BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF PACIFICORP FOR AN INCREASE IN ITS RATES AND CHARGES	)))))	DOCKET NO. 01-035-01

PRE-FILED DIRECT TESTIMONY OF JEFF BURKS
ON BEHALF OF THE UTAH ENERGY OFFICE
UTAH DEPARTMENT OF NATURAL RESOURCES

Q: Please state your name and business address.

A. My name is Jeff Burks, and my business address is 1594 West North Temple, Suite 3610, PO Box 146480, Salt Lake City, Utah 84114-6480.

Q: Who is your employer and in what capacity are you employed?

A: I am employed by the Utah Department of Natural Resources where I currently serve as a Director of the Utah Energy Office (UEO). In 1999 I was appointed by Governor Leavitt to the position of State Energy Manager and assigned responsibility to develop an energy management plan for state government. In these capacities I have managed a staff of 10 engineers, economists, and policy analysts who are responsible for providing the Department of Natural Resources and other public agencies with energy efficiency and renewable energy engineering services, economic research, policy analysis and planning assistance on a range of energy, environmental and natural resource issues.

Q: Please state your educational background and work experience.

A: I attended undergraduate programs at the University of Wisconsin at Madison and the University of Utah. In 1978 I graduated from the University of Utah with a B. Sc. degree in Economics. I have been involved with energy policy issues since 1979 when I began my state employment with the Governor's Energy Office. For the last seventeen years I have been employed by the Utah Department of Natural Resources where I have held the positions of Energy Facility Siting Coordinator, Senior Energy Analyst, and Assistant Director of the Division of Energy. I have been in my current position with the Department of Natural Resources since June, 1994.

Q: Have you previously testified before the Utah Public Service Commission on the issues of energy efficiency and renewable energy?

A: Yes. I have filed testimony in PacifiCorp Dockets 97-035-01, 98-2035-004, and 99-035-10 on this matter and was a signatory party to the *Stipulation of Settlement of Issues Related to the Public Purposes Programs* in the Scottish Power/PacifiCorp merger proceedings. I have served as co-chair of the Public Service Commission's (Commission) Energy Efficiency and Renewable Energy Task Force, and Energy Efficiency Advisory Group.

Q: What is the purpose of your testimony in this docket?

A: I have three purposes in filing testimony in the cost-of-service and rate design portion of this rate case. First, I will discuss the UEO's position on the appropriate mechanism for recovering costs of demand side management (DSM) programs as recommended by the UEO's expert witness Dr. David Nichols. Second, my testimony will discuss net metering and recommendations made by the Commission's Energy Efficiency and Renewable Task Force in the report filed with the Commission on December 23, 1999. Finally, I will

discuss some policy implications and make recommendations regarding combined-heat-and-power as a distributed generation resource.

Q: Please summarize your testimony?

A: I recommend that a DSM tariff rider be adopted as the cost recovery mechanism for the Company's expenditures on DSM, as set out by UEO's expert witness, Dr. David Nichols. In addition I recommend the Commission order the Company to adopt a net metering tariff and open a docket to hear parties' positions on the regulatory, economic and institutional issues facing distributed resources development in the Company's Utah service territory.

Q: Do investments in DSM provide benefits to the Company and ratepayers?

A: Yes. In previously filed testimony, Dr. Nichols pointed out that Tellus Institute's study, *An Economic Analysis of Achievable New Demand-Side Management Opportunities in Utah,* (Tellus Study) found a huge potential for DSM that has not yet been tapped in Utah. Moreover, the economic analysis performed as part of the Tellus Study concluded the cumulative present value of energy resource savings from implementing the DSM portfolio identified in the study was over $1.44 billion (2000 dollars). With total resource costs of $370 million, the net benefit is $1.08 billion and the benefit to cost (B/C) ratio is 3.9 to 1. Moreover, the long-run impact of this portfolio on average rates was found to result in an estimated $132 million reduction in rates over the 24 year period of the study.

In addition there are substantial economic benefits in the near-term from investment in DSM. Reductions in demand can either offset the need for the Company to purchase high priced power in the wholesale spot market or can be a resource for the Company to sell into that market. Under either circumstance, in the current wholesale market the financial value

of DSM resources to the Company and ratepayer in the near-term is very high and the economic case for increased investment in DSM is even stronger.

Q: Do investments in DSM provide other benefits?

A: Yes. Investments in DSM have economic benefits to the state. Several reports have shown that investment in energy efficiency can have significant positive impacts on local per capita income, jobs and total state income. One study in particular prepared by the RAND Corporation (Bernstein et al. 2000) for the California Energy Commission showed energy efficiency investments in California since 1977 have provided economic benefits to the state economy equivalent to $875-$1,300 per capita (1998) and reduced the energy expenditure burden on low-income households.

Second, investments in DSM produce air quality benefits. The Tellus Study found that energy efficiency reduces the amount of air pollutants emitted from power plants, including sulfur oxide, and nitrogen oxide. These emissions are of particular concern for both health reasons and federal visibility standards. The cumulative reductions in emissions from implementing the DSM portfolio analyzed in the Tellus Study were estimated in the range of 428 to 670 tons of SO_x and 12,500 to 19,600 tons of NO_x. Moreover, investments in DSM can also offset the need to bring dirty, diesel-fired generators online to meet peak demand.

Environmental benefits of energy efficiency are also acknowledged by EPA in the regional haze rule. Section 309(d)(8), Pollution Prevention, explicitly recognizes energy efficiency as an air pollution control strategy to reduce visibility causing emissions. Actions taken by this Commission to support DSM programs will provide collateral air quality benefits and

allow Utah's environmental regulators to include these measures as pollution control strategies in preparing Utah's regional haze SIP.

Q: What is the State of Utah's policy with respect to energy efficiency?

A: On March 14, 2001, Governor Leavitt issued a set of energy policy principals for his administration to implement. With regards to DSM, the Governor stated that "[Utah] will cultivate an ethic of conservation and energy efficiency," and that:

> *Public policies will support sustained investments in cost effective demand side management and increased use of energy efficient technologies and services in Utah's economy.*

Utah Energy Policy, March 14, 2001 *available at* www.governor.state.ut.us/

In addition, he declared that "energy prices in Utah will reflect the development and use of the state's low cost resources." *id.* The UEO believes the Tellus Study definitively demonstrates that DSM represents a low cost resource to the Company in Utah. In the absence of a DSM initiative ratepayers are likely to be charged higher rates due to spot wholesale power purchases of electricity and expenditures on costly new generation that could have been avoided. In the current market environment the acquisition of demand side resources should be immediately and vigorously pursued.

Q: How should PacifiCorp investments in DSM programs be recovered?

A: The UEO believes the most appropriate accounting treatment for cost recovery of the Company's future investments in DSM is the tariff rider. The DSM tariff rider would provide the Company cost recovery certainty necessary to motivate acquisition of new, cost-effective DSR. A tariff rider provides the additional advantage of allowing annual tracking of expenditures against revenues and will accommodate funding and program changes based on market conditions. A tariff rider also provides a consistent and stable

source of funding necessary to transform the energy service industry in Utah. In order to transform the energy service infrastructure in Utah and enable it to deliver timely, cost-effective DSM on a long-term basis, a cost-recovery mechanism must be adopted that provides for stable, consistent funding from year to year. Finally, the tariff rider is the only cost recovery mechanism the UEO believes could accommodate "self directed" funding for DSM by large customers.

Net Metering

Q: You mentioned that you wanted to discuss net metering. What is net metering?

A: Net metering allows users of electricity to reduce their electric bills by generating power using *on-site* energy generating systems. Predominantly, the source of power is environmentally benign such as solar photovoltaic (PV) systems or wind energy systems. Generally, net metering programs are offered to residential customers and small commercial customers. Under net metering, customers have the opportunity to reduce their purchase of utility-generated electricity and run their electric meters backward when their distributed, renewable generation is greater than their on-site usage. Beyond what is needed for the customer to meet their own needs, the customer is essentially supplying electricity to the utility. The extra electricity is then credited, or off-set, against the electricity delivered from the utility to the customer at other times during the billing period. This allows the customer to obtain the full benefits of distributed, renewable energy generation regardless of whether the customer is using electricity at the same time the system is generating power.

Q: How does net metering work?

A: Net metering is relatively simple. It allows utility customers to use any extra electricity they generate from small, distributed renewable energy technologies to spin their existing utility meter backwards. At the end of a billing cycle they are charged only for the "net" electricity they consume. Net metering simplifies the process of metering and accounting for modest amounts of excess electricity that may be produced by small distributed power systems.

Q: Have other states in PacifiCorp's service territory implemented net metering tariffs?

A: Yes. Oregon, Washington, Idaho, California, and Wyoming all have net metering programs.

Q: Has the Company had any experience with net metering in Utah?

A. Yes. In Utah, the Company has partnered with the Utah Energy Office and the National Park Service to implement a net metering "pilot" project at the new visitor center at Zion National Park.

Q: What information on net metering has been filed with this Commission?

A: As a result of the order in Docket No. 97-035-01, the Public Service Commission agreed to organize a task force in the "interest of concrete proposals, well analyzed as to the costs and benefits, and specifics of program delivery . . ." with respect to energy efficiency and renewable resources. The order outlined specific programs for which the Commission required analysis. Included in this list were green pricing, ***net metering***, and energy efficiency. On December 23, 1999 the Task Force submitted its report and recommendations to the Commission.

Q: Please summarize the report's recommendations regarding net metering.

A: The Energy Efficiency and Renewable Energy Task Force recommended that a "net metering program be established in Utah Power's Service territory." The report's recommendations also included a template of program elements the Task Force believed should be included in the design of a net metering tariff.

Distributed Generation

Q: You mentioned you wanted to discuss the issue of distributed generation. Why is a discussion of distributed generation relevant to testimony filed by the Utah Energy Office?

A: In previously filed testimony, UEO's witness Dr. David Nichols presented information highlighting that a substantial amount of centrally supplied electricity can be saved if on-site combined-heat-and-power (CHP) were installed in commercial and industrial facilities in Utah. Dr. Nichols testimony indicated that the on-site CHP evaluated in his study was a form of distributed generation. As such the UEO wishes to bring to the Commission's attention the larger policy implications of distributed generation resources.

Q: What are some of the benefits of distributed generation?

A. Emerging distributed generation technologies such as natural gas micro-turbines, fuel cells and renewable energy technologies, have the potential to reduce capital expenditures associated with traditional distribution system upgrades, enhance reliability and help avoid central plant generation costs. From an environmental perspective these technologies are attractive because of their superior emissions characteristics relative to many central station technologies. Because of these potential

economic and environmental benefits, and the fact that a form of distributed generation, CHP, was recommended as a cost-effective, electricity saving technology in the Tellus Study, the UEO believes the time is right for the Commission to undertake a comprehensive investigation of the potential for, and market and regulatory barriers to distributed generation in Utah.

Q: What other reasons are there for the Commission to undertake a comprehensive investigation of distributed generation?

A: It would promote state energy policy. The Governor's energy policy calls for the "development of new energy supplies sufficient to meet Utah's growing demand." Distributed generation, with DSM, represents a important potential new source of "low cost" electricity supplies for Utah's economy. Moreover, Utah legislative policy declares "[i]t is the policy of this state to encourage the development of small power production and cogeneration facilities, . . . " and:

> *"in order to promote the more rapid development of new sources of electrical energy, to maintain the economic vitality of the state through the continuing production of goods and the employment of its people, and to promote the efficient utilization and distribution of energy, it is desirable and necessary to encourage independent energy producers to competitively develop sources of electric energy not otherwise available to Utah businesses, residences, and industries served by electrical corporations, and to remove unnecessary barriers to energy transactions involving independent energy producers . . ."*

Utah Code Ann. 54-12(1) -- Small Power Production and Cogeneration

Recommendations

Q: What do you recommend the Commission do?

A. In my previous testimony in this proceeding I made recommendations on DSM implementation to the Company. The Commission should direct the Company to implement those recommendations.

In my previous testimony I recommended that the Company immediately implement certain DSM initiatives while it is preparing a DSM Plan for Commission review. The Commission should indicate that it expects to view costs incurred from such interim new DSM as fully recoverable from ratepayers.

The Commission should direct the Company to design tariff riders for recovery of new DSM costs. There would be one rider for residential DSM costs, recoverable from residential customers, and another for non-residential DSM costs, recoverable from non-residential customers.

The Commission should direct that the riders be designed to recover the first-year DSM budgets the Commission adopts; to be adjusted annually for subsequent years' adopted DSM budgets, and for over or under recoveries; and to include the shared savings mechanism proposed by Dr. David Nichols, that is, a credit for purchased power market savings arising from DSM, net of lost retail revenues arising from DSM.

The Commission should direct the Company to file these riders as part of the rates filed pursuant to its decisions in this case.

The Commission should direct the Company to design and file a net metering tariff for its Utah service territory based on the recommendations of the Commission's Energy Efficiency and Renewable Energy Task Force.

The Commission should open a docket to hear parties positions and assessment of the potential opportunities for distributed generation and the regulatory, economic and institutional issues facing distributed resources in the Company's Utah service territory.

Q: Does this conclude your testimony?

A: Yes.