering Employers Federation Scotland	→ Scottish Further Education Unit
→ The Countryside Commission	→ Scotland Europa	→ Energy Action Scotland
→ The Countryside Council for Wales	→ ECOBA (promotes use of Pulverised Fuel Ash (PFA))	→ National Energy Action
→ Sussex Downs Conservation Board	→ Scottish Council for Development and Industry	→ Strathclyde Passenger Transport
→ National Trust	→ Quality Scotland Foundation	→ Wales Environment Centre
→ Scottish Environmental Protection Agency (SEPA)	→ British Energy Association	→ East of Scotland Water (Waste Minimisation Programme)
→ Environment Agency	→ The Environment Council	→ Electric Vehicle Association
→ Local authorities	→ Association of Electricity Producers	→ Amateur Swimming Association (ASA)
→ RSPB	→ Association for Conservation of Energy	→ Sustrans
→ National Monuments Record	→ Combined Heat & Power Association	→ Common Purpose
→ Department of the Environment, Transport and the Regions (DETR)	→ Energy Services Association	→ Portsmouth Environmental Business Club
→ World Wildlife Foundation	→ Electricity Association Services	
→ English Heritage	→ Energy Association Technology	
→ British Trust for Ornithology	→ Scottish Wildlife and Countryside Link	
→ Bat Conservation Trust	→ Water UK	
→ British Trust for Conservation Volunteers (BTCV)	→ Business in the Community	
→ Butterfly Society	→ Sussex Wildlife Trust	
→ Dragonfly Society	→ RSPB	
→ Forestry Commission	→ Scottish Environment Forum	
→ Game Conservancy		
→ Hampshire & Wight Trust for Maritime Archaeology		
→ Hampshire Ornithological Society		
→ High Weald AONB Office		
→ Kent Trust for Nature Conservation		
→ Marine Conservation Society		
→ South Downs Badger Group		
→ The Herpetological Conservation Trust		
→ Wildfowl and Wetlands Trust		
→ Centre for Environment, Fisheries and Aquaculture Science (CEFAS)		
→ British Waterways		



Chart 10.1

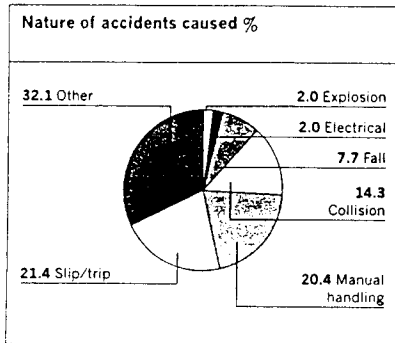
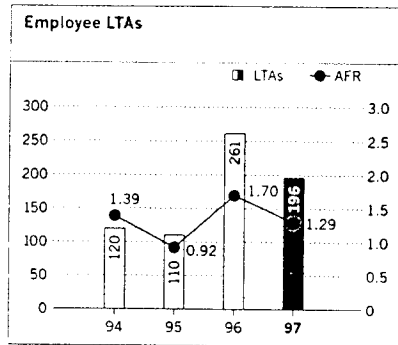


Chart 10.2



**Management structure**

ScottishPower's organisational structure for health and safety management aims to provide top level management leadership and commitment whilst devolving responsibility for safety into the businesses. Health and safety is the responsibility of all line managers who are supported by professional health and safety personnel. At group level there are two health and safety committees as illustrated below:

*Committee*

Health and Safety Policy Committee

*Members*

Chaired by Chief Executive with Company Executive and Managing Directors

*Role*

Review safety performance  
 Set strategy and policies

*Committee*

Policy Formulation Committee

*Members*

Nominated safety representative from each business

*Role*

Formulate group policies

**Performance Review**

**Safety performance data**

Chart 10.2 shows the LTAs data for ScottishPower employees. Manweb and Southern Water were incorporated into this data in 1996-97. The increase in the number of employees accounts for the increase in total number of LTAs over the previous two years. In 1997-98 we achieved the group reduction target of 25%. The accident frequency rate (AFR) is the number of LTAs per 100 employees; this also went down last year, by 24%, showing an overall improvement in the group's safety performance.

ScottishPower is to introduce a Contractor Passport Scheme over the next 12 to 18 months which will help ensure that all contractors employed

by ScottishPower have a consistent level of competence in terms of health and safety, and we will audit contractor performance against their safety management systems. In 1997-98, 15 contractor accidents were recorded and it is intended to improve reporting systems during the coming year.

Across the group we also carried out several safety training initiatives aimed at our contractors during 1997-98 including:

- induction safety training for over 3,000 contractors from Longannet power station;
- a safety conference sponsored by ScottishPower for all major suppliers and contractors;
- monitoring of contractor performance in Generation Wholesale;
- video highlighting dangers of OHLs and cables;
- safety leaflets.

**Safety awards**

Table 10.3 details several of ScottishPower's businesses and regions that have been successful in this year's Royal Society for the Prevention of Accidents (RoSPA) safety competition with 12 Gold, 3 Silver and 3 Bronze awards. The safety manager from Generation Wholesale business was selected as RoSPA Safety Professional of the Year in the Energy Sector.

In the Eagle Star Training Award the combined entry of the Generation Wholesale and Power Systems businesses was selected as this year's best entry.

Table 10.3

RoSPA awards			
	Gold	Silver	Bronze
Group	1		
Generation Wholesale	5		1
Power Systems	4	2	1
Technology	1		
ScottishTelecom	1		
Contracting Services		1	
Southern Water			1

# Appendices

## Appendix 1

1997-98 Record of Compliance with Regulations				
	No. of warnings	No. of notices	No. of prosecutions	Level of fines (£)
<b>Environmental Regulations</b>				
Generation Wholesale	none	none	none	-
Power Systems (Scotland and Manweb)	1 oil spillage onto agricultural land	none	none	-
Southern Water	none	none	3 polluting of water courses	9,500 (plus 1,840 costs)
Retail	none	none	none	-
Technology	none	none	none	-
Contracting Services	none	none	none	-
ScottishTelecom	none	none	none	-
Energy Supply	none	none	none	-
<b>Health and Safety Regulations</b>				
ScottishPower Group	none	none	none	-

## Appendix 2

1997-98 Record of Incidents and Complaints			
	No. of incidents	Description of incidents	No. of complaints
<b>Environmental Regulations</b>			
Generation Wholesale	13	Minor exceedance of limits for pH, suspended solids, SO <sub>2</sub> , oil and acid spills	69 concerning noise, dust, odour and traffic
Power Systems (Scotland and Manweb)	3	Oil spills	7 concerning noise and visual impact
Southern Water	165	Category 1* - incidents: 1 Category 2 - incidents: 5 Category 3 - incidents: 159	99** - foul flooding 50 - interruption to supply 189 - mains relining 52 - reinstatement of works 123 - sewage services 65 - sprinkler 90 - water quality/pressure
ScottishTelecom	none	-	70 concerning noise and traffic
Energy Supply	none	-	none
Technology	none	-	none
Contracting Services	none	-	none
Retail	none	-	2 concerning procedures
Health and Safety	196	Employee accidents resulting in lost time	-
*Southern Water classifies its incidents into three categories in line with the Environment Agency's pollution incident reporting system. Category 1 is for major incidents, Category 2 is for significant incidents and Category 3 is for minor incidents.			
**Southern Water complaints are written complaints to mid-March 1998 only.			

Safety is paramount in all of ScottishPower's activities. As a leading multi-utility in the UK, we must lead by example and not only aim to be the best in class in a business sense, but achieve and maintain the highest safety standards possible.

## Case study 10.1

**Awareness training in the hazards of electricity**

Power Systems in partnership with ScottishPower Learning have developed 'Hazard Alley'. This is a realistic set where school children can witness and learn about the hazards and risks involved with electricity.



Learning about safety.

This is the first year that we have included health and safety in this Report. Our aim has been to provide a summary of our management strategy and available performance data for last year. We aim to build on this for future years and may consider publishing a separate health and safety report.

**Issues briefing**

*In our business there are many different types of hazards which have the potential to result in accident, injury or damage to health. As well as the everyday risks associated with manual handling, driving or working in an office, there are specific hazards associated with our activities, in particular the electricity we generate, distribute and supply. Some of the other main health and safety issues for ScottishPower include:*

- risks associated with working with moving machinery;
- the use and handling of hazardous chemicals;
- entry into confined spaces;
- falls from heights;
- fire and explosion risks;
- viral and bacterial risks associated with the water industry;
- noise induced hearing loss;
- occupational asthma;
- stress.

*Safety at work is tightly regulated and it is in ScottishPower's interest to ensure the health and safety of its employees, contractors and the public in connection with our operations. Through promoting a safe working environment, providing health and safety training and encouraging our employees to take responsibility for the safety of themselves and others, we can reduce the number of incidents and improve the health and safety of our workforce.*

**Our strategy**

ScottishPower's vision is to promote a safety culture within all of its businesses. Our health and safety policy statement commits us to recognising health and safety as an integral part of all aspects of ScottishPower's undertakings. Meeting statutory obligations as a minimum standard, we require staff at every level to promote high standards in health and safety as a fundamental objective. The main principles of our health and safety policy are:

- using a systematic approach to identify hazards and allocating resources to control them;
- minimising, and where possible eliminating, health and safety risks;
- striving to ensure that ownership of safety is recognised by all staff;
- applying common standards of health and safety across the company and to our contractors;
- developing safety management systems and initiatives;
- benchmarking our safety performance against others in safety management;
- consulting employees and their representatives on health and safety matters;
- providing and promoting occupational health advice and facilities.

Performance objectives and quantitative targets for health and safety are set annually at group level, and devolved and implemented within the businesses. Our key objective for 1998-99 is to further reduce our lost time accidents (LTAs) by 25% and eliminate all major injuries. Safety will be promoted through implementing a number of initiatives, including:

- separate initiatives from each business;
- a manual handling campaign;
- operational safety audits;
- the introduction of a Contractor Passport Scheme;
- a compliance review of our gas business licensing conditions;
- ensuring our plant and equipment is inaccessible to the public for their safety.

10

Health and Safety

Table 10.1

<b>Safety training</b>	
This table summarises the safety training programme for ScottishPower employees during 1997-98. Manual handling training is being added to this programme for 1998-99. Display Screen Equipment training has been carried out across the group with around 220 employees trained in Power Systems.	
Type of training	Number of staff
Occupational safety and health (NEBOSH) certificate level	41
Managing safety (IOSH) certificate level	172
Supervising officer (safety of contractors) training	108
Safety representative training	59
Defensive driving	985

Table 10.2

<b>Health and Safety</b>		
Targets 97-98	Progress against 97-98 targets	Targets 98-99
25% reduction in lost time accidents from 1996-97 baseline	Reduction target achieved. LTA target of 196 accidents within the group met	To reduce ScottishPower employee lost time accidents by a further 25% to less than 147, concentrating on reducing serious accidents and injuries in areas where hazards have been identified
Measure the safety culture across the group	Achieved through Chief Executive's Shield Competition with audits in selected area of each business. The award was won by Generation Wholesale	Continue to run the Chief Executive's Shield Competition
Involve the workforce in safety initiatives and increase the number of safety representatives	59 new safety representatives underwent targeted health and safety training	Enhance the role of safety representatives to include involvement with accident investigation, development of initiatives and hazard spotting
To pass the ownership of safety initiatives to employees	In Generation Wholesale the Divisional Health Safety and Environment Committee (DHSEC) have ownership of safety initiatives and responsibility for implementation lies with the safety representatives	
To raise safety awareness of line managers	Safety awareness 'road show' developed by Southern Water which visited all major parts of the business	
To extend the measurement of safety beyond accident statistics	Power Systems have developed and implemented a series of key safety performance indicators	To consider the introduction of key safety performance indicators into other businesses
		To reduce incidents where the public have gained access to plant or equipment to as low a level as possible and to have no members of the public injured by our plant and equipment
		To ensure competency of contractors by auditing compliance with their safety management systems and to introduce Contractor Passport Scheme by end 1999
		To introduce a central recording system to monitor and review accidents and incidents involving our contractors

# Transport

Promote the efficient use of resources, energy and fuel throughout the group's operations.

### Issues briefing

*The social and environmental issues surrounding road transport are a major challenge to achieving sustainability. The main issues to be tackled are emissions to air, use of resources and land management.*

*The combustion of petrol and diesel in vehicle engines produces exhaust emissions including oxides of nitrogen, carbon monoxide and in the case of diesel, particulate matter. These emissions can have a significant impact on local air quality affecting health and the environment. All forms of combustion engine produce carbon dioxide, the main greenhouse gas, and therefore contribute to global climate change. As more land has been given over to extensive road networks, the number of cars and heavy vehicles using our roads has increased, bringing with it more congestion, noise and disturbance to towns, cities and rural areas.*

*The Government is currently preparing an Integrated Transport Policy, which will aim to define a more sustainable transport strategy for the UK.*

### Our strategy

A good transport network is essential to ScottishPower's operations. To enable us to carry out our role as a multi-utility we rely on road transport for the development and maintenance of our plant and equipment and for providing the levels of service required by our customers. In certain circumstances, for example extreme weather conditions, our transport capability is essential to maintaining and restoring supplies. Power Systems and Southern Water businesses have the largest vehicle fleets within the group.

Transport issues are common throughout the group and we have therefore agreed a group-wide policy and progress is reported to EPAC.

Our transport capability is essential for maintaining and restoring supplies in extreme weather conditions.



Case study 9.1

#### Wind power charged electric vehicles

ScottishPower's wind farm contractor in Eire is investigating the possibility of using electric vehicles charged up by a wind turbine in the office grounds.

Case study 9.2

#### Energy Supply sponsors Strathclyde Electric Bus Project

Energy Supply sponsored the supply connection for Strathclyde Passenger Transport's Electric Bus project. Two electric buses with no direct emissions to air are now operating in Glasgow city centre in the pilot phase of this study.

We will be strengthening our data collection systems for transport use and ensuring that optimum performance is achieved from the existing fleet through regular maintenance and driver training. In future, we will be seeking to make the fleet progressively less damaging by making vehicle purchase decisions which give weight to fuel economy and vehicle recyclability.

**Performance review**

Tables 9.2 and 9.3 show the number of vehicles within ScottishPower's fleet and the volume of fuel consumed for key businesses. Through strengthening our data collection systems we have been able to report fuel consumption more widely in 1997-98 than in the previous year. Therefore, although the number of vehicles in the fleet has reduced, the total fuel consumption reported has increased.

We are continuing to provide defensive driving training to targeted company car drivers, which includes instruction in fuel economy techniques. In 1997-98, over 980 staff in Generation Wholesale and Power Systems were trained.

Table 9.1

Transport		
Targets 97-98	Progress against 97-98 targets	Targets 98-99
<b>Group</b>		
		10% reduction in fuel consumption by 2002-03
<b>Generation Wholesale</b>		
Extend safe driving to the rest of the business	83 members of staff completed safe driver training course	50% of staff who drive on behalf of the company to complete safe driver training course by March 1999
<b>Southern Water</b>		
		Complete 'in line filters' study for improved fuel economy and emissions
		Investigate and report on the advantages and disadvantages of alternative fuels such as Compressed Natural Gas (CNG) and Liquefied Petroleum Gas (LPG)
<b>Power Systems (Scotland and Manweb)</b>		
As part of the Defensive Driving Campaign achieve a further 5% reduction on fleet and business car fuel consumption and a further 10% reduction in minor accident damage	5% reduction on fleet and business car fuel consumption achieved in the Manweb region  10% reduction in minor accident damage achieved in three businesses within Power Systems	5% reduction on fleet and business car consumption  5% reduction in minor accident damage across all businesses within Power Systems
<b>ScottishTelecom</b>		
		Establish an inventory of operational and business vehicles across all ScottishTelecom businesses

Table 9.2

ScottishPower vehicle fleet and company cars			
	Number of cars	Number of vans	Number of trucks/HGVs
95-96	2,500	3,246	579
96-97	2,482	3,060	559
97-98	2,249	2,809	413

Table 9.3

ScottishPower vehicle fleet fuel consumption for main group fleets*			
	Volume of unleaded petrol used ('000 litres)	Volume of leaded petrol used ('000 litres)	Volume of diesel used ('000 litres)
96-97	627	177	4,750
97-98	1,856	36	5,450

\*Includes data from Generation Wholesale, Power Systems, Retail, Southern Water, Contracting Services in Scotland and ScottishTelecom.

Power Systems have a total land holding of 694 hectares although their transmission and distribution networks potentially impact a much larger area. When works are carried out, it is routine procedure to prepare method statements covering safety and environmental risks, noise surveys and visual and landscape assessments. In sensitive cases, full environmental impact assessments are carried out, for example, during the upgrade and refurbishment of the 132 kV transmission network in Fife. New, more stringent procedures and guidelines for the routing, construction and maintenance of transmission and distribution networks are currently under development.

Southern Water owns around 3,725 hectares of land incorporating several heritage sites and areas of conservation interest. Five year habitat and conservation management plans are currently under development for our major projects. Preliminary environmental appraisals are carried out for most

Table 8.1

Power Systems (Scotland and Manweb) transformer and switchgear oil containment data			
	Total volume of oil held (litres)	Volume of oil lost (litres)	Total number of transformers banded to date
95-96	44,776,000	13,650	76
96-97	44,745,000	5,925	126
97-98	44,800,000	7,723	181

Case study 8.1

**Valleyfield and Musselburgh ash lagoons**  
Ash waste from Longannet and Cockenzie power stations which is not sold for re-use is pumped to engineered lagoons at Valleyfield and Musselburgh. When the lagoon is filled it is capped, landscaped and planted, reclaiming often previously derelict foreshore areas. Both these areas are now well established and provide important wildlife habitats and recreational facilities for local communities.



Case study 8.2

**Power System's Merseyside wild flower meadow**  
The old power station site at Lister Drive, Liverpool in the Manweb region will this year be transformed into a wild flower meadow. This spring the area has been sown with a wildflower mix including camions, oxeys daisies and poppies.



Case study 8.3

**Southern Water build an underground waste water treatment works**  
The Broomfield Bank waste water treatment works is being built entirely underground to protect this area of outstanding natural beauty. In April 1997, a giant cavern was excavated which will house the plant. A team of archaeologists were on site to monitor the work. The scheme, which is due for completion at the end of 1999, will serve the populations of Dover and Folkestone and will ensure better bathing water quality and reduced flooding in the area.

Case study 8.4

**Multi-utility installation**  
Power Systems provides a multi-utility installation service for the Dunfermline East Expansion project in Fife. Using a common utilities trench over 27 km of underground electric power cable, 5 km of gas pipeline and 24 km of telecommunications ducting were installed by a single contractor. This efficient approach, using one contractor to install all three services in a single trench, has the benefit of reducing the disruption caused by excavations and site traffic.

capital schemes and will be extended to cover all schemes, and full environmental impact assessments are undertaken where required.

**Visual impacts**

Power Systems are developing a formal policy on which proposed new overhead lines (OHL) should be undergrounded. Planning consent for the 275 kV OHL required for the Interconnector to Northern Ireland was granted for a wholly overhead route in South Ayrshire. Following a detailed public inquiry the Secretary of State for Scotland found no reason to underground for environmental or other reasons. The business is also in a process of preparing a routing methodology and codes of practice for OHL construction works and has completed a sponsored tower design study for 132 kV OHL to be ready for the next millennium.

ScottishTelecom use existing structures wherever possible to minimise visual intrusion from additional masts.

**Streetworks and noise**

Power Systems have increased the use of trenchless cabling techniques to avoid disruption to sensitive sites and main roads. This year 49.5 km of cabling was installed by this method, although this remains a small proportion of the total.

ScottishTelecom minimise the need for streetworks by using radio based connections and installing cables under footways and grass verges where possible. All work carried out by contractors is supervised by ScottishTelecom personnel. A customer and general public complaints system is in place and last year 70 complaints were received relating to environmental issues. Our target is to investigate and resolve all complaints within 20 working days which is a standard set by OFTEL and published by the Telecommunications Industry Forum.

Table 8.2

For most of our businesses this is the first year that we have set targets in respect to land stewardship issues		
Targets 97-98	Progress against 97-98 targets	Targets 98-99
<b>Generation Wholesale</b>		
		Work closely with all interested parties to enhance habitats and heritage including: → management of public access to Valleyfield → the development of a walkway at Lanark → publication of a habitats and heritage brochure
		Donate the maximum allowable contribution with respect to the landfill tax to the Environmental Trusts within our regions, representing a total contribution of approximately £200,000, with an additional £20,000 funding from ScottishPower
<b>Southern Water</b>		
		Develop and implement habitat and conservation management plans for major capital projects
		Improve and extend preliminary environmental appraisal procedure to cover all schemes
<b>Power Systems (Scotland and Manweb)</b>		
Replace two fluid-filled underground cable circuits within the Manweb area	Two 25 kV fluid-filled cable circuits totalling 7 km replaced at British Rail, Crewe	
Conduct the remaining 10% of environmental risk assessment of grid and primary substations in Power Systems. Use risk assessment to develop a prioritised bunding programme for high risk transformers	Completed	Use data to prioritise the bunding programme
Prepare policy on undergrounding of OHLs	Draft discussion document is available for 132 kV and higher voltage lines	Develop policy on undergrounding of OHLs to incorporate lower voltage lines
Determine overhead line routing methodology and significance criteria appropriate for OHL construction	Six draft methodology documents have been produced by consultants	Complete OHL routing guidelines by December 1998
Produce a generic code of practice for OHL construction	First draft has been prepared by consultants	Complete generic code of practice for OHL construction by March 1999
Develop a visual enhancement programme for a prominent urban substation within Scotland and Manweb area, similar to Dewar Place upgrade in Edinburgh	Proposals for Holmquarry Road substation in Kilmarnock and Harrington Street substation in Liverpool have been developed	Implement substation visual enhancing programmes
Complete stage II of the Glasgow School of Art study on tower and pylon design by late 1997	Completed in October 1997	Present tower design study to Royal Fine Arts Commission. Explore commercial possibilities of study design
Establish a register of competent contractors. Identify old compressors and road drills for replacement	Procurement procedure in process of development. Hydraulic power packs have replaced old compressors and hydraulic road drills are now in use	Complete register of competent contractors
<b>ScottishTelecom</b>		
		Implement customer complaints software across all business areas
		Develop links with Scottish Natural Heritage to assist in minimising visual impacts



Wastes

→ Generation Wholesale are implementing waste management initiatives to promote the segregation and recycling of waste oils, wood, scrap metal and cardboard at their operational sites. There has been significant investment in the waste management area at Longannet power station and a full time member of staff has been appointed to segregate wastes to optimise re-use and recycling.

→ Contracting Services have already established a successful office paper recycling scheme for the Cathcart Business Park. They are now setting targets to transport in paper waste from remote sites where independent recycling schemes are not economical.

→ In response to the proposed EU Directive on Electronic and Electrical Equipment Waste, an EPAC sub-group has been formed, headed by ScottishTelecom, to address the issues of end-of-life electronic equipment disposal. A take-back scheme for redundant mobile phones is proposed.

→ Southern Water has set up a paper and card recycling scheme at their Sussex County Office at Falmer which will be expanded to their other offices. Previously, 64% of waste going to landfill from Falmer consisted of paper and card.

→ Retail continues to operate a scheme for recovering appliances from customers for re-use and recycling. During 1997-98, a total of 107,857 appliances were recovered which, if suitable, are reconditioned or used for parts. The CFCs are recovered from any scrapped appliances.

Table 7.3

Wastes		
Targets 97-98	Progress against 97-98 targets	Targets 98-99
<b>Generation Wholesale</b>		
Reduce waste by a further 10%	The 10% target has been exceeded	Reduce waste generated, excluding ash, by a further 5%
Increase ash sales by a further 10%	Overall a 9% increase in ash sales has been achieved, with a 13% increase in PFA sales and 3% increase in sale of FBA	Increase ash sales by a further 10% through increased business using delivery of ash by rail
<b>Southern Water</b>		
Phase out liquid disposal, untreated sewage sludge production and routine disposal by 2000	On target	Phase out liquid disposal, untreated sewage sludge production and routine landfill disposal by 2000
Establish quality standard for sludge production	Quality standards in place and incorporated into Southern Water's business targets	
Phase out sea disposal of sewage sludge by the end of 1998	On target. Construction of Millbrook Sludge Treatment Centre, which will treat sludge from the Southampton area, is well under way	Phase out sea disposal of sewage sludge by the end of 1998 Commission Millbrook Sludge Treatment Centre by end of November 1998
		Increase sales income from sewage sludge by 12.5%
		Initiate paper recycling schemes at major offices
<b>Power Systems (Scotland and Manweb)</b>		
Reduce waste to landfill by 10%	83,500 tonnes of waste were generated in the seven regions (excluding major projects) compared to 68,100 tonnes in Scotland only in 1996-97. The 1997-98 figure will be used as the baseline for future years	Reduce waste to landfill from the regions by 10% Establish accurate figures for major projects by March 1999
Introduce a spoil recycling plant within the Forth region	The project was due to start at the beginning of May 1998. It has been slightly delayed due to planning permission requirements	Monitor efficiency of spoil recycle plant and report progress by December 1999
Use trenchless technology to install 40 km of cable	49.5 km of cable installed using trenchless technology	
<b>Retail</b>		
From 1998 recover and recycle packaging waste to satisfy the Producer Responsibility Obligations (Packaging Waste) Regulations, 1997	111 tonnes of paper and card and 25 tonnes of plastic were recycled during 1997	Recover and recycle packaging waste to satisfy the Producer Responsibility Obligations (Packaging Waste) Regulations 1997
Continue to monitor companies which recover CFCs from old appliances	Two visits undertaken during 1997-98	Continue to monitor companies which recover CFCs from old appliances
<b>Contracting Services</b>		
Extend Cathcart recycling scheme to recycle 50% of waste paper at Contracting Services HQ	The start of this scheme was delayed until December 1997	Recycle 50% of paper waste generated at head office in Hamilton
<b>ScottishTelecom</b>		
Establish waste hierarchy and centralised record keeping system	System in place	Establish systems for reporting significant volumes of waste
Provide waste management training to staff	500 of 1,400 staff have received environmental training	
		Establish procedures through the sustainability project for the recycling of end-of-life mobile telephone handsets by September 1998

## Conservation and Land Management

### Issues briefing

*Conservation and land management are important issues for a multi-utility, not only on the sites we own such as power stations and water treatment works, but also on the land crossed by our large transmission and distribution networks for electricity, water and telecommunications.*

*Conservation involves protecting the diverse range of species found in the UK. Fundamental to this biodiversity is the preservation of wildlife habitats. Conservation of our heritage sites is also important to our historical and cultural identity.*

*Some of the most important land management issues are concerned with the risk of contamination from oil leakage, visual intrusion from plant, transmission and distribution networks, and noise and disruption from streetworks.*

### Our strategy

Our strategy for conservation and land management is to minimise all possible adverse effects. We strive to be a good and trusted neighbour and to be seen to demonstrate environmental care towards the communities in which we operate. We do this by using a range of management controls including environmental assessments, adhering to relevant procedures and guidelines on sensitive planning and by enforcing our own codes of practice.

In the communities in which we operate, we aim to work in close partnership with wildlife and conservation organisations to protect species, their habitats and heritage sites.

### Performance review

#### Oil contamination

The main potential sources of oil leakage are fluid-filled cables, transformers and switchgear.

ScottishPower in seeking to be a good and trusted neighbour will establish a responsible interchange of views and ideas in the communities in which we operate.

We recognise the value to society of both cultural heritage and biological diversity and will strive, within the scope of our operations, to secure their preservation.

The proportion of fluid-filled cables in the total network is small and we are reducing this further through decommissioning work. Chart 8.1 shows an increase in the loss of fluid which is due to major faults involving high voltage cables at Inverkip and Kaimes. Both these faults have been fully repaired.

We have now completed the risk assessment of our larger substations (grid and primary) and have prioritised our oil bunding programme accordingly. This ongoing programme will bund all high risk grid and primary transformer substation sites identified. Table 8.1 opposite shows our progress to date. During 1997-98 over £749,000 was invested in oil bunding and separation schemes in Scotland and in the Manweb region.

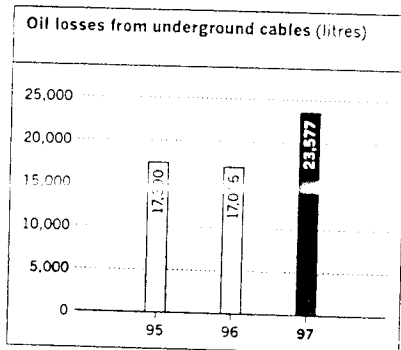
The risk of polychlorinated biphenyl (PCB) contaminated transformer and switchgear oil is another area receiving attention. We monitor PCB levels using an in-house PCB oil analysis service provided by the Technology business and replace oil found with concentrations above 50 parts per million (ppm). Oil found to contain PCB above this level is removed by specialist contractors for incineration or reclamation as appropriate. By the end of 1997-98 all ground mounted Power Systems transformers had been tested for PCBs. Over 90 transformers were found to contain oil with PCB levels above 50 ppm these are being dealt with according to an approved methodology.

Contracting Services via the Technology business also provide our customers with a PCB testing service for transformer oil. During 1997-98, 168 samples were analysed and 5 transformers found to contain PCB levels above 50 ppm.

#### Species, habitats and heritage

Generation Wholesale has a significant land holding at its power stations and hydro-schemes. Several of our power station sites are important habitats for wildlife, birds in particular. Near our major coal-fired stations we are creating important new wildlife habitats through the development of ash lagoons.

Chart 8.1



Promote waste minimisation, encouraging the beneficial re-use or recycling and where these are not practicable ensure disposal in an environmentally responsible manner in accordance with our duty of care obligations.

### Issues briefing

Wastes, by definition, are lost resources. Awareness of the amount of waste produced by industry and wider society is increasing alongside better understanding of the environmental risks from waste disposal.

The dominant disposal method, landfill, creates areas of contaminated land which can pose a risk to ground water resources in certain circumstances. Incineration, with energy recovery, is an alternative but local communities are often concerned about the possibility of hazardous emissions. Recycling and re-use are widely seen as preferable to disposal, although the energy used in collection and reprocessing should be taken into account.

A general hierarchy can be stated, but it should be recognised that the factors influencing the best route for each waste stream can be complex:

- minimisation;
- re-use;
- recycling;
- composting;
- incineration with energy recovery;
- incineration;
- landfill.

Different types of waste are generated by each of ScottishPower's businesses.

Some of the most significant of these are:

- power station ash from Generation Wholesale;
- excess spoil from excavations in connection with electricity, telecommunication and water activities;
- sewage sludge from Southern Water's operations;
- waste packaging, primarily from Retail.

### Our strategy

Our strategy for waste management is to identify the wastes generated in each business and assess the options for effective management of these wastes. Where feasible we seek to move up the waste hierarchy through reducing the volume of our waste generated or diverting wastes from landfill to more sustainable disposal routes, exploiting

re-use and recycling options where economical and practical.

Southern Water's sewage sludge strategy is to invest in new regional sewage sludge treatment centres to produce de-watered cake or dried products which provide valuable agricultural fertilisers and soil conditioners where the characteristics of the sludge and soil are appropriate.

In order to meet our requirements under the Producer Responsibility Obligations (Packaging Waste) Regulations 1997 we have opted to take the individual route. Our Retail business is coordinating our approach across the group via the Environmental Policy Advisory Committee (EPAC).

As a multi-utility we are also exploring potential synergies between different parts of our business. For example, we are investigating the feasibility of using sewage sludge as an energy source.

### Performance review

#### Power station ash

Pulverised fuel ash (PFA) and furnace bottom ash (FBA) wastes generated from our power stations are either sold where possible to the construction industry for re-use as a fill or raw material, or pumped to engineered lagoons nearby. Once filled these lagoons are landscaped and managed to provide important habitats for birds and other wildlife. In this way we have reclaimed 134 hectares of derelict foreshore area at Musselburgh near Cockenzie power station and created

Table 7.1

Southern Water sewage sludge disposal (tonnes dry solids)					
	Farmland	Landfill	Incineration	Marine	Total
96-97	43,140	9,128	4,726	8,242	65,236
97-98	46,225	6,166	5,425	13,761	71,577

a nature reserve at Valleyfield near Longannet. Generation Wholesale's ash sales business is growing year-on-year as shown in chart 7.1. In 1997-98 a total of 221,750 tonnes was sold for re-use, an increase of 9% on the previous year. Ultimately our aim is to market all ash generated. Table 7.2 shows an increase in ash generated since 1996-97. This is due to more accurate recording of ash quantities, since the introduction of the landfill tax in October 1996, and it is now clear that our previous estimates were too low. The 1997-98 figure will be used as the baseline for comparing future trends.

#### Sewage sludge

Forthcoming EU waste water treatment legislation will result in increased sewage sludge arising due to enhanced waste water treatment facilities in coastal areas. The disposal of sewage sludge to sea will be phased out by the end of 1998. By investing in new regional sewage sludge treatment centres Southern Water plan to treat all sewage sludge generated and phase out routine landfill disposal by 2000. These plants produce de-watered cake or dried products which are suitable for use as agricultural fertilisers or soil conditioners. We also propose to install drying plants to process up to 50% of sludge. Nearly £28 million was invested in this major improvement programme during 1997-98.

Table 7.1 shows that during 1997-98 we have increased the amount of sludge disposed to agricultural land whilst reducing the amount going to landfill. However, the total amount of sludge

generated has also increased from last year with more marine disposal, mainly due to the addition of Pennington WWTW.

**Excavation spoil waste**

Spoil waste is generated from excavations during underground cable laying operations. Much of the spoil removed cannot be replaced and currently goes to landfill where it may be used in the construction of the landfill. A spoil recycling project is planned by Power Systems within Forth region which was due to start in May 1998. If successful, we will consider extending spoil recycling to other Power Systems regions in the future. Power Systems handled approximately 83,500 tonnes of spoil waste during 1997-98 compared to 68,100 tonnes for Scotland only in the previous year. We will use 1997-98 as our baseline figure for future reporting.

Trenchless cabling technologies have been introduced which enable cables to be laid with minimal disruption and waste generation. These operations have increased with 49.5 km of cabling installed using trenchless methods in 1997-98 compared to 40.0 km in 1996-97. This represents 2% of our total cabling activity. We use trenchless methods when installing new cabling as long as the geology and ground conditions are suitable.

ScottishTelecom also generates spoil waste during fibre optic cable laying operations. During 1997-98, 656 km of cable was laid generating 5,667 tonnes of excess spoil waste which was landfilled.

**Packaging waste**

As a group we are working independently to meet our requirements under the Producer Responsibility Obligations (Packaging Waste) Regulations 1997. The amount of packaging waste generated by the ScottishPower group in 1997-98 was 1,748 tonnes of paper, 577 tonnes of plastic and 173 tonnes of wood. Our Retail business has the largest legal obligation within the group for the recovery and recycling of packaging waste and is setting up a scheme for

recovering waste packaging from customers and recycling paper, card and plastics. During 1997, the Retail business recycled 111 tonnes of paper and card and 25 tonnes of plastics.

**Other wastes**

In addition to these waste streams each business of ScottishPower generates many other types of wastes which need to be managed. Below are several examples of initiatives being implemented to reduce volumes of waste going to landfill:

→ Power Systems operate a switchgear and transformer oil recycling scheme with 965 tonnes of oil recycled during 1997-98. There were 28,375 litres of resin oil waste generated over this period. This is a tar substance used in cable joints and cable end boxes on transformers and is gradually being replaced by epoxy resins and mechanical joints where possible.

Obsolescent mobile phones present a recycling opportunity.



Case study 7.1

**ScottishTelecom's mobile phone recycling scheme**

ScottishTelecom is set to establish a take-back scheme to recycle redundant mobile telephone handsets by the end of 1998. The disposal of end-of-life electronic equipment is becoming an issue of increasing concern and if successful this project will be extended to other electronic equipment wastes.

Chart 7.1

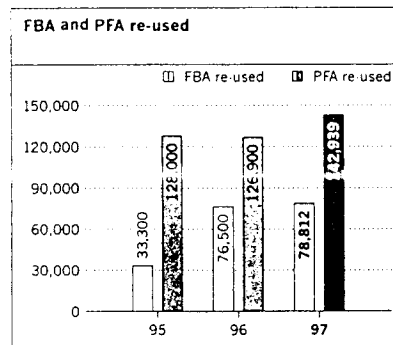


Table 7.2

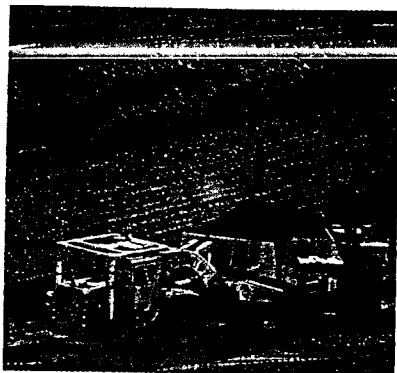
Generation Wholesale PFA and FBA (tonnes)			
	95-96	96-97	97-98
FBA generated	91,000	131,860	91,023
FBA re-used	33,300	76,500	78,812
PFA generated	505,000	603,240	818,705
PFA re-used	128,000	126,900	142,939

Emissions to Air

Case study 6.1

**Gas reburn at Longannet**

ScottishPower has developed a gas reburn process at Longannet power station to reduce emissions of atmospheric pollutants, in particular oxides of nitrogen. Used in conjunction with low NOx burners, the process can achieve a reduction in emissions of NOx of up to 80%.



Euclid vehicle moves coal from Longannet's reserve coal stocks.

Table 6.1

Emissions to air		
Targets 97-98	Progress against 97-98 targets	Targets 98-99
<b>Generation Wholesale</b>		
Evaluate the NOx reduction capability of the gas reburn at Longannet using trial results	Initial test results on gas reburn are very encouraging. Trials are ongoing in preparation for report submission to THERMIE in October 1998	Complete the gas reburn trials by October 1998 and report to THERMIE
Assess environmental improvement at Longannet as part of the Integrated Pollution Control (IPC) Consent review	The four-yearly review of the authorisation is under way with the Scottish Environment Protection Agency (SEPA)	Establish a programme for FGD fitment and gas reburn in line with outcome of the IPC review
Establish a programme for FGD fitment in line with the National Plan requirements	Continued liaison with SEPA to establish a programme of FGD fitment in line with National Plan requirements. Details yet to be finalised	As above
Optimise the performance of the low NOx burners at Cockerzie prior to fitment on further units	Progression during 1997-98 with the implementation of various modifications. Initial tests have shown a 25% reduction in NOx	Optimise the performance of low NOx burners at Cockerzie to meet guarantee criteria for NOx reduction and carbon in ash levels prior to fitment to further units  Improve unit efficiency at Cockerzie by improving furnace combustion conditions by: → Improving mill performance and reducing carbon in ash → Improving burner flame shape and intensity → Eliminating air ingress where possible
Monitor performance of the new fabric filter equipment installed for flue gas cleaning at Methil	Fabric filters continue to achieve a high level of performance, keeping particulate emissions well within IPC limits, facilitating a move from monthly to quarterly emissions testing	
		Zero complaints relating to emission to air from the public for IPC sites
<b>Power Systems (Scotland and Manweb)</b>		
Closely monitor quantities of SF <sub>6</sub> in use	Monitored ongoing purchase and replacement	Closely monitor quantities of SF <sub>6</sub> in use
Minimise SF <sub>6</sub> emissions by introducing recycling as an inherent part of the handling procedure	Systems instigated on gas insulated switchgear (GIS) currently installed	Produce a code of practice on SF <sub>6</sub>  Instigate a data collection system to produce annual returns on SF <sub>6</sub> installed, gas purchased and losses
Continue to be one of the leading utilities involved with the Cigré (an international high voltage research organisation) Task Force on SF <sub>6</sub>	Recycling guide issued. Work commenced on Global SF <sub>6</sub> balance and on possible future gas mixtures	Power Systems to take the lead role in drafting the UK Electricity Supply Industry (ESI) policy on SF <sub>6</sub> usage

Emissions to Air

We have installed low NOx burners at our largest power station, Longannet, and are trialling gas reburn equipment on one of Longannet's four units. At Longannet the low NOx burners have reduced NOx emissions by 40% and the gas reburn aims to achieve a further reduction.

Our other major power station, Cockenzie, has low NOx burners on one of its four units. We are working with contractors to optimise performance towards the design specification of a 50% reduction.

*Power Systems high voltage equipment emissions*

Sulphur Hexafluoride (SF<sub>6</sub>) is used as an electrical insulant in high voltage equipment. The units are sealed and leaks should not occur. However, some gas can escape during servicing or through equipment failure and we have an internal recording system to establish the quantity of releases. During 1997-98, we estimate that 0.68 tonnes of SF<sub>6</sub> was released from a total of approximately 23 tonnes in use. SF<sub>6</sub> has a global warming potential (GWP) of 16,300 within a 20 year time horizon compared to CO<sub>2</sub> which has a value of one. The GWP of the SF<sub>6</sub> released is equivalent to 11,084 tonnes of CO<sub>2</sub> (approximately 0.1% of our total generation of CO<sub>2</sub> emissions).

We are taking the lead role in developing a Code of Practice for the management of SF<sub>6</sub> in conjunction with the Electricity Association.

*Southern Water WWTWs emissions*

Odour from waste water treatment works can cause a nuisance to communities in close proximity to the works. Where there is a potential for odour nuisance, we install appropriate control systems to reduce or eliminate the problem. A variety of technologies have been developed including state-of-the-art contained sites, such as Shoreham, which has airlock access for lorries and skips.

Chart 6.2

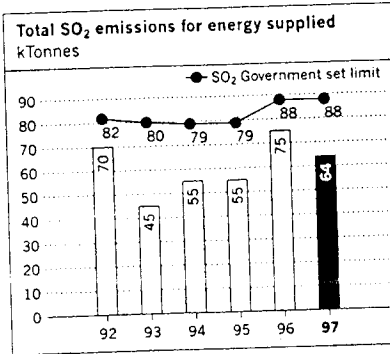
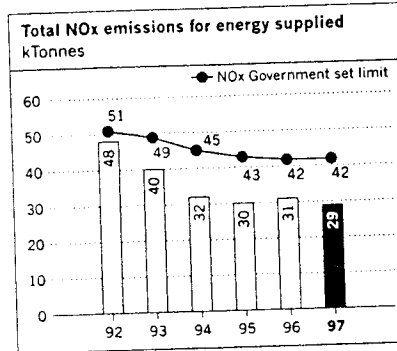


Chart 6.3



Methane produced during sludge digestion is a valuable source of exploitable energy. All 16 of the new sludge treatment centres to be constructed under Southern Water's sludge strategy will have digesters. At the four largest plants the methane will be used in gas turbines to provide power for sludge driers and at two other plants the methane will be used in CHP schemes. At the remaining schemes methane is used to power boilers to heat the digesters with the remaining gas flared off. Approximately 46% of the methane gas generated in the business will be totally utilised and of the remainder, 50% will be used to power boilers and the excess flared off.

Chart 6.4

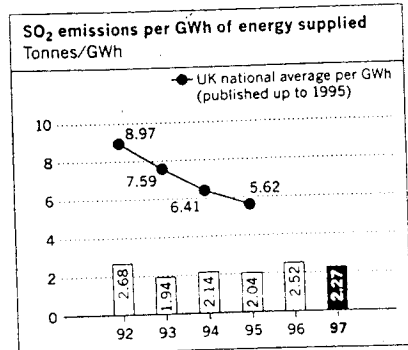


Chart 6.5

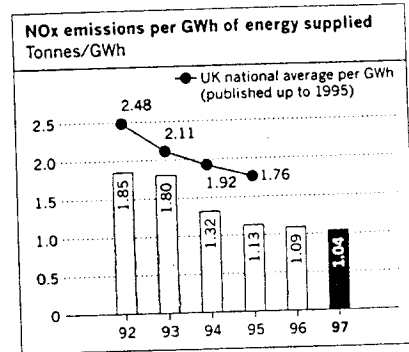
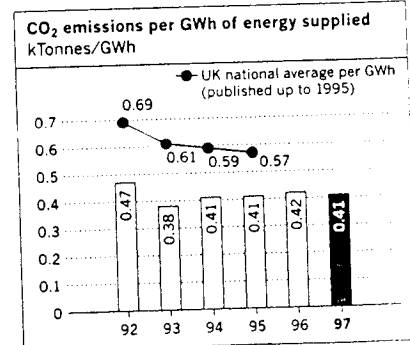


Chart 6.6



UK average emissions data for 1996 and 1997 not yet published by the Department of Environment, Transport and the Regions.

As shown in table 5.2, of the 75 bathing waters in the Southern Water region 67 were compliant, including 31 that achieved the higher 'Guideline' standard, and eight failed to meet the required standard.

Southern Water's £1 billion environmental improvement programme made unprecedented progress during 1997-98 and will accelerate further next year. This is one of the largest environmental improvement programmes ever undertaken in the South East and is producing the cleanest bathing waters we have seen for decades.

**Generation Wholesale power station discharges**

In the power generation plants, water is used for cooling and steam generation. This is taken from rivers or estuaries under abstraction licences and returned under discharge consents with which we achieved full compliance in 1997-98. Chemicals are added to inhibit rust and prevent growth of mussels and other organisms. The marginal increases in water temperature are carefully monitored and consequently the environmental impact of these discharges is small.

Table 5.3

Discharges to water		
Targets 97-98	Progress against 97-98 targets	Targets 98-99
<b>Southern Water</b>		Achieve greater than 99% waste water treatment works compliance
<b>Generation Wholesale</b>		Undertake a full drainage survey and risk assessment at Longannet

Chart 5.1

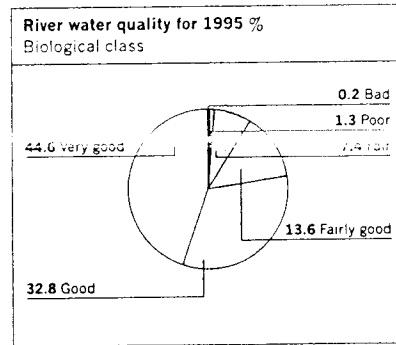
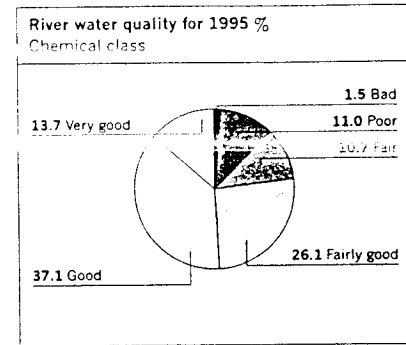
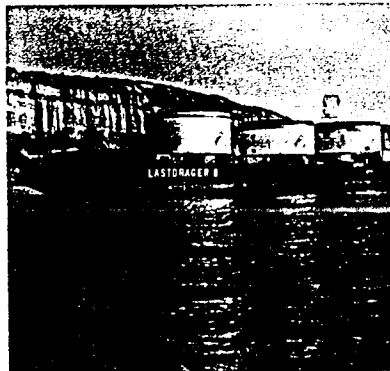


Chart 5.2



River quality based on published information from the Environment Agency.

Giant tunnelling machine used to drill the mile long underground stormwater tunnel at Hastings arrives in sections at Hastings beach.



**Case study 5.1**

**Eastbourne welcomes Operation Seaclean**  
 As part of its Operation Seaclean to enhance the marine environment, Southern Water has invested £42 million at Eastbourne waste water treatment works which uses state-of-the-art technology to treat waste water before recycling back to sea. As well as the environmental benefits, the cleaner seas will also enhance tourism in the region.

# 6

## Emissions to Air

Require businesses to establish relevant objectives supported by quantifiable targets which relate to their reduction of environmental impact, sustainability, risk management and compliance.

Maintain a competence in environmental science in order to keep abreast of development in the understanding of relevant issues, support Research and Development as appropriate, with the overall objective of continuous environmental improvements.

### Issues briefing

The burning of fossil fuels to generate power emits carbon dioxide (CO<sub>2</sub>), sulphur dioxide (SO<sub>2</sub>), oxides of nitrogen (NO<sub>x</sub>) and particulate matter (dust). Of these, CO<sub>2</sub> is the principal greenhouse gas associated with anthropogenic climate change. Although there is now widespread scientific consensus that global climate change is occurring, the resulting effects on climate and ecosystems are difficult to predict.

Other greenhouse gases relevant to ScottishPower include methane emissions from the waste water treatment process and sulphur hexafluoride (SF<sub>6</sub>) contained in electrical switchgear.

SO<sub>2</sub> and NO<sub>x</sub> also contribute to acid rain which causes damage to vulnerable freshwater systems, forestry and buildings. Local air quality may also be affected by emissions of SO<sub>2</sub>, NO<sub>x</sub> and particulates.

### Our strategy

Global climate change

Our long term strategy is to proactively contribute to the Government programme to limit emissions of CO<sub>2</sub> and other greenhouse gases in line with national and international agreements.

While the switch from coal to gas in much of the UK electricity generation mix has delivered a short term reduction in CO<sub>2</sub> emissions for the nation, we believe that a balanced and secure mix of fuel sources should also be maintained. Coal-fired power stations which are in the middle of their effective life can, with suitable modification, continue to play a valuable role in the overall UK generating mix. There remains considerable potential for delivering efficient energy and therefore further emissions savings through community and industry efficiency partnerships. Greater incentives may be needed from Government to drive forward such schemes.

In addition, we plan to invest in new generation plant using CHP and CCGT technologies with substantially lower CO<sub>2</sub> emissions per unit of energy supplied. As the equipment becomes more efficient and therefore economically viable, we also expect renewable energy sources to assume increasing importance in the energy mix and we are already increasing our wind power capacity.

### Acid rain

By its nature coal combustion produces more 'acid gases' than natural gas as a fuel. By progressively developing and installing new emissions reduction technology, including gas reburn, tertiary combustion techniques, seawater scrubbing and flue gas desulphurisation (FGD), we are confident that emissions of SO<sub>2</sub> and NO<sub>x</sub> can be dramatically reduced to create a new generation of clean coal stations.

### Performance review

Generation Wholesale power station emissions

The charts show total energy supplied and emissions of CO<sub>2</sub>, NO<sub>x</sub> and SO<sub>2</sub> per unit of energy supplied. These demonstrate a small reduction for each of the gases emitted which has been achieved by clean coal technologies such as gas reburn and low NO<sub>x</sub> burners, continued burning of low-sulphur Scottish coal, reduced coal use and increased renewables.

During 1997-98, the sour gas from the Miller field began to decline due to the field being exhausted, and we will replace this partly by increased use of low-sulphur Scottish coal (typically 0.8% compared with 1.5% for English coal). This is likely to lead to some increase in emissions next year. However, our exports of electricity to England and Wales remain at a high level and are displacing generation from coal-fired power stations in England and Wales with higher emissions, particularly of SO<sub>2</sub>.

Chart 6.1

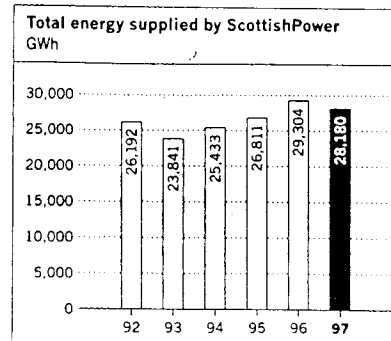




Table 4.6 shows the CHP and CCGT schemes which are currently at the planning stages. CHP which uses waste heat for other industrial or community heating can achieve thermal efficiencies of between 60% to 80% depending on the mix of heat and electricity specific to the individual CHP project. CCGTs can achieve about 55% depending on the technology used.

*Internal energy and water use*  
 Our overall strategy for conserving water and energy resources applies also to our internal consumption. The target tables 4.3 and 4.7 summarise the progress being made across the group.

Table 4.7

<b>Internal energy use</b>		
<b>Targets 97-98</b>	<b>Progress against 97-98 targets</b>	<b>Targets 98-99</b>
<b>Generation Wholesale</b>		
Establish an effective energy monitoring system to measure progress against targets	Energy use at all sites is now more extensively metered and readings logged	Implement energy monitoring and targeting software at Longannet
		Carry out full works power audit and prioritise areas for energy savings of 5% at all sites
<b>Power Systems (Scotland and Manweb)</b>		
Further reduce energy use by 3%	Target achieved in Manweb region	Reduce energy use in Scotland by 3%
Establish an effective energy monitoring system	Detailed values now supplied by Metering business	
<b>ScottishTelecom</b>		
Establish an effective energy monitoring system	Establish energy systems of centrally managed sites monitored	
<b>Contracting Services</b>		
Using 1996-97 data as a baseline, monitor energy use at head office in Hamilton to pinpoint areas in need of energy efficiency improvements	Energy consumption has been established as 103,425 kWh	Allowing for increased accommodation at head office in Hamilton, maintain energy consumption below 115,000 kWh
Establish an effective energy monitoring system and baseline at all premises	Not completed at all locations due to office relocation	Complete the establishment of energy monitoring systems at all premises
<b>Technology</b>		
Year-on-year reduce internal energy consumption by 5%	Target not achieved due to business expansion	
<b>Southern Water</b>		
3.3% reduction in expenditure on energy use, excluding new sites commissioned to meet tighter standards of treatment	Target achieved	
		Promote internal energy awareness via area management team meetings throughout Southern Water
		Improve the existing energy management system to include site cost analysis and better reporting. Design in 1998-99 and implement in 1999-2000
		Install new Milltronic level control unit to monitor waste water pumping stations to help improve pump efficiency
		Trial development of a system for calculating unit energy production costs at ten waste water treatment sites and water pumping stations
		Develop a system of measuring energy use per unit treated

# 5

## Discharges to Water

Require businesses to establish relevant objectives supported by quantifiable targets which relate to their reduction of environmental impact, sustainability, risk management and compliance.

Maintain a competence in environmental science in order to keep abreast of development in the understanding of relevant issues, support Research and Development as appropriate, with the overall objective of continuous environmental improvements.

### Issues briefing

Waste water from domestic households and industry is transported via the sewerage system to WWTWs before being discharged to rivers and the sea. The treatment is designed primarily to reduce the level of biological and chemical matter in the waste which would otherwise adversely affect the quality of receiving waters and the wildlife they support.

### Our strategy

The treatment of waste water to protect rivers, estuaries and the sea from pollution is an area of increasing focus both of legislation and also of public and political debate. The legacy of under-investment in WWTWs when the industry was in public ownership has required a substantial capital investment programme to install equipment capable of meeting current regulatory and social expectations.

The water industry is regulated by OFWAT which must approve our investment plans in the light of achieving the best value for the customer. We are therefore required by the regulator to ensure compliance with environmental regulations, but to do so at the least cost to the customer. Our future investment plans are currently being considered by OFWAT under the AMP 3 review.

The European Union (EU) Urban Waste Water Treatment Directive (UWWTD) sets standards which the Environment Agency oversees. The Directive normally requires secondary treatment except in areas where the receiving waters provide 'high natural dispersion'. The scientific definition of high natural dispersion is complex and the Environment Agency judges where this exception may be applied. The Environment Agency is currently considering our submissions on 12 sites.

Our long term strategy is to apply the highest levels of treatment technically justified and to work with all the regulators to assist in striking an appropriate balance between the rate of environmental improvement and the costs to our customers. We will be looking closely at the agenda established by the Government's

Sustainable Development Strategy when it is published later in 1998 and also at the output from the industry's body, Water UK, sustainability indicators project.

### Performance review

#### Southern Water compliance with discharge consents

All of the 394 WWTWs operated by Southern Water have discharge consents issued by the Environment Agency. Some 267 have numeric consents. Our overall compliance during 1997 was 99% as illustrated in table 5.1.

We are continuing to invest in improvements to WWTW equipment and during the year commissioned schemes to achieve compliance with the UWWTD at Morestead, Queenborough, Swalecliffe and Hythe. Phosphate stripping plants were installed at Andover and Ashford, which discharge into areas defined as sensitive by the UWWTD.

### River quality

Although we are not responsible for river quality we recognise the effect that discharges from WWTWs can have. The charts show the overall classification of river quality in the Southern Region of the Environment Agency. This is not wholly contiguous with the Southern Water operational area. It should also be recognised that many other factors influence river quality including other sources of pollution from agriculture and industry.

### Bathing water quality

Bathing waters are classified under the EU Bathing Water Directive which defines a compliance level for coliform presence in the water. Therefore compliance indicates good control of nearby sewage discharges. The Directive also sets a higher 'Guideline' standard which is not mandatory but establishes a target.

Table 5.1

Waste water treatment works compliance with discharge consents	
% of waste water treatment works complying with discharge consents	
1993	98
1994	99
1995	99
1996	98
1997	99

Table 5.2

Bathing water compliance with EU Bathing Water Directive	
EU Standard	Number of bathing waters
Compliant	67
Non-compliant	8

Conservation of Resources

Table 4.3

Internal water use		
Targets 97-98	Progress against 97-98 targets	Targets 98-99
<b>Southern Water</b>		
		Achieve 20% greater efficiency in Southern Water's own use of water
		Implement action plan from the findings of water consumption surveys of Southern Water sites
		Draw up design criteria to ensure new and refurbished offices and works are built to water efficient standards
<b>Generation Wholesale</b>		
Reduce water use at Longannet and Cockenzie by 25%	Although a reduction in water consumption has been achieved, the target of 25% has not been met at Cockenzie. Further measures to reduce water consumption are under way	Reduce water consumption at Cockenzie by 15% below 1997-98 consumption.  Investigate alternative sources and recycling opportunities for on-site water usage at Longannet
Conduct a complete survey of all water systems at Cockenzie	A full acoustic survey of Cockenzie's underground water systems was carried out. Various underground leaks were detected and repaired	
Optimise use of potable water in the boiler by minimising leakage	At Cockenzie unit leakage has been assessed and numerous repairs conducted	A programme is planned for 1998-99 to replace poorly performing valves

Chart 4.1

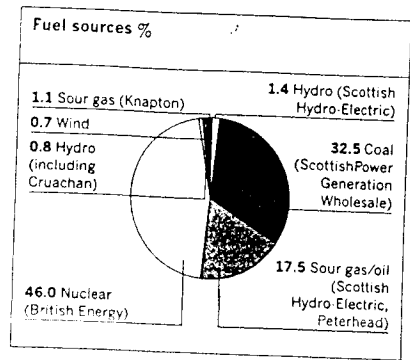


Chart 4.2

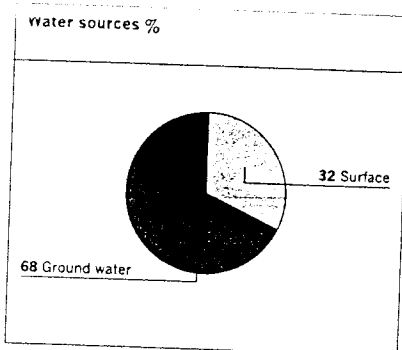


Table 4.4

Renewable energy		
Targets 97-98	Progress against 97-98 targets	Targets 98-99
<b>Generation Wholesale</b>		
Develop the wind energy portfolio, in line with a future renewable tariff structure	Barnesmore, a 15 MW wind farm in Donegal, Eire, was added to the wind portfolio in June 1997 at a cost of £13 million	Secure planning for at least 30 MW of wind capacity in Kintyre  Conduct development work in preparation for at least one new wind farm using the revenue generated from a green energy tariff
		Improve unit efficiency at Cockenzie and Longannet by 0.7% and 0.8% respectively
<b>Energy Supply</b>		
Identify opportunities for customer-based CHP	Installed 2 MW of CHP, entered agreement to develop a further 60 MW of plant	Progress two 30 MW CHP projects and install 10 MW of small scale CHP

Chart 4.3

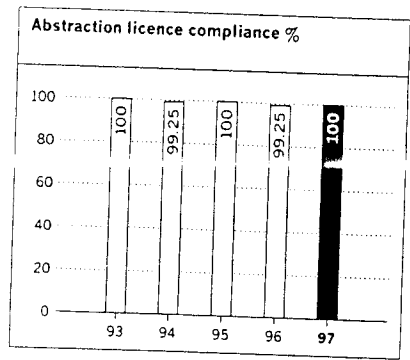


Table 4.5

Energy generated in ScottishPower's own power stations (1997)				
Power station	Location	Fuel type used	Capacity MW	Energy supplied GWh
Longannet	Kincardine	Coal	2,400	9,604
Cockenzie	Prestonpans	Coal	1,200	2,480
Methil	Leven	Coal slurry	60	176
Cruachan	Loch Awe, near Oban	Pumped storage	400 generating 440 pumping	292 generating 340 pumping
Galloway hydros	Galloway	Hydro	109	207
Lanark hydros	Lanark	Hydro	16	59
Knapton	Yorkshire	Sour gas	41	307
Wind farms	Various	Wind	92	210

Table 4.6

Planned generating schemes			
Name of scheme	Operating partners	Status	Capacity
Blackburn mill CHP	SAPPI UK Ltd	Planning stage	59 MW, consisting of 9 MW site demand and 50 MW exported
Capenhurst CHP	Urenco (Capenhurst) Limited and British Nuclear Fuels plc	Planning stage	65 MW, consisting of 18 MW site demand and 47 MW exported
Southern Water regional treatment centre CHPs		One is currently being built and 4 to 5 more are planned	Small scale CHPs, 1 to 2 MW each
Enderby CCGT		Planning application submitted – possible referral to public enquiry	Pending
Shoreham CCGT	Central & South West	Planning consent extended in 1997	400 MW
Beinn an Tuirc wind farm		Planning stage	30 MW
New small scale hydro schemes	Various	Various	Numerous schemes including a 350 kW mini hydro scheme

efficient CHP and Combined-Cycle Gas Turbine (CCGT) power plants and investing in new wind farms.

In addition, we believe that a broad balance of fuel sources is desirable to avoid overreliance on any single source. The considerable reserves of coal in the UK will continue to play an important role in the overall energy supply equation and we are therefore seeking to be at the forefront of developing clean technology for combustion of low-sulphur Scottish coal in particular (see Emissions to Air page 22).

Southern Water is planning to use methane from sludge digestion as a fuel. All 16 of the new sludge treatment centres will incorporate energy recovery through gas turbine generation, CHP schemes or directly in boiler combustion.

#### Performance review

##### Main fossil fuel power stations

Our main fossil fuel stations at Longannet and Cockenzie are 26 and 30 years old respectively. The process of improving thermal efficiency is an ongoing goal for both financial and environmental reasons. As the plant has progressively been optimised, the scope for efficiency gains has reduced. The programme at both stations has involved a combination of capital investment and staff training

During 1997-98, we achieved a thermal efficiency at our major power stations equivalent to a saving in CO<sub>2</sub> emissions of approximately 166 kTonnes.

We believe that further gains are possible and have set efficiency improvement targets for 1998-99 of 0.8% at Longannet and 0.7% at Cockenzie.

##### New generating plant

Our strategy is to invest in high efficiency and renewable technologies where possible. We already own some wind farms and hydro stations and have increased the capacity of our wind farms by 19% during the year. We aim to secure planning consent during 1998-99 for a further 30 MW increase.

## 4

## Conservation of Resources

Promote the efficient use of resources, energy, water and fuel throughout the group's operations.

Across the group, we are engaged in conserving resources. In generation there is a built-in business incentive to strive for greater efficiency and reduce our fuel costs per unit of electricity supplied. In the water business, maintaining the balance between natural supply and customer demand is central to the business.

### Water Resources

#### Issues briefing

*The natural water cycle in which water evaporates from the oceans, falls as rain over land and returns to the sea via rivers and ground water has created an impression that water resources are limitless. However, the amount of water available for use on land is limited by regional rainfall and geography. The amount of water available for abstraction is affected by seasonal fluctuations in rainfall. The precise effects of global climate change are difficult to anticipate, but if UK rainfall patterns change, this could further limit the available resource in the medium term.*

*In dry periods, water demand can potentially lead to falling levels in rivers and reservoirs which has an impact on wildlife. Reducing leakage not only conserves water, but also saves resources used in pumping and treating drinking water. The reduction in abstraction during periods of low rainfall will also lead to environmental benefits.*

#### Our strategy

In response to several years with below average rainfall, and the possibility that climate change will further reduce rainfall, the water industry and its regulators are currently reviewing water resource strategies.

Our existing strategy aims to achieve a balance between available resources and

demand by carefully managing abstraction from rivers and ground water sources. We use reservoirs to ensure that there are adequate supplies to meet demand in peak periods and also to augment river flows during the Summer. We are currently assessing options for developing new resources such as expanding reservoir capacity, artificially recharging natural aquifers using excess flows in the Winter, desalination and the use of treated waste water final effluent to supplement river flows.

During the course of the year, we reviewed our assessment of the economic level of leakage, which will help us to put leakage into a more accurate framework for decision making. A review of pressure management systems is continuing.



New reservoir under construction at Testwood Lakes.

Table 4.1

Conservation of resources		
Targets 97-98	Progress against 97-98 targets	Targets 98-99
<b>Southern Water</b>		
Continue to maintain total population served above the OFWAT DG1 reference level of the yield/demand ratio being greater than 1	Under review by OFWAT	
Reduce distribution losses to 3.34 litres per property per hour (11.80%)	OFWAT has amended the performance measure to M litres/day total losses. We believe that we are on track to achieve our 100 M litres/day target	Reduce distribution losses to 95 M litres/day
		Undertake 3,900 supply pipe repairs and renewals
		Undertake 1,850 free leak detections

Table 4.2

Leakage				
Year	Total Losses M litres/day	Total %	Distribution Losses M litres/day	Distribution Losses %
93-94	144	23.2	100	16
94-95	133	21.1	87	14
95-96	120	18.7	85	13
96-97	112.7	18.1	77.1	12.4
97-98	98.8	16.3	69.2	11.5

### Performance review

#### Abstraction

Abstraction from rivers and ground water sources is subject to licences which specify daily and annual limits to the amount of water which can be abstracted. In total we have 133 water sources across the region, consisting mainly of boreholes but also including river abstraction and four impounding reservoirs. During 1997 we achieved 100% compliance with these limits and over the last five years only two sources have failed their limit in any one year.

In 1997-98 we supplied an average of 603.8 M litres/day to a resident population of 2.2 million. Demand from customers has reduced by 2.4% over the last five years. In the Summer, low rainfall and peak water demand can cause considerable pressure on our water resources.

#### Low flow rivers

The Environment Agency has identified two rivers in Southern Water's region where low flow is a serious concern (Wallop Brook in Hampshire and the River Darent in Kent). However, the River Darent is not affected by any Southern Water abstraction. Southern Water is currently reviewing an abstraction in the Wallop Brook catchment area as part of the Asset Management Plan 3 (AMP3) process. In addition we have worked with the Environment Agency to supplement flows in the River Medway, River Eastern Rother and River Great Stour during dry periods.

We can influence low flow problems by managing abstraction and also by the volume of effluent discharged from waste water treatment works (WWTW). In some areas the treated effluent is a significant proportion of the total river flow. Proposals to close smaller works could adversely affect rivers by diverting effluent downstream to larger works. This risk is assessed as part of the environmental appraisals carried out for capital schemes.

#### Leakage

Leakage from our distribution network and from our customers' pipes increases the possibility of supply shortages during drought periods. For this reason we have agreed a target with the regulator (OFWAT) to reduce our total leakage to 100 M litres/day in 1997-98 and then to 95 M litres/day in 1998-99.

The targets take into account that there will always be a background level of losses due to factors such as weeping joints, ground movements, traffic loading or deterioration due to old age.

As shown in table 4.2, we have achieved a steady reduction in leakage over the past five years, and the 1997-98 total leakage figure of 98.8 M litres/day is in line with the OFWAT target.

#### Energy Resources

##### Issues briefing

*Fossil fuels such as coal, oil and gas take millions of years to develop under the Earth's surface. This long timescale means that they are effectively a finite resource. Estimates of remaining resources are frequently amended upwards as the extraction industries develop new technology for locating and exploiting additional reserves.*

*In the context of predicted increases in world energy demand, pressure to conserve fossil fuels can be expected to increase. Existing technology can be made more efficient and in the medium term renewable resources, such as wind and solar energy will play a greater role in meeting overall energy needs.*

##### Our strategy

Fossil fuel reserves are preserved by a combination of increasing the efficiency of generation plant, developing renewable sources and increasing customer energy efficiency (see table 4.4).

Our strategy encompasses optimising the efficiency of our existing power stations, proactively seeking opportunities, where appropriate, to develop new, more



Fuelling CHP with methane from sewage sludge.

Case study 4.1

##### Multi-utility approach at Southern Water's sludge treatment plants

Four of Southern Water's new regional sludge treatment centres will have integrated CHP schemes associated with a gas turbine, increasing the overall efficiency of the plants between 60% to 80% depending on the specific project. This project is a good example of how synergies between the businesses can benefit the ScottishPower group as a whole. The engineering skills of Generation Wholesale, Technology and Southern Water businesses have been combined in the plant design which will use the methane emitted from the sludge treatment process to drive a small gas turbine to generate electricity. The waste heat from the turbines will in turn dry the sludge – thus completing the highly efficient cycle.

Case study 4.2

##### Beinn an Tuirc wind farm

We are planning to build a new wind farm in mid-Kintyre which will be the most productive in the UK, generating 30 MW of electricity, enough to more than meet the needs of the southern part of Kintyre and Arran. The proposed site at Beinn an Tuirc was selected from 200 potential sites as existing forestry provides screening to reduce the visibility impact and it is situated more than two km from the nearest dwelling well out of the detectable noise range.

**Water saving**

Over the past year we have made considerable progress in developing partnerships with customers to promote water saving measures. Our approach has been to build up an understanding of water saving issues through our Water Research Action Plan and implement practical water saving programmes through our Customer Partnership Action Plan.

Most domestic customers do not have metered water supplies and therefore do not have any direct cost incentive to save water. Mandatory introduction of water meters would be socially controversial and also very expensive. We are therefore developing partnerships with customers to encourage greater awareness of the importance of using water efficiently.

Following the many initiatives detailed below, we have set further targets for 1998-99 in table 3.3.

**Water Research Action Plan**

- > research into 'grey' water/rain recycling;
- > retro-fitting of dual flush toilets in conjunction with the Environment Agency;
- > a project to promote water efficiency in new homes, in cooperation with Wimpey Homes, Caradon Bathrooms and Zanussi, managed by Sheffield Hallam University;
- > customer opinion survey of hippo bags, water saving devices which reduce flush volumes in toilet cisterns, showed a 36% uptake, saving 2% of water in the supply areas targeted.

**Customer Partnership Action Plan**

- > hippo bags - we issued 233,000 of these to 205,000 homes in North Sussex, East Sussex and East Kent;
- > metering - we offered free meter installation to 135,000 customers in North Sussex and East Kent, with 7,600 taking up the option;
- > audits - 287 water audits were completed for domestic customers, and 15 by business customers. 15,000 water use 'self help' checklists were sent to business customers in Kent and East Sussex;

Table 3.3

Partnership with customers		
Targets 97-98	Progress against 97-98 targets	Targets 98-99
Southern Water		
		Meter 10,000 sprinkler users
		Distribute 210,000 hippo bags to customers
		Conduct 100 audits/workshops among large business customers
		Carry out three information/education campaigns
		Promote water efficient new buildings to 80% of developers in the region
		Measure water savings achieved through customer partnerships



Providing energy and water saving advice to our customers.

- workshops – a Water Saving Workshop for 10 business customers was held in conjunction with the DETR/DTI's Environmental Technology Best Practice Programme;
- sprinkler amnesty – 12,000 hosepipe spray guns were exchanged for sprinklers;
- education – 270,000 packs of water efficiency information and products were distributed from Sainsbury's Homebase stores. A Waterwise Key Stage 2 Education Pack was offered to 1,700 primary schools, with over 470 taking up the offer;
- leakage – we offered up to three free repairs to customer supply pipes, with up to 10 metres replaced free of charge if the leaking pipes were made of lead.

**Drinking water quality**

Clean safe drinking water is vital to ensuring public health and we have a clear responsibility to the communities we serve to ensure that the highest standards are always maintained.

Old water mains are cast iron which can cause trace amounts of iron to enter the supply. By agreement with the Drinking Water Inspectorate we are undertaking a major programme of mains renewal and replacement.

Increasing amounts of pesticide and fertiliser are used in agriculture and by local authorities, railways and domestic gardeners which can run off land and enter the river system and into ground water. In response a number of our water treatment works are being modified to remove these chemicals. We are also seeking to tackle the problem at source in partnership with users. To set an example, Southern Water continues to ban the use of pesticides on all water supply sites.

The quality of the drinking water we provide to customers is closely monitored and regulated by the Drinking Water Inspectorate. Over 197,700 tests were

carried out during the year to measure microbiological and physico-chemical quality. The results for 1997 summarised in table 3.4 below show that we continue to maintain a high standard of overall compliance.

Case study 3.2

**Sprinkler amnesty**

To encourage customers to use water wisely in their gardens, Southern Water launched a 'sprinkler amnesty' – issuing hosepipe spray guns in exchange for sprinklers. In total 12,000 of these water saving devices were handed out in conjunction with a free booklet 'The Waterwise Gardener'



Table 3.4

Southern Water compliance with drinking water standards		
	Overall % compliance	% Microbiological compliance
1993	99.7	99.8
1994	99.7	99.9
1995	99.7	99.9
1996	99.8	99.9
1997	99.8	99.9

Table 3.5

Drinking water		
Targets 97-98	Progress against 97-98 targets	Targets 98-99
<b>Southern Water</b>		
Total coliform microbiological compliance at:		Total coliform microbiological compliance at:
Treatment works – 99.96%	99.89%	Treatment works – 99.97%
Service reservoirs – 99.95%	99.84%	Service reservoirs – 99.95%
Customers' taps – 99.63%	99.61%	Customers' taps – 99.63%
Physico-chemical quality at customers' taps – 99.78%	99.59% – This is a low figure due to the number of tests carried out being reduced by 14,650. The reduction in tests is due to a lower number of water quality zones and a reduction in the frequency of specific parameters due to good history of quality and compliance. Reducing the number of samples by 14,650 from zones with good water quality has the effect of reducing percentage compliance overall. In 1997 the number of failures reduced by five over the previous year	Physico-chemical quality at customers' taps – 99.70% compliance



## A Partnership with Customers

Advise customers on the efficient use of energy and of essential resources such as fuels and water.

The importance of a partnership approach

As a multi-utility, ScottishPower performs an essential role in society through the provision of energy, water and telecommunications services. There are many areas in which environmental objectives can only be achieved by working in partnership with our customers.

In the electricity and gas business, improved energy efficiency in the domestic and commercial sectors will make a significant contribution to reducing CO<sub>2</sub> emissions. In the water business, careful use of water, particularly in gardens, can greatly reduce pressure on supplies in drought periods.

We intend to offer our customers products which actively promote sustainable development. In the Summer of 1998 we will be launching a 'Green Energy' tariff to promote renewable energy and our Energy Supply business already offers a range of energy saving packages to commercial and domestic customers.

This section examines the main areas where customer partnerships support environmental goals.

### 'Green Energy' tariff

The green energy tariff will initially be offered to our 3 million existing domestic and small business customers, and extended to the wider public once the electricity markets are fully opened to competition.

Under the scheme, householders and small businesses will be offered the choice to support new renewable energy, by paying a small premium on their bill. Our research has shown that just over half of the customers surveyed would be

prepared to support the green energy tariff as a way of making a personal commitment to the environment.

The customers' premium will be targeted for the development of new renewable energy projects which will be selected by ScottishPower in conjunction with community groups and subject to independent audit. A number of suitable options have already been identified, ranging from a small hydro generation unit to a new wind farm.

### Energy saving

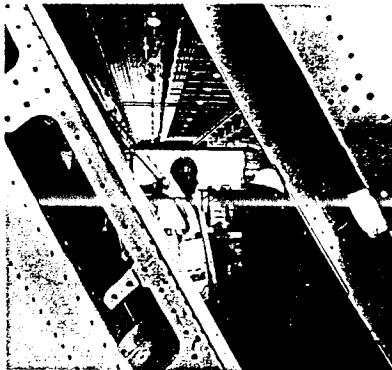
We are working with customers in the domestic and commercial sectors to reduce their energy use while delivering the same quality of service. This not only helps to reduce their energy bills, but also requires less electricity to be generated with resulting reductions in emissions.

*Initiatives with commercial customers*  
Energy Supply has developed a range of services tailored to the needs of industrial, commercial and public sector organisations. Some examples of these are:

Regional multi-company energy efficiency schemes – such as the PowerSave programme in Merseyside which is being extended from a £3.2 million pilot programme. The programme, supported by European Regional Development funding, aims to enroll 350 small and medium sized companies in energy saving initiatives. An overall saving of 30 GWh, equivalent to 12 kTonnes of CO<sub>2</sub> emissions, is projected.

Shared savings schemes – for commercial and industrial customers where ScottishPower fully funds the energy saving measures at the customer's site and shares in the resulting cost savings.

Private Finance Initiative energy projects – where we work with public sector organisations such as hospitals and schools to provide the investment and expertise to install energy saving measures and share the resulting financial savings.



Installing energy efficient lighting at British Aerospace, Chester.

Combined Heat and Power (CHP) – for customers whose operations enable waste heat to be used for heating or process energy such as hospitals or paper mills, we are offering a specialist turn-key CHP development service. Approximately 20 such schemes are currently under active consideration.

*Initiatives with domestic customers*

The prime initiative for domestic energy saving is our Energy Efficiency Standards of Performance (EESoP) scheme undertaken in conjunction with the Energy Savings Trust. Under this scheme we are required to develop and invest in schemes to the equivalent of £1 per franchise customer to achieve specified energy savings in the franchise sector of our operating regions. Details of the scheme and savings achieved are available in our Standards of Performance Report.

The combined contribution for approved schemes from ScottishPower and Manweb over three and four years respectively ending in March 1998 is approximately £11 million with a discounted energy saving target of 656 GWh. This would save approximately 747 kTonnes of CO<sub>2</sub> over the total life of the projects as calculated under OFFER approved guidelines.

In addition to the EESoP projects, our call centre staff are trained to respond to customer queries on energy efficiency advice. This primary service is backed by customer liaison officers, trained to City and Guilds standards in giving energy efficiency advice. We are currently installing a bespoke software package to further improve this service to customers. In 1997-98 we received and responded to over 5,000 such calls in Scotland alone.

**Electric and Magnetic Fields (EMFs)**

Although recent research has failed to provide conclusive evidence for a link between EMFs and potential health risk, they have continued to generate public interest and concern.

Our approach is therefore to continue to support independent research and public information campaigns on EMFs, and respond promptly to all enquiries from customers. We carried out 126 site visits to take measurements on request, four of which required further action in the form of more detailed reports, further liaison and advice.

Table 3.1

Power Systems EMF enquiries and visits	96-97	97-98
Number of EMF enquiries	308	285
Number of EMF visits	168	126
Number of EMF visits requiring further action	-	4

Case study 3.1

**Private Finance initiative for North Hampshire NHS Trust**

Under the Private Finance Initiative to encourage energy efficiency in the public sector, ScottishPower has invested £2.5 million in the North Hampshire NHS Trust to develop a new energy supply for the hospital. This includes a CHP scheme, a new efficient boiler plant and upgraded heating and distribution systems.

Table 3.2

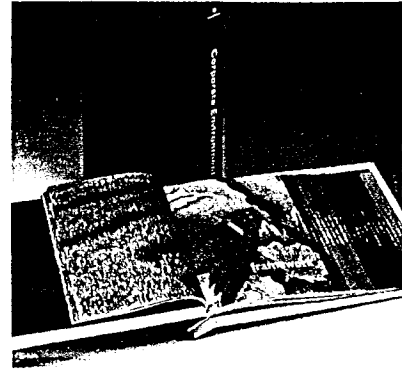
Partnership with customers		
Targets 97-98	Progress against 97-98 targets	Targets 98-99
<b>Energy Supply</b>		
		Spend £12 million capital investment in customer related energy services projects
Meet EESoP regulatory obligations	EESoP schemes developed and approved to exceed ScottishPower target of 326 GWh and Manweb target of 330 GWh energy savings	EESoP targets for 1998-2000 are: → ScottishPower £3.3 million spend and 185 GWh of savings; → Manweb £2.5 million spend and 137 GWh of savings
<b>Power Systems (Scotland and Manweb)</b>		
Respond to all EMF enquiries within two working days, via telephone calls and/or visits	Target achieved	Continue to respond to EMF enquiries within two working days
		Provide refresher training for all EMF Coordinators
Continue to support industry research	Continuing to support the United Kingdom Childhood Cancer Study	Complete all data requests for the United Kingdom Childhood Cancer Study
		Produce a video of environmental planning of substations in the urban environment by July 1998

addressed. These include Certificate of Technical Competence (CoTC) in waste management licensing, training to Higher National Certificate (HNC) level in energy efficiency, specialist environmental auditing and oil-spill response procedures.

**Stakeholder approach**

We are keen to ensure that our approach does not become introspective and remains relevant to the concerns of a wide stakeholder base. We are establishing an Environment Forum consisting of key thinkers in the field of sustainable development. This will provide us with a valuable external perspective. Invitations have been sent to selected individuals. The first meeting will be held shortly and subsequent meetings three or four times a year. We intend that the Forum will give our directors the opportunities to discuss the main themes of sustainability in the context of our operations.

We also subscribe to public opinion research on environmental issues from MORI and conduct an annual survey of opinion leaders. The feedback helps us to determine the emphasis of our policy. EMS and this Report. We would welcome your comments on the enclosed reply card.



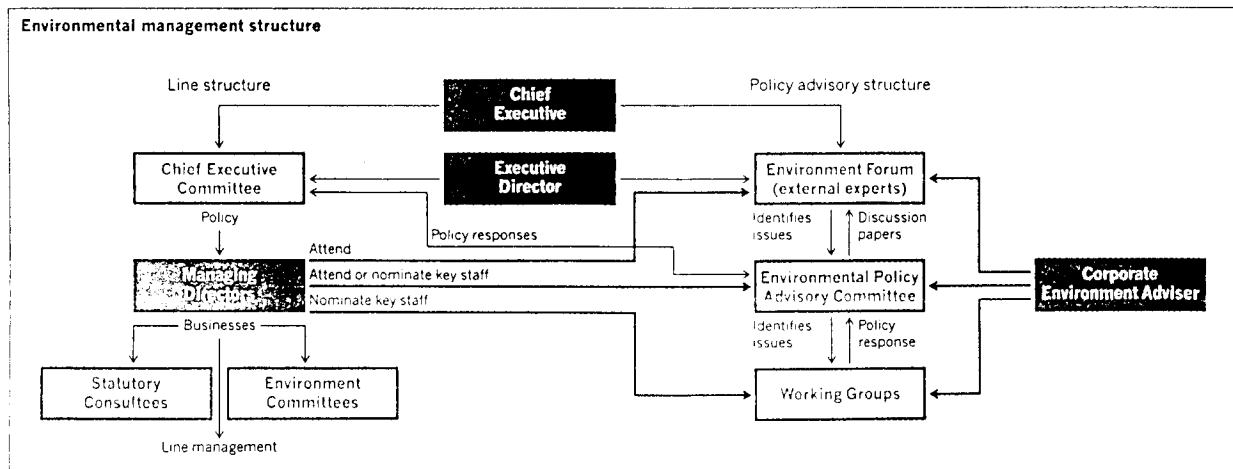
Case study 2.1

**Corporate environment manual**  
 Our new corporate environment manual provides senior managers with a briefing on environmental issues and up to date information about environmental policies. The manual will soon be available on the group's intranet, providing an accessible reference source for staff.

**Assessing and managing risk**  
 During the year we again commissioned environmental management consultants Aspinwall & Company to conduct a review of corporate governance of environmental issues. The review assessed compliance with our Environmental Policy and the effectiveness of management in managing environmental risk. The key findings of the review have been incorporated into Aspinwall's validation statement on page 39 of this Report.

We also commissioned consultants SustainAbility to identify and assess the risks facing our businesses.

Diagram 2.1



In particular, we were interested in risk factors which impact across our multi-utility business, long term issues and those which could result in adverse public reaction.

The discipline of producing this Report annually also contributes to providing a management overview of areas of progress and issues needing attention. We therefore believe that we are well placed to anticipate and manage risks from environmental and broader sustainability issues.

**Benchmarking and awards**

Increasingly, analysts and other stakeholders have called for methodologies to be developed by which environmental performance can be compared between companies. These benchmarking studies have many limitations due to the differences in operations between one company and another. One of the best established surveys is that of Business in the Environment (BiE) which produces an annual Index of Corporate Environmental Engagement among the FTSE 100 companies. The results are graded into five groups and, in 1998, ScottishPower was placed in the leading group.

In addition, many projects around the group receive commendations or awards from external bodies. We have selected a few of these below:

- > Group – Business Commitment to the Environment (BCE) – commendation for overall commitment to the environment;
- > Southern Water – Certificate of Merit from the British Association of Communicators in Business for 'Conservation Matters' publication;
- > Power Systems – Scottish Environmental Regeneration Award 1997 sponsored by Scottish Natural Heritage and Scottish Enterprise for Dewar Place substation;
- > Generation Wholesale – Longannet power station was runner up in the Scottish Environmental Awards for the work at Valleyfield.

Table 2.2

<b>Benchmarking and awards</b>		
<b>Targets 97-98</b>	<b>Progress against 97-98 targets</b>	<b>Targets 98-99</b>
<b>Generation Wholesale</b>		
To convert BS 7750 to ISO 14001 at Longannet	Achieved August 1997	Convert ISO 14001 at Longannet to the European Union (EU) standard Eco-Management and Audit Systems (EMAS)
To achieve certification to ISO 14001 at all major power stations	Cockenzie has implemented approximately 60% of the requirements of ISO 14001	Achieve certification to ISO 14001 at Cockenzie
		Methil – progress implementation of ISO 14001 building on the experience at Longannet and Cockenzie
		Identify 10 priority contractors/suppliers for EMC partnership projects
		Provide at least a half-day of environmental awareness training for all staff
<b>Power Systems (Scotland and Manweb)</b>		
ISO 14001 certification throughout Power Systems	Forth region certified September 1997	Clyde and Southern regions to achieve ISO 14001 certification by September 1998
		Transport business to achieve ISO 14001 certification by March 1999
		Engineering projects to achieve ISO 14001 certification by March 1999
		Integrate regional environmental management systems by March 1999
		Quantify the environmental burden for Power Systems in order that meaningful KPIs can be set for future years
		Develop and introduce regular communications to all staff on environmental and sustainable issues
		Develop a Charter for Environmental Care to support the established environmental identity
		Develop and introduce Green Procurement Strategy by March 1999
<b>ScottishTelecom</b>		
		Establish audit programme for major contractors and suppliers
		Environmental Steering Committee to meet quarterly

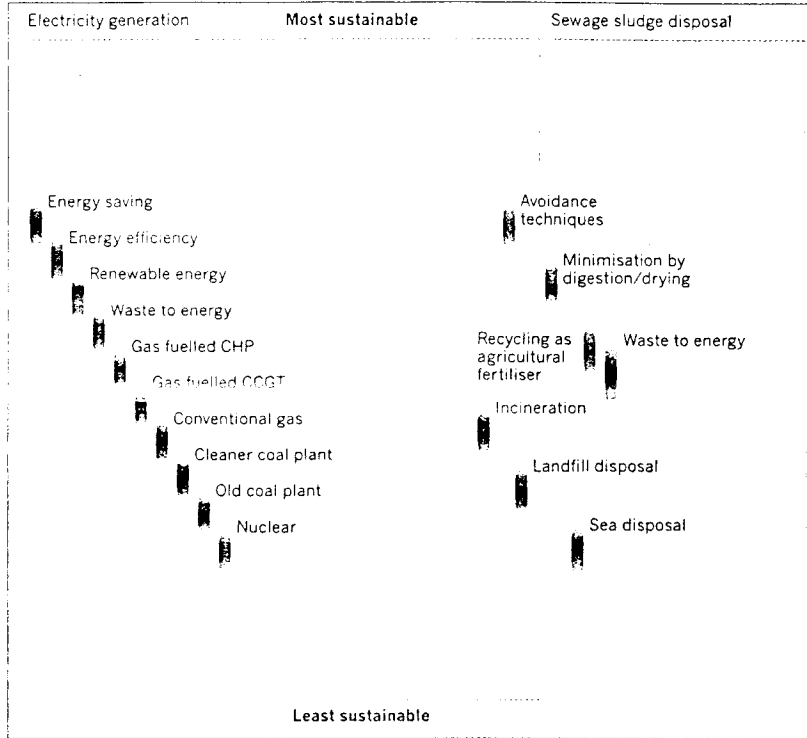
1

Contributing to Sustainable Development

to electricity generation and sewage sludge disposal. We would welcome feedback on the approach and the relative positions of the options.

Similar hierarchies could be drawn up to cover other activities with an impact on sustainability such as waste water treatment, abstraction, retail, telecommunications and others. We will be progressing this work in the coming year.

Diagram 1.2



Case study 1.1

**Green energy initiative**

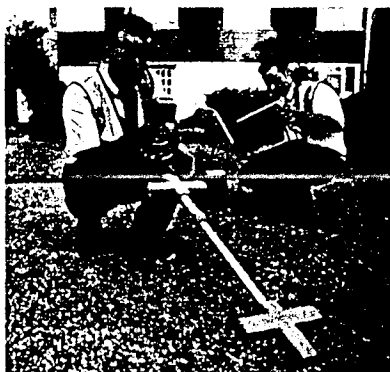
ScottishPower will offer its domestic and small business customers the opportunity to support renewable energy projects later this year with the launch of a green energy tariff to promote new wind and hydro projects.



Case study 1.2

**Leak detection provides employment opportunities**

The long term unemployed are being trained by Southern Water to help detect water leaks – providing both valuable work experience and benefiting the environment. This new scheme is part of the ScottishPower Learning initiative which ties in with the aims of the Government's Welfare to Work scheme. Last year six of the nine recruits found permanent employment with Southern Water's leakage contractors. Next year the scheme will be extended to train another 20 job seekers.



Far left: Promoting wind energy.  
 Left: Training to detect water leaks.

# 2

## Environmental Management

Continue to refine and develop our Environmental Management Systems in line with our business needs, taking into account appropriate best practices.

Table 2.1

Raising awareness		
Business	Certified to ISO 14001	Other system
<b>Generation Wholesale</b>		
Longannet power station	•	
Cockenzie power station	•	
Methil power station	•	
Knapton power station		†
Cruachan power station		†
Hydro power stations		†
Wind farms		¥
Cathcart headquarters	•	
<b>Southern Water</b>		
		†
<b>Power Systems (Scotland and Manweb)</b>		
Merseyside, Cheshire Wales and Forth regions		
Clyde and Southern regions	•	
Transport business	•	
Metering business		¥
Engineering projects	•	
<b>Energy Supply</b>		
		¥
<b>Contracting Services</b>		
		¥
<b>ScottishTelecom</b>		
		¥
<b>Retail</b>		
		¥
<b>Technology</b>		
		¥

**Key EMS type**

- Certified to ISO 14001
- Working towards certification to ISO 14001
- † System based on regulatory compliance
- ¥ System to manage specific issues

### Environmental Management Systems (EMS)

Our Environmental Policy Statement commits us to meeting or improving on regulatory requirements and ensuring that the impacts of our activities are kept to a practicable minimum. To achieve this our businesses operate EMSs, some formally certified to international standards, others tailored to the particular needs of the business.

The underlying principle behind EMS is the use of the widely recognised PLAN>DO>CHECK>ACT cycle on which the ISO 14001 model is based. Our EMSs operate at corporate, business and site level to ensure that all significant environmental impacts arising from the group's activities are identified and management action and investment is prioritised and directed towards minimising these impacts.

All group businesses are required to operate an EMS appropriate to their environmental impacts and nature of

operations. The group does not impose a particular EMS standard on businesses, preferring to allow management to select the approach which is most appropriate to their needs. The certified EMSs in place at Longannet power station and Power System's Merseyside, Cheshire, Wales and Forth regions reflect the areas of most significant environmental impact from our operations. The water business operates in a highly regulated environment and has focused on systems to meet regulatory requirements. Table 2.1 summarises the EMS approach throughout the group.

### Raising awareness

To be effective, systems rely on the participation and knowledge of the people operating the businesses. To encourage a high level of awareness most of our businesses have ongoing training programmes. In total, over 1,500 staff received environmental training of different types during the year. In addition to this widespread general training, the specific needs of key staff are also



**Ken Vowles**  
Executive Director with Responsibility  
for the Environment

The operations of a multi-utility have the potential to interact with the environment in numerous ways. This Report has been compiled to provide a comprehensive and objective account of our main environmental issues and the progress we are making in minimising them.

It is my role to ensure that our businesses are implementing the group environmental policy and have appropriate systems for measuring and managing their environmental impacts. I also ensure that the Board is appraised of performance and that the associated financial risks to the business are assessed and managed.

I attach great importance to external consultation, and have already taken steps to extend this in the coming year by the establishment of our Environment Forum, a panel of external experts whose perspective I hope will challenge and stimulate our own thinking.

Last year we set ourselves targets and have made significant progress. Generation Wholesale and Power Systems have extended their externally certified environmental management systems. Energy Supply has implemented a range of innovative energy saving projects with domestic, commercial and public sector customers. Southern Water has intensified its leakage reduction programme and the initial results suggest that they are making excellent progress in dealing with the issues. These are just a few highlights from the many achievements detailed in this Report.

However, we are not complacent and recognise there is much left to achieve. Generation Wholesale are continuing to install and commission emissions control equipment. Power Systems are working to eliminate the visual impact of transmission and distribution networks and to reduce the risk of oil spills. We will continue our major capital spend which is yielding substantial improvement in waste water treatment.

As we progressively deal with the issues, we are also identifying areas in which our particular expertise can create innovative approaches to environmental problems. By bringing together our experience in generation and waste water treatment, for example, we aim to develop new techniques for disposing of sewage sludge which will increase the options available for resolving this key issue.

I hope that this Report is clear and informative, and would welcome your comments on any aspect via the enclosed reply card.

A handwritten signature in dark ink, appearing to read 'Ken Vowles', written over a horizontal line.

**Ken Vowles**  
Executive Director with Responsibility  
for the Environment

# Contributing to Sustainable Development

Participate fully with the Government and its agencies in striving towards the aims of sustainable development in the utility sector and influence the development of environmental legislation by contributing positively to relevant consultation processes.

It is now five years since the Rio Earth Summit brought the concept of sustainability to the attention of governments worldwide. Much research and debate has taken place in this period which has clarified the meaning of the term.

Most significantly, there is now broad agreement that sustainability involves a balance between environmental, social and economic priorities. Our core businesses of energy and water services are at the heart of sustainability, being essential services to society. Sustainability equally embraces the need to ensure that each generation leaves adequate resources for the next.

What sustainability means for ScottishPower

### Achieving social, environmental and economic balance

It is now well recognised that the provision of these services involves us directly in a number of environmental sustainability issues. These need to be understood in the context of our role in the provision of energy and water services to enable communities to achieve a healthy and safe living environment.

Electricity generation can contribute to the emissions of greenhouse gases and also to the gases which cause acid rain. Water resources, once seen as limitless, are now recognised as requiring careful conservation and protection. Waste water treatment, although greatly reducing the pollution produced by society, still results in a pollution burden on rivers and the sea. Increasingly we have become aware of our effect on sensitive wildlife sites and the biodiversity they support.

It is important also to recognise the social functions that we perform. We provide energy to homes and industry, and we recognise that some sectors of society on low income are unable to afford the energy they need to keep

warm. Similarly, we supply clean, safe drinking water and treat waste water, which are vital to maintaining public health. These are essential services which must be provided at prices which all members of society are able to afford. This complex balance between environmental, social and economic objectives is a good example of the central challenge that sustainability presents, and as a multi-utility we believe that we have the skills to develop some innovative solutions in the future.

Governments and companies are still in the early stages of working out how the broad principles of sustainability can be implemented in practice. The UK Government's Sustainable Development Strategy is under review and is due to be completed in the Summer of 1998 in conjunction with a concise set of sustainability indicators. ScottishPower supports this work and we are continuously looking constructively at the contribution we can make.

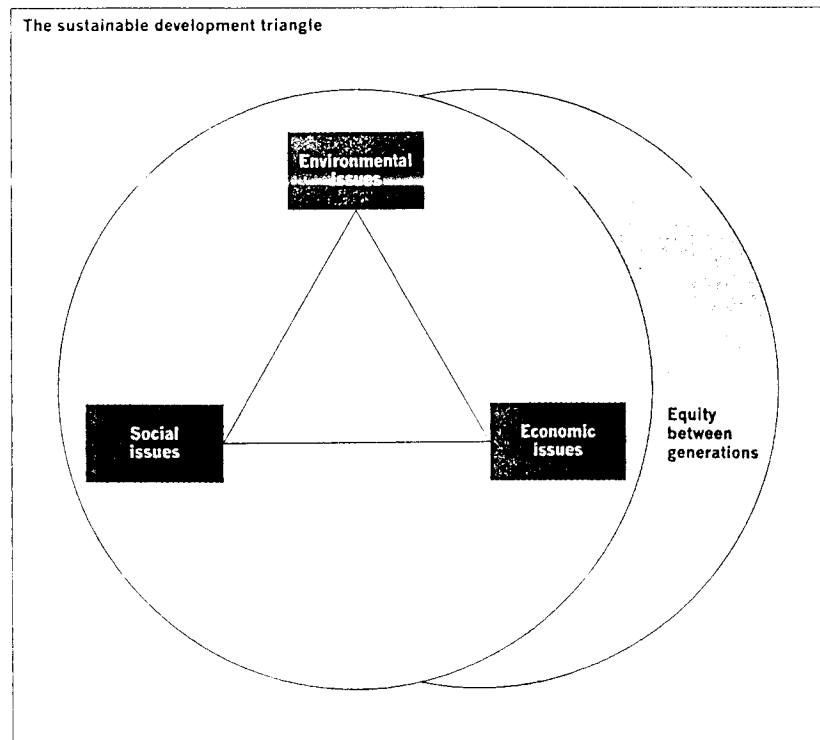
### Developing our strategy

We have begun to turn the concept of sustainability into an implementation strategy by establishing a concept of a hierarchy of processes from the most to the least sustainable. The hierarchy allows for the fact that sustainable solutions cannot usually be achieved in one step change, because the technologies may not be available or may be economically prohibitive. Other solutions, for example, the introduction of water meters or the improvement of home energy efficiency, frequently have a slow take-up rate.

Our approach is therefore based on identifying progressively more sustainable processes and seeking to move our operation up the hierarchy at every opportunity.

Further detailed research and consultation is required to build consensus around the hierarchy tables, but diagram 1.2 shows how the concept might be applied

Diagram 1.1





Businesses at a glance

**Generation Wholesale**

Operates ScottishPower's generating stations and undertakes the wholesale trading of electricity and gas.

- Over 4,000 MW generation capacity
- 2 major coal-fired stations at Longannet and Cogenzie
- Developing cleaner coal generation
- 217 MW renewable energy generation

**Generation Wholesale in this Report**

Issues	Page
Sustainable electricity generation hierarchy	7
Environmental management	8
Generation efficiency	16
Discharges to water	20
Emissions to air	22
Power station ash	25
Transport	31
Health and safety	33

Power Systems (in our franchise areas in Scotland and in the Manweb region)

Power Systems in Scotland manages transmission and distribution of electricity from power station to customer in Central and Southern Scotland.

Manweb distributes electricity from the National Grid to customers in Merseyside, Cheshire and North Wales.

→ Power Systems serves 3.2 million premises:

- 1.8 million in Scotland
- 1.4 million in the Manweb region

→ Power Systems assets in Scotland and in the Manweb region:

- 62,000 km underground cables
- 50,000 km overhead lines
- 81,820 transformers

**Power Systems in this Report**

Issues	Page
Environmental management	8
Electric and magnetic fields	12
Sulphur hexafluoride	24
Spoil waste	26
Oil contamination	28
Species, habitats and heritage	28
Visual impact	30
Streetworks and noise	30
Transport	31
Health and safety	33

**Energy Supply**

Responsible for electricity and gas supply related activities in our franchise regions and UK wide. The main functions of Energy Supply include sales and marketing, billing and income collection, and responding to customer enquiries from call centres in Glasgow, Warrington and Rhostyllen. Energy Supply has also developed a range of services to assist domestic, commercial and public sector customers achieve energy savings.

**Energy Supply in this Report**

Issues	Page
Customer energy saving initiatives	11

**Southern Water**

Supplies water and waste water treatment services to customers in Kent, Sussex, Hampshire and the Isle of Wight.

- Customer base of 1.7 million premises
- Supplies 604 million litres of drinking water per day
- Over 13,000 km of mains pipes
- Waste water treatment for 4.2 million people
- Receives 1,300 million litres of waste water per day
- Treated at 394 waste water treatment works

**Southern water in this report**

Issues	Page
Sustainable sewage sludge disposal hierarchy	7
Customer water saving initiatives	13
Drinking water quality	14
Conservation of water resources	15
Waste water treatment emissions	24
Sewage sludge disposal	25
Visual impact	30
Transport	31
Health and safety	33

**ScottishTelecom**

Operates an advanced telecommunications network based on fibre optic technology which is available to commercial and domestic customers. ScottishTelecom operates throughout Scotland and utilises existing overhead and underground ducts to minimise the need for additional structures.

**ScottishTelecom in this Report**

Issues	Page
Spoil waste	26
Recycling mobile phones	26
Visual impact	30
Streetworks and noise	30
Transport	31
Health and safety	33

**Retail**

Is the UK's third largest electrical retailer with 174 stores nationwide at both high street and out-of-town sites. The store brands are ScottishPower, Sound & Vision, Electricity Plus and Total Sound & Vision.

**Retail in this Report**

Issues	Page
Packaging	26
Transport	31

**Contracting Services**

Provides installation, maintenance, project and facilities management services for electrical systems to a wide range of commercial and public sector customers.

**Contracting Services in this Report**

Issues	Page
Polychlorinated biphenyl disposal for customers	28
Transport	31

**Technology**

Provides technical, quality and environmental consultancy services to the ScottishPower group and to external customers.

**Technology in this Report**

Issues	Page
Polychlorinated biphenyl testing	28

## Executive Statements



Ian Robinson  
Chief Executive

Over recent years we have seen the agenda surrounding environmental issues gather pace through the increasing involvement of Government, business and the public. The most significant theme has been the concept of sustainable development. Sustainable development is about finding the complex balance between environmental, social and economic objectives. While nobody yet has the ultimate solutions, it is most encouraging to see how organisations in both the public and private sectors have begun to debate the subject seriously.

As a leading multi-utility, we are involved in many of the issues and objectives within this agenda. We believe we have the skills to develop some innovative solutions for the future which successfully achieve that delicate balance of environmental, social and economic objectives. This Report describes some examples. Of course no single company can achieve these goals on its own and the balances will continue to evolve. We will therefore maintain an approach which keeps us at the forefront of the debates about how best to respond to these sustainability objectives, and continue to make a positive and informed contribution to finding solutions.

On the international stage, the most significant development in 1997 was the agreement at Kyoto to targets for tackling global climate change. We welcome the agreement and are committed to working with the UK Government to develop a strategy for achieving not only the Kyoto targets, but also the UK's own more

ambitious target of 20% reduction in carbon dioxide.

We are also looking forward to the publication of the revised UK's Sustainable Development Strategy and the opportunity to appraise how we will make a significant contribution.

It is becoming increasingly clear that business goals and sustainability can be made to work together and the coming year will produce more examples of progress in this direction. We will be launching our 'Green Energy' tariff to provide customers with a choice of promoting renewable generation. Our water business will have agreed strategies for waste water treatment and for conserving water resources.

This Report details the considerable achievements we have made thus far. But as the drive towards sustainable development continues more will be required of society. We therefore set out targets for the forthcoming year and will ensure through our business planning process that we continue to set targets which support the Government's Sustainable Development Strategy. We look forward to reviewing our progress in next year's Report and to discussing in more detail the steps we intend to take as our part in meeting the challenge of sustainability.

Ian Robinson  
Chief Executive

## Environmental Principles

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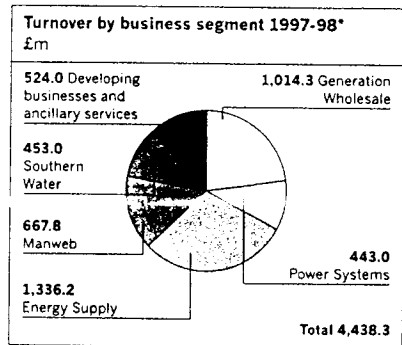
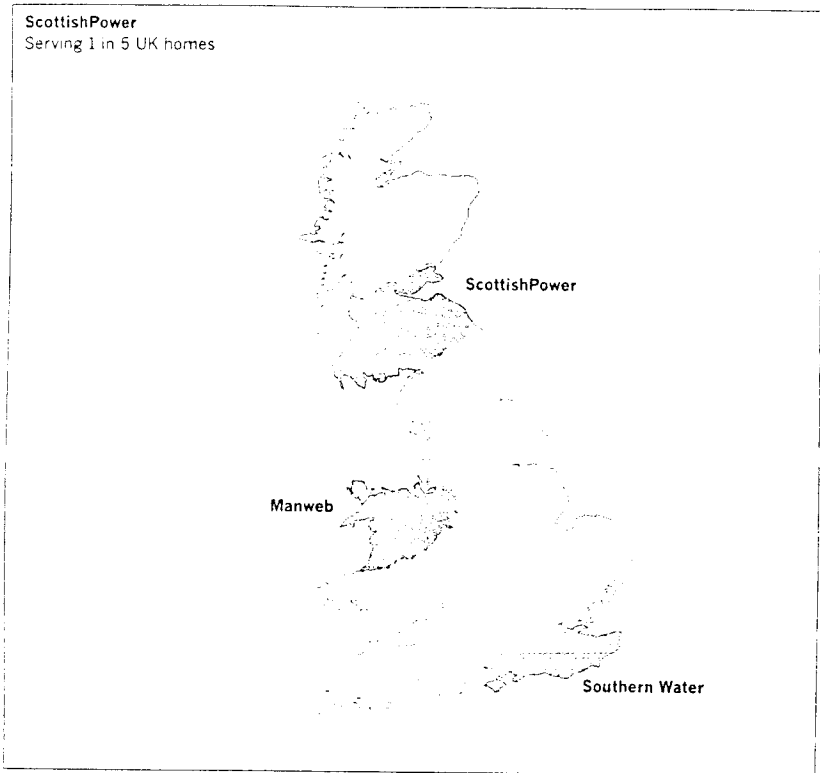
ScottishPower, throughout its utility and related services, will meet or improve upon legislative and regulatory environmental requirements and codes of practice. We aim to contain the environmental impact of our activities to a practicable minimum in accordance with our Environmental Principles. In addition we will strive to continue to be regarded as a good and trusted neighbour, demonstrating environmental care, in the communities in which we operate.

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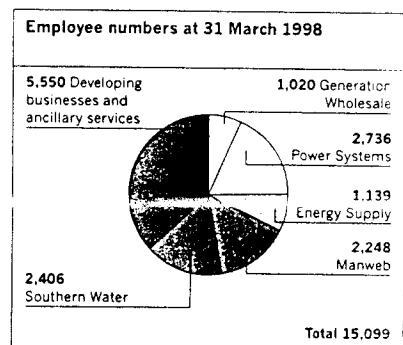
- Incorporate environmental issues into the business decision making process, taking due cognisance of all threats and opportunities and in accordance with the aims of sustainable development.
- Participate fully with the Government and its agencies in striving towards the aims of sustainable development in the utility sector and influence the development of environmental legislation by contributing positively to relevant consultation processes.
- Continue to refine and develop our Environmental Management Systems in line with our business needs, taking into account appropriate best practices.
  - Require businesses to establish relevant objectives supported by quantifiable targets which relate to their reduction of environmental impact, sustainability, risk management and compliance.
- Maintain a competence in environmental science in order to keep abreast of developments in the understanding of relevant issues, supporting Research and Development as appropriate, with the overall objective of continuous environmental improvement.
- Promote the efficient use of resources, energy, water and fuel throughout the group's operations.
- Promote waste minimisation, encouraging the beneficial re-use or recycling and where these are not practicable ensure disposal in an environmentally responsible manner in accordance with our duty of care obligations.
- Advise customers on the efficient use of energy and of essential resources such as fuels and water.
- Recognising that the interchange of information and experience can lead to better environmental performance, we will encourage dialogue and promote an appreciation of the company's environmental performance between all parts of the ScottishPower group, its shareholders, customers, employees, suppliers and other interested parties.
- As our employees make a significant contribution to our environmental performance, we will work with them on relevant issues and provide appropriate training.
- ScottishPower in seeking to be a good and trusted neighbour will establish a responsible interchange of views and ideas in the communities in which we operate.
- We recognise the value to society of both cultural heritage and biological diversity and will strive, within the scope of our operations, to secure their preservation.

# Business Overview

ScottishPower is a leading UK multi-utility business with some five million customers in three distinct geographical regions across England, Wales and Scotland.



\*Including inter segment turnover.



Employee numbers at the year end (full-time and part-time) employed by the group, including executive directors.

THE TIMES  
25/01/99

# Search for the best proves a fluid task

**From Telewest to Scottish Power, the FTSE 100 is dominating Britain, says Jason Nisse**

NAPOLEON famously said that Britain was a nation of shopkeepers. He was implying that small businesses formed the backbone of this island nation, defining the British psyche as a country of individuals, who like to work for themselves, create their own enterprises and develop them. A nation of entrepreneurs, if you will.

A cursory look at the London stock market might make one think that this has all changed. An institution developed shortly before Napoleon came to power is now dominated by a handful of increasingly powerful companies.

UK-listed groups such as BP, Amoco, Glaxo Wellcome, AstraZeneca, Vodafone and Diageo stand among the largest companies in the world. The Stoxx list of the top 50 companies in Europe has more UK-based members (13) than members from any other country. The members of the FTSE 100 list of the UK's top companies account for more than 80 per cent of the value of the London stock market. We are increasingly becoming less a nation of shopkeepers than a nation of employees.

That is why, just under 18 months ago, *The Times* started a unique analysis of the 100 leading corporations in Britain. The Corporate Profile series is aimed at getting to the heart of these giant companies that dominate our lives and our investment decisions, understanding what makes them tick, what is their "unique selling proposition", how well they deliver to the objectives that they set themselves and how they interact

with other organisations and the community at large.

The board structure is analysed, as are the market's views of the companies and a rating, out of 100, looking at issues such as how well the directors are paid, how the shares have performed and whether the company has a well explained and executed ethical policy.

At the end of this mammoth task, which started in October 1997 with Pearson, which was just at the start of the Marjorie Scardino revolution, there should be an answer to the question: "What is Britain's best corporation?"

At the moment, the series is pretty much at its halfway stage. This might seem strange given that nearly 70 companies have been analysed, but the FTSE 100 is a dynamic list, recalculated every three months and so changes quite dramatically. For example, Sema Group, profiled in November, no longer merits its place in the FTSE 100, thanks to the decline in the value of the company. (Our analysis of Sema was quite dismissive, questioning whether its corporate structure under Pierre Bonelli was open enough and wondering where growth would be coming from for the computer systems company.) Other well-known companies to lose their FTSE status in recent months have included Nycomed Amersham and British Land, while the likes of COLT Telecom (which was valued at only £500 million when this series started and now is worth more than £7 billion), Telewest and WPP have all risen from the ranks to take their place at the market's top table.

Then there has been corporate activity. There will always be bids and deals, but the past few years have seen some of the most hectic dealmaking in British history. There are many reasons for this. Europe and the US have entered an era of low inflation and low growth, while

the previously exciting Far Eastern market has fallen apart, so taking away a large amount of the growth potential for European companies. At the same time a low oil price has led to a radical restructuring of that industry, while growing consolidation among fund managers and their increasing reliance on index tracking rather than active management has seen a "flight to size" in institutional investment decisions.

How has this manifested itself? Well, BP was just BP when it was profiled last June — now it has merged with Amoco. Commercial Union was independent when it appeared in December 1997, now it has merged with General Accident.

However, the most obvious example is BAT Industries. When it was analysed on December 15, 1997, it was a large, unwieldy tobacco and insurance conglomerate. We predicted that plans to demerge the company might enhance what had been a pretty poor share performance. How right this proved. The financial services side broke away and merged with Zurich Reinsurance, prompting a dramatic rerating of the company that nearly doubled its market value. The cigarette business has also thrived, striking a deal earlier this month to merge with Rothmans and create the world's second-largest tobacco group.

So, of the companies profiled, which came out well and which badly? On the simple mathematical verdict, the best and worst are clear. Scottish Power — which was then, irritatingly, called ScottishPower — stands head and shoulders above everyone else with a score of 81%, thanks to a ten out of ten for its pay policy and nines for strength of brand and innovation. At the time we praised its ability to size up situations and act quickly, something shown when it moved to buy PacifiCorp, the US utility.

Surprisingly, perhaps, Shell and British Land also obtained high ratings. They showed that clear and well-defined policies on remuneration can differentiate a company operating in difficult markets. Rentokil Initial might ponder this, its low rating being partially because of a two for ethical expression.

And at the bottom? There is a clear loser — Telewest Communication. It arrived in the FTSE 100 thanks to its deal to acquire General Cable and so make it, by a short head, the largest cable TV company in the UK. Our analysis pointed out its capacity to disappoint, to fail to exploit the market opportunities and, with a mere one out of ten for ethical expression, its failure to define clearly what is expected of its employees. To be fair to Telewest, though, it had been through a lot of turmoil and its latest chief executive, Tony Illsley, had yet to get to grips with the company.

Given that the next lowest score was for BAT Industries, it is clear that companies can redeem themselves by swift and decisive action.

In the next few weeks some of the best-performing companies on the stock market will be profiled, such as Kingfisher, one of the few retailers to rise above the Christmas gloom, and Orange, a standard bearer for the telecom revolution.

## THE VERDICTS

COMPANY	SCORE	DATE
Scottish Power	81½	Feb 09 1998
Shell	79	Oct 27 1997
British Land	79	Dec 07 1998
BAA	78	Dec 22 1997
BP	78	Jun 29 1998
Legal & General	78	Jun 22 1998
Granada	78	Feb 02 1998
Cadbury Schweppes	77	Apr 14 1998
PowerGen	76	Jul 06 1998
Boots	76	Apr 27 1998
Lloyds TSB	75	Nov 10 1997
British Aerospace	75	Jun 15 1998
Stagecoach	74	Sep 1 1998
Schroders	74	Jun 01 1998
BC	74	Nov 03 1997
Aada	74	Oct 13 1997
Routers	73	Dec 14 1998
Teeco	73	Jun 08 1998
Reckitt & Colman	73	May 18 1998
British Energy	73	Apr 20 1998
Smiths Industries	73	Nov 24 1997
Halifax	73	Jan 05 1998
COLT Telecom	72	Jan 18 1999
Nycomed Amersham	72	Nov 09 1998
United News & Media	71	May 11 1998
Hays	71	Oct 12 1998
National Power	70	Jan 11 1998
Prudential	70	Oct 5 1998
3i	70	May 04 1998
Diageo	69	Nov 2 1998
Severn Trent	69½	Oct 19 1998
WPP	69	Aug 10 1998
Carlton Communications	69	Sep 29 1998
Unilever	69	Feb 23 1998
Scottish & Newcastle	69	Mar 02 1998
Allied Domecq	68	Nov 30 1998
Smithkline Beecham	68	Sep 14 1998
HSBC	68	Aug 17 1998
Compass	68	Jul 20 1998
Rolls-Royce	67	Feb 16 1998
Rio Tinto	67	Nov 17 1997
ICI	67	Mar 16 1998
Reed Elsevier	67	Jan 4 1998
Amvescap	66	Sep 21 1998
Railtrack	66	Jan 12 1998
Sema	66	Nov 23 1998
Tomkins	66	Nov 16 1998
Abbey National	66	May 25 1998
Norwich Union	66	Jan 19 1998
Alliance & Leicester	64	Jul 13 1998
Thames Water	64	Aug 03 1998
CU*	63	Dec 01 1997
Woolwich	63	Dec 23 1998
Rentokil Initial	62	Dec 08 1997
J Sainsbury	62	Aug 24 1998
British Airways	61	Oct 20 1997
Pearson	59	Oct 08 1997
Royal & SunAlliance	58	Mar 30 1998
Barclays	57	Jan 26 1998
Safeway	54	Mar 09 1998
NatWest	54	Mar 23 1998
United Utilities	54	Apr 06 1998
Bilton	53	Sep 7 1998
BAT Industries**	49	Dec 15 1997
Telewest	47	Oct 26 1998

\* before the merger with General Accident

\*\* before the dermerger into financial services

and tobacco and the subsequent deals to create AlliedZurich and merge BAT with Rothmans

## SCOTTISHPOWER GROUP AWARDS FOR 1997-98

### CORPORATE

- 1998 IVCA (International Visual Communications Association) Silver Award under the Charity & Public Awareness Category
- FT/ABSA Awards 1997/98 Business in the Arts shortlisted
- The Utility Industry Achievements Awards 1998 – The Internet Initiative Award 3<sup>rd</sup> Place

### POWER SYSTEMS

- ISO9002 “Quality Assurance” Certificate awarded to the Metering Business
- Dewar Place presented with and Award of Merit for 1997 by America’s Premier Illumination Engineering Society
- Accredited Training Organization status awarded to PowerLearning by the Institute of IT Training
- Investors in People Award presented to Merseyside Region
- Investors in People Award presented to Hoylake House
- U K National Lighting Award 1997

### SCOTTISHTELECOM

- ScottishTelecom ABSA Award
- ScottishTelecom 5<sup>th</sup> at Deloitte & Touche top 50 fastest growing technology companies
- Demon Internet: Personal Computer World Award for Best ISP  
ISP of the Year Net Magazine Netherlands
- Prestel: Internet Service Provider of the Year

- Utility Week Information Technology Initiative Award
- Rural Wales Award from Campaign for the Protection of Rural Wales
- Denbighshire County Council Rangers Service Annual Award for Environmental Improvements

#### **ISD**

- Runner up in the British Computer Society IS Management Awards for UK 1998
- David Jones, winner of the IT Director of the Year, Insider Corporate Elite Awards UK

#### **TECHNOLOGY**

- RoSPA Gold Award
- Re accreditation of the LRQA

#### **SCOTTISHPOWER LEARNING**

- Investors in People Award for 1998
- Utility Week Industry Achievement Award, Community Initiative of the Year Category
- Lanarkshire Education Business Partnership Champions Award 1998
- British Association of Communication in Business Best Newsletter Category

#### **SOUTHERN WATER**

- RoSPA Health & Safety Award Bronze

#### **ENERGY SUPPLY**

- Re-credited for ISO 9002 (ScottishPower/Manweb)
- Overall Business Award for part of ISO 9002 for Monitoring & Reporting of Guaranteed Standards
- Completed the European Foundation Quality Model of Business Excellence



- Equal Opportunities Award for Employment of Disabled People
- Equal Opportunities Award (Corporate)
- RoSPA's Safety Professional of the Year Award

RECEIVED

FEB 26 9 13 AM '99

**CERTIFICATE OF SERVICE**

UTAH PUBLIC  
SERVICE COMMISSION

I hereby certify that I caused to be served the foregoing **DIRECT TESTIMONY AND EXHIBITS OF SCOTTISH POWER plc AND PACIFICORP** by mailing in a sealed, first-class postage-prepaid envelope and deposited with the United States Postal Service at Portland, Oregon on February 26, 1999, on:

Michael Ginsberg  
Assistant Attorney General  
Division of Public Utilities  
160 East 300 South, 5th Floor  
Salt Lake City, UT 84111

Doug Tingey  
Assistant Attorney General  
Committee of Consumer Service  
160 East 300 South, 5th Floor  
Salt Lake City, UT 84111

Peter J. Mattheis  
Matthew J. Jones  
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Bill Thomas Peters  
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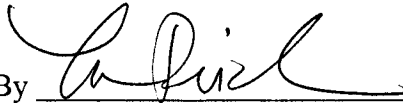
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