Gary A. Dodge, #0897
HATCH, JAMES & DODGE
10 West Broadway, Suite 400
Salt Lake City, UT 84101
Telephone: 801-363-6363
Facsimile: 801-363-6666
Attorneys for UAE

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Acknowledgment of PACIFICORP'S Integrated Resource Plan 2004	DOCKET NO. 05-2035-01 **COMMENTS AND RECOMMENDATIONS OF THE UTAH ASSOCIATION OF ENERGY USERS ON PACIFICORP'S 2004 IRP**

The Utah Association of Energy Users ("UAE") hereby submits its response to the Public Service Commission's (Commission) Order dated February 10, 2005, requesting comments on the appropriateness of PacifiCorp's 2004 Integrated Resource Plan ("IRP").

Summary of Comments and Recommendations

UAE recognizes PacifiCorp's substantial efforts in connection with the IRP and appreciates its solicitation of public input. However, UAE cannot recommend Commission acknowledgement of the IRP or Commission support of the proposed action plan. UAE strongly disagrees with PacifiCorp's proposal to immediately commence its Request for Proposals (RFP) process to acquire yet another large combined cycle gas plant in Utah. Rather, UAE recommends that the Commission offer guidance to PacifiCorp on its proposed action plan, as specifically contemplated by Senate Bill 26, as follows:

- Delay issuance of an RFP for the proposed CY 2009 Combined Cycle Combustion Turbine (CCCT) for at least one year (from Fall 2005 to 2006) (IRP page 184).
- Begin aggressive and immediate pursuit and implementation of new and expanded customer-based alternatives, including Demand Side Management (DSM) programs, combined heat and power (CHP), Qualifying Facilities (QF) resources, interruptible contracts and rate design changes.
- To ensure reliability, pursue available market opportunities and consider an RFP in 2005 or 2006 for options to procure the output of up to five 100 MW Intercooled (IC) Aero Derivatives at desired locations in various years, beginning in CY 2009.
- File a new IRP by the end of 2005 with corrections and changes as directed by the Commission. UAE recommends that these corrections include a base case that utilizes updated gas and electric market forecasts, a 12% planning margin, more aggressive customer-side initiates, more reasonable assumptions as to carbon tax risk, interruptible contracts and non-firm transmission, and other appropriate changes based on comments of UAE and other parties.
- Promptly take all steps necessary to make IRP models and input data available to regulators and other participants, subject to appropriate confidentiality protections, in order to permit testing and validation of IRP assumptions and modeling.
- Commence immediate evaluation of the merits of less cumbersome and more transparent and available IRP models.
- Reduce emphasis and reliance on traditional natural gas resources, given dramatic gas price volatility and the significant gas resources already under construction.

- Increase emphasis on prompt development of resources capable of exploiting Utah's coal resources, particularly Integrated Gasification Combined Cycle (IGCC).
- Increase emphasis on resource options that permit greater flexibility in responding to changing circumstances and needs, such as several 100 MW IC Aero units rather than a single 500 MW CCCT unit.

Portions of the recently enacted Senate Bill 26, codified at Utah Code §§ 54-17-101, et seq., create significant implications for the utility's resource planning, as they allow PacifiCorp to obtain pre-approval for the recovery of resource costs. In exchange for upfront approval, the Commission is authorized and expected to provide active guidance on a utility's action plan and to approve or disapprove specific resources selected as a result of implementation of the action plan. SB 26 may shift significant risks from the utility to ratepayers. Accordingly, the Commission's role in resource planning is far more critical and involved than in the past. Given significant deficiencies in the IRP and its action plan and unacceptable ratepayer risks as discussed in these comments, UAE recommends that the Commission decline to acknowledge the 2004 IRP or to approve its action plan. Rather, UAE recommends that the Commission direct PacifiCorp to submit a corrected IRP and a revised action plan by the end of the year, after correcting the deficiencies identified in these comments and the comments of other participants.

UAE's primary concerns with the IRP and its action plan, which are explained in more detail below, are briefly summarized as follows:

1. Outdated and inaccurate market prices. The IRP acknowledges a monumental increase over the past several months in natural gas prices, with significant attendant impacts on electric prices, resource selection, etc. (IRP page 63) However, the IRP fails to respond

adequately to these significant changes; it fails to include updated analyses that incorporate current data and projections. Gas price forecasts have dramatic impacts on nearly every aspect of the IRP, yet the analyses were not redone despite remarkable price increases. In the absence of accurate and current gas and electric prices and forecasts, meaningful comparisons of resources and risks are impossible and the suggested action plan is essentially meaningless.

2. Cumbersome and non-validated models. As emphasized in UAE's comments on the 2003 IRP, no one outside of the Company has ever verified the data or models used in preparing the IRP. Moreover, testimony recently filed by Committee of Consumer Services' (Committee) witness Phil Hayet in the QF docket raises serious questions about the accuracy of the IRP model. The IRP models are untested, unverified, cumbersome and complex. Unless and until others outside of PacifiCorp are allowed to test and validate the modeling and input data used in the IRP, the results will remain highly questionable.

3. Failure to assume aggressive pursuit of customer-based alternatives. Utah has seen dramatic and sustained energy growth for a number of years, and has experienced exponential demand growth. Under these circumstances, it is critical to the public interest generally, and to the interests of Utah ratepayers specifically, that all available alternatives to traditional supply-side resources be aggressively evaluated, pursued and exploited. These alternative resources, including DSM programs, CHP, cogeneration or QF, rate design initiatives, and other such resources (collectively, "customer-based alternatives"), are often, especially in periods of high market prices, less expensive, more efficient, and more environmentally friendly, making pursuit of the same a high priority. PacifiCorp's IRP and action plan fail to include aggressive pursuit or use of customer-based alternatives. PacifiCorp should be required to

identify and pursue all cost-effective customer-based alternatives promptly and aggressively, and to supplement the same with supply-side resources only as truly needed.

4. Failure to satisfy standards and guidelines. The IRP attempts to at least address, at times superficially, the procedural requirements of the Commission's Report and Order on Standards and Guidelines issued on June 18, 1992, in Docket 90-2035-01 ("Standards and Guidelines"). However, UAE submits that the IRP and its action plan fail to meet the spirit and intent of the Standards and Guidelines in several important particulars. The primary areas in which the IRP and action plan fail to satisfy the Standards and Guidelines are summarized as follows:

a. While PacifiCorp aggressively sought public input into the IRP process, public participation and input was not terribly meaningful because much of the critical input data, models and spreadsheets were never made available to participants for testing and verification. Moreover, serious questions have been raised about the output of the complex and unverified IRP models.

b. The IRP fails to review and consider customer-based alternatives on a consistent and comparable basis to supply-side resources. Customer-based alternatives continue to be treated largely as an afterthought and the availability of all cost-effective customer-based alternatives is not adequately investigated, evaluated or pursued.

c. The IRP fails to give adequate emphasis to alternative supply-side resources that exploit Utah's stable natural resources, such as IGCC. Inadequate attention is also given to IC units, available market transactions, Circulating Fluidized Bed units (CFB), and other technologies, including nuclear. Despite brief discussions of some of

these resource options, the IRP ultimately serves only to reinforce and perpetuate PacifiCorp's recent almost-exclusive reliance on CCCT units to meet its expanding needs.

d. Alternative resource acquisition paths, with decision mechanisms identified for switching paths in the event of changed circumstances, are not adequately explored or developed. In addition, insufficient value is given to resource flexibility. For example, the proposed CY 2009 CCCT unit can easily be deferred through relatively modest increases in assumptions as to customer-based alternatives, backed up, if necessary, by available market opportunities and options to procure flexible 100 MW IC Aero units. PacifiCorp's own analysis concludes that the risk and cost profiles of the two top-scoring portfolios are identical. Yet, PacifiCorp chooses the less-flexible portfolio that includes immediate pursuit of yet another large CCCT plant, rather than the more flexible portfolio using five 100 MW IC Aero units.

e. The IRP continues to use a customer impact approach that fails to identify customer impacts in a clear and understandable manner.

f. The portfolios were not analyzed under the expected gas scenario or the expected electric power market scenario as required by the Standards and Guidelines.

UAE's Detailed Comments and Recommendations

UAE believes that Commission review of an IRP should be aimed at three important goals: (i) determination of whether the IRP is sufficiently consistent with the Standards and Guidelines to warrant acknowledgment; (ii) providing feedback on how the IRP process can be improved in the future; and (iii) in light of SB 26, providing specific "review" and "guidance" to

the utility on its proposed action plan.

UAE has organized its comments and suggestions on the IRP in response to each of the existing Standards and Guidelines. Each of the Standards and Guidelines is provided in bold, followed by UAE's comments as to the IRP's consistency with the same, UAE's comments and recommendations on future improvements that the Commission should encourage, and UAE's comments on the proposed action plan.

1. Integrated resource planning is a utility planning process which evaluates all known resources on a consistent and comparable basis, in order to meet current and future customer electric energy services needs at the lowest total cost to the utility and its customers, and in a manner consistent with the long-run public interest. The process should result in the selection of the optimal set of resources given the expected combination of costs, risk and uncertainty.

UAE Comments: The IRP generally attempts to evaluate selected supply-side options on a consistent and comparable basis, but it is ineffective at identifying "optimal" resources that will produce the lowest total cost and that will be consistent with the long-run public interest. Moreover, assumptions utilized in the IRP ensure that nearly every conceivable resource mix will test out very close to all of the others, leaving actual selection of resources largely to the utility's subjective judgment. The IRP is unable to identify an optimal mix of resources because of incorrect or overly conservative assumptions, out-of-date natural gas and electricity prices, failure to begin with a proper "base case," failure to treat customer-based alternatives on a consistent and comparable basis, modeling constraints, and other factors.

- *Assumptions.* The IRP incorporates several overly-conservative assumptions that

dramatically increase the IRP's projected timing needs for additional resources. Among the most significant assumptions are a 15% planning reserve margin as the sole reference portfolio criterion, the modeling of only firm transmission rights, carbon tax assumptions, and modest assumptions about availability of customer-based alternatives. Collectively, these assumptions lead to unreliable outcomes and potentially incorrect projections of resource addition needs. UAE's concerns regarding some of these assumptions are described in more detail in paragraphs that follow.

- *Natural Gas Prices.* Perhaps the most fundamental error in the IRP is its failure to respond timely or properly to dramatic increases in natural gas prices from the time the IRP was initially developed to the time it was issued. The relationship between gas prices and contract prices, especially at high gas price or stress scenarios, has not been well explored in the IRP. An increase of $2.27/MMBtu in just a few months (IRP page 63) has a serious impact on resources, which PacifiCorp fails to address. The IRP suggests, disingenuously, that the high gas scenario run in the stress test represents an "extreme market case" (IRP page 161). In reality, that "extreme" case – based on PacifiCorp's own updated gas price forecast plus 10% - is not "extreme," but rather far closer to the current reality than is the "base case" used in the IRP. In addition, PacifiCorp does not adequately address the very real risk of continuing elevated gas prices and the impact such a risk will have on its resource decisions. Given the substantial upward gas market trends since the portfolios were created, all of the portfolios should all be re-evaluated with a higher "base" gas price scenario. The absence of meaningful re-evaluation in light of the dramatic recent increases in gas prices makes the IRP results unreliable and highly suspect.

- *Planning Margin.* The Company applied a single criterion – maintaining a 15% margin at the annual system peak – in developing its reference portfolio (IRP pages 53-54, 73). While a higher planning margin may reduce reliability risks, this insurance comes with a significant price tag. The IRP projects additional cost of $140.5 million for a 15% planning margin, as opposed to 12% (IRP page 171). Most of the large electric users who belong to the UAE require a high degree of utility reliability, and they are not willing to take unreasonable reliability risks. However, it is imperative for all customers that risk and reward tradeoffs be carefully evaluated. The IRP fails to demonstrate that the incremental value of a 15% planning margin, as opposed to planning margins of, say, 10% or 12%, is worth the additional cost. Moreover, while the higher planning margin may reduce reliability risks, if PacifiCorp's proposed action plan is pursued, it will not significantly reduce price volatility risks. Given the action plan's continued reliance on large CCCT gas units, gas price volatility perpetuates significant price risks for customers. After considering the risk/reward tradeoff, UAE believes that the IRP should utilize a base case 12% planning margin.

- *Carbon taxes.* The IRP base case assumes a 50% risk of $8 per ton in carbon taxes by 2010, and a 100% risk of such taxes by 2012. (IRP page 155). The inclusion of these taxes appears designed primarily to ensure that natural gas resources remain competitive alternatives. The assumptions are not adequately supported and appear unreasonably conservative. It is extremely difficult to predict the likelihood or level of potential carbon taxes. Moreover, potential implications of such taxes on the country's economy are staggering. It is UAE's view that assuming a 100% chance of $8/ton carbon taxes by 2012 as the base case is unreasonable. UAE believes that the carbon tax risk *in the base case* should be given a later likely

start-date (e.g. 2016) and a lower likelihood (e.g., 50%), with risk scenarios performed around alternative assumptions.

- *Firm Transmission Rights.* The IRP models firm transmission rights only (IRP page 65). Historically, PacifiCorp has made significant use of non-firm transmission. No explanation is offered as to why reasonable projections as to available non-firm transmission should not be included. These assumptions tend to skew the results and support over-construction.

- *Portfolio Analysis*. The Present Value of Revenue Requirements (PVRR) difference between the "best" and "worst" portfolios evaluated was only 2.5% (IRP pages 136), yet the Company applied its risk analysis to only 10 of 17 portfolios (IRP page 138). Given that the PVRR differences among the portfolios are so small, PacifiCorp should include each portfolio in its risk analysis. Without a complete analysis of all portfolios and the risks associated with each one, the Company's findings are suspect.

- *Preferred Portfolio.* Even if one were to accept the results of PacifiCorp's IRP analysis, they led PacifiCorp to the conclusion that portfolios E and K "are indistinguishable from a modeling perspective" as to risk and cost (IRP page 164). Using "non-modeling factors," PacifiCorp chose portfolio E as its preferred supply-side portfolio - the one that includes yet another large CCCT unit. As between these two "indistinguishable" portfolios, UAE strongly supports portfolio K - which assumes up to five 100 MW IC Aero SCCT units - because of the significant increase in resource flexibility offered by five smaller units, as well as the superior operational flexibility, fast start capability, ramp rate and system reliability that use of these units would produce. It appears that PacifiCorp's choice was based largely on its comfort with the

CCCT technology (IRP page 164) and its desire to utilize existing facilities at Currant Creek. UAE submits that the utility needs to become comfortable with other, more flexible technologies, including IC Aero units, as well as with technologies that better exploit Utah's coal resources, like IGCC units.

- *Customer-Based Alternatives.* As discussed in more detail in subsequent sections, PacifiCorp continues to give insufficient attention to alternative sources of demand reduction or supply, including Independent Power Producers (IPP), CHP/QF, distributed generation, DSM, interruptible contracts, rate design changes, and other alternatives to traditional utility-build options.

- *Clean Coal Technologies.* The IRP discusses clean coal technologies such as IGCC, but largely dismisses such technologies for several years because of higher projected costs and uncertain technological issues. UAE submits that PacifiCorp should devote more attention and resources to development of IGCC and similar resources. Dramatic and continuing escalation in the demand and price for natural gas in the region - driven in no small part by electrical generation - should cause significant concerns for all ratepayers. Moreover, industries that rely upon natural gas for other industrial processes are damaged by increasing competition for natural gas from electric utilities. Given Utah's rich natural resources, strong consideration and encouragement should be given to technologies that most efficiently use these natural resources, such as IGCC, and that permit a more efficient and more environmentally-friendly use of resources.

- *Market Resources.* The IRP does not give adequate attention to potentially available market resources that could also serve to delay the need for large new facilities. For example, it

is widely known that the owners of the Payson gas plant are seeking to sell some or all of the output of the plant, and perhaps the plant itself. Also, the IRP should reflect thoughtful evaluation of participation in the planned IPP expansion.

2. The Company will submit its Integrated Resource Plan biennially

UAE Comments: The Standards and Guidelines require biennial IRP filings. Given the magnitude of projected resource needs and potential impact on ratepayers, the Standards and Guidelines should be revised to require annual IRP filings for the foreseeable future.

3. IRP will be developed in consultation with the Commission, its staff, the Division of Public Utilities, the Committee of Consumer Services, appropriate Utah state agencies and interested parties. PacifiCorp will provide ample opportunity for public input and information exchange during the development of its Plan.

UAE Comments: PacifiCorp has actively solicited public input, for which it should be commended. Unfortunately, the quality of the public input continues to be severely limited by the inability of the public (or the regulators) to access, operate or verify the data, spreadsheets, models and other information used in and critical to the IRP results. This is inconsistent with PacifiCorp's statement that "an IRP will be most successful if it is *owned* by both the Company and by its stakeholders" (IRP page 1).

A public utility should not be permitted to submit any data or spreadsheets to the Commission, or the results of any models, unless the data, spreadsheets and models are made available for analysis and verification by appropriate entities - including the regulators. Confidentiality or licensing agreements should not be allowed to limit appropriate regulatory access to data critical to the regulation of the utility or the setting of rates. It is simply not

appropriate as to issues of extreme public importance, like the regulation of monopoly utilities, for business to be conducted through the use of secret "black boxes" or for critical data or processes to be hidden from regulators. PacifiCorp has elected to use complex custom modeling tools in its process. For example, each stochastic simulation run takes at least 30 hours (IRP page 136). For the IRP, PacifiCorp uses Marketsym to simulate the operation of its existing system and each portfolio over a 20-year horizon, resulting in variable costs and emission levels for each existing and new resource. The results are combined with the capital costs for the new resources in the Consolidation Model to arrive at PVRR for each candidate portfolio.

Serious questions have arisen as to the accuracy of this model vis-à-vis the GRID model used for ratemaking purposes, which has been subjected to significant outside evaluation. According to the Committee testimony filed in the recent QF docket (03-035-08 & 03-035-09), the Marketsym model and the GRID model produced 2006 net power costs of $570.7 and $786.7 million, respectively. These result in a 2006 net power costs difference of $216 million despite a lower GRID energy requirement of 5,107 GWH. (See CCS-1D, Direct Testimony of Phil Hayet at page 16 in Docket 03-035-08 & 03-035-09). UAE finds this result very troubling. Many utilities use modeling techniques that have been in the market for over 20 years, so that the work has been proven over time and other stakeholders can operate, manipulate and verify the models, or retain experts who can. This is not true with PacifiCorp's custom models. Only the Company knows how to operate them, which makes the data, at a minimum, questionable. The modeling is also cumbersome and complicated.

UAE strongly urges the Commission to require PacifiCorp to consider alternative modeling approaches. At a very minimum, PacifiCorp should be required to make appropriate

arrangements for Commission staff, the Division of Public Utilities, the Committee of Consumer Services and interested intervenors (subject to appropriate confidentiality requirements) to have immediate and unfettered access to any data, spreadsheets and models used by PacifiCorp in the IRP process, in order to enable appropriate parties to test and verify the same. In addition, the utility should be required to provide funding to permit regulators and intervenors to be trained on the models.

4. PacifiCorp's future integrated resource plans will include:

a. A range of estimates or forecasts of load growth, including both capacity (kW) and energy (kWh) requirements.

i. The forecasts will be made by jurisdiction and by general class and will differentiate energy and capacity requirements. The Company will include in its forecasts all on-system loads and those off-system loads which they have a contractual obligation to fulfill. Non-firm off-system sales are uncertain and should not be explicitly incorporated into the load forecast that the utility then plans to meet. However, the Plan must have some analysis of the off-system sales market to assess the impacts such markets will have on risks associated with different acquisition strategies.

ii. Analyses of how various economic and demographic factors, including the prices of electricity and alternative energy sources, will affect the consumption of electric energy services, and how changes in the number, type and efficiency of end-uses will affect future loads.

UAE Comments: The IRP provides load growth projections and consumption

assumptions. However, PacifiCorp does not project meaningful customer responsiveness to rate design changes or potential DSM programs. The IRP does not give adequate attention to the proper role of rate design in stemming Utah's dramatic peak load growth. The Company posits that a "large change in price is needed to affect the incremental A/C premium people are willing to pay" (IRP Appendix, page 169), yet it fails to identify or propose the types of rate design changes needed to reduce unnecessary peak usage. Significant efforts should be made to effect changes in the behaviors that are driving excessive peak growth in Utah through rate design and other approaches. Cost allocation methodologies should also be adjusted as necessary to send proper signals and to reduce cross-subsidization. UAE recommends that PacifiCorp be instructed to more directly address price elasticity, to forecast effects of projected rate design on consumption by rate classes, and to propose meaningful rate design changes designed to send correct peak pricing signals.

The IRP also fails to meaningfully address potential natural gas price impacts from increasing competition for natural gas stemming from electric generation, including the facilities proposed by PacifiCorp, or from planned expansions of natural gas pipeline capacity out of the Rocky Mountain region. Gas prices may continue to be driven higher for the foreseeable future. Utah businesses and industries remain troubled by potential price impacts of increasing reliance by PacifiCorp on natural gas, as well as electric price fluctuations stemming from increased reliance on natural gas resources.

b. An evaluation of all present and future resources, including future market opportunities (both demand-side and supply-side), on a consistent and comparable basis.

i. An assessment of all technically feasible and cost- effective improvements in the efficient use of electricity, including load management and conservation.

ii. An assessment of all technically feasible generating technologies including: renewable resources, cogeneration, power purchases from other sources, and the construction of thermal resources.

iii. The resource assessments should include: life expectancy of the resources, the recognition of whether the resource is replacing/adding capacity or energy, dispatchability, lead-time requirements, flexibility, efficiency of the resource and opportunities for customer participation.

UAE Comments: The IRP does not properly evaluate the availability of customer-based alternatives, including DSM programs, cogeneration and interruptible contracts, on a consistent and comparable basis with supply-side resources. The IRP also uses conservative assumptions about available customer resources and fails to consider increased availability of such resources in response to aggressive and meaningful pursuit of the same. PacifiCorp should be directed to model and pursue all cost-effective customer-side resources aggressively, using prices consistent with supply-side resources. It should not simply wait for responses to RFPs. Even modest assumptions about increased customer-side resources will allow the deferral of PacifiCorp's proposed CCCT gas plant.

- *DSM.* The IRP evaluated only those Class 1 DSM programs proposed in response to its 2003 RFP (IRP page 81). Reliance only on RFPs to identify and acquire DSM programs is short-sighted. PacifiCorp may prefer to outsource DSM programs to bidders who

will assume the risks (IRP page 183), but this approach is far too restrictive and will not capture all available cost-effective customer-based resources. Reports previously filed with this Commission, including an October 2002 Tellus Institute report, identified hundreds of MW of cost-effective DSM programs. In order to maximize the identification and exploitation of these efficient and socially-desirable customer-based alternatives, the utility must do much more than simply "provide an avenue" for these types of resources "to participate" in an RFP process (IRP page 186). Rather, the utility must aggressively encourage, solicit, develop and capture all available avenues of cost-effective customer-based alternatives.

A capacity expansion model (CEM) was used to select the four "most cost-effective" Class 1 DSM projects (IRP Page 78, 165). The CEM model picked four out of eight identified Class 1 DSM projects, resulting in only 44 MW of additional DSM on the east side of the system over the next 10 years. No explanation is offered as to why the others were rejected. It is not explained, for example, whether the others were shown not to be cost effective, or simply not as cost-effective as the chosen programs. It is notable that the DSM resources that were identified succeeded in deferring three resources, with substantial projected savings ($134 million) (IRP pages 166-167). Much more savings would be available if all cost-effective DSM programs were actively pursued.

Only a few potential DSM programs were evaluated in all resource portfolios, with the remaining programs evaluated only against the most likely portfolio of resource additions. This analysis falls short of the Standards and Guidelines. In addition, while the IRP assumes certain DSM load reductions, it does not fully assess available opportunities, including cogeneration, interruptible service, purchases from non-utility sources, etc., that would likely be available if

clear and adequate procedures and pricing mechanisms were in place to put such resources on a consistent and comparable basis with supply-side resources.

Class 1 and 2 DSM analyses were performed only on the "best portfolio," instead of including DSM as a resource in all portfolios. (IRP page 8). They should be performed on other portfolios, particularly given the maximum 2.5% deterministic difference. The assumed amount of direct load control DSM is very low and does not reflect neutral treatment with other resources. Class 2 DSM projections also appear to be very low. The residential cooling results, for example, are impressive (IRP page 168). The study should be repeated with larger decrements and started earlier. The Company should assume a continuing and increasing emphasis on mitigating peak load growth within the residential and commercial classes that are driving the growth. Also, there is no adequate explanation as to why DSM could not be available before 2009. In addition, the availability and value of Class 3 DSM is not adequately developed.

- *Rate Design*. PacifiCorp claims that "price has minimal effect on the consumption of electricity" (IRP Appendix page 129). This claim of very low price elasticity of demand is not supported in any detail and appears contrary to the results of the "20/10" conservation residential program ordered by this Commission several summers ago, as well as recent study results from California that show significant customer response to high prices. (See Impact Evaluation of the Statewide Pricing Pilot, March 16, 2005, Final Report, prepared by Charles River Associates, Oakland, CA, pursuant to the Statewide Pricing Pilot initiated by the CPUC, available at www.energy.ca.gov/demandresponse/documents/group3_final_reports/2005-03-24_SPP_FINAL_REP.PDF). There is an extreme need to send correct price signals to impact behavior and align costs with cost causation. PacifiCorp should be directed to analyze and

pursue aggressive rate design proposals in an effort to stem exponential peak demand growth. Moreover, the utility should be directed immediately to begin requiring demand meters on all new installations in order to maximize future data collection and rate design options.

- *CHP/QF*. The IRP's attempt to satisfy the requirement to assess "opportunities for customer participation" fails miserably - particularly in relation to cogeneration. The IRP's projections of available new QF projects are inadequately supported and extremely low. Despite acknowledging that "[c]onsiderable QF activity is occurring in PacifiCorp's service area, particularly in Utah," the IRP assumes only 100 MW of QF resources over the entire 10-year planning horizon, (IRP pages 53, 87; IRP Appendix page 57). The "considerable QF activity" in Utah - which is validated by numerous entities recently competing for the limited remaining capacity under the QF stipulation, despite pricing which is low compared to the projected prices of the supply side resources discussed in the IRP - is wholly inconsistent with an assumption of only 100 MW of new QF resources over a 10-year horizon. At a very minimum, the full 275 MW of QF capacity available under the QF stipulation should be assumed. The IRP states that the 90 MW Desert Power QF contract is included as an Existing Resource (IRP page 53), but UAE has searched the Appendix in vain for any reference to this resource in the list of existing resources (IRP Appendix pages 40-41, 57, 60, 81). Indeed, the load and resource information provided with the IRP is poorly organized and of limited usefulness. UAE recommends that the Commission require that the capacity report (IRP Appendix Table F.1 page 81) be fully supported by workpapers showing the derivation of the figures *by control area* or, if the data exists elsewhere in the report, that a reference be included to the appropriate pages. UAE has been unable to reproduce this capacity report. UAE presumes

that the 100 MW figure shown as a planned resource in the "QF" row in IRP Appendix F.1, page 81, includes the Desert Power contract.

Moreover, particularly in light of the high level of QF interest, the IRP should assume additional QF resources will be available after 2007. The IRP generally dismisses additional QF resources, based largely on unsupported claims of higher costs and perceived risks such as on-line time requirements (IRP pages 87-88), which risks can be adequately managed through contract provisions. The availability of efficient QF resources is much greater than assumed in the IRP. If QF pricing were set to accurately reflect realistic long-term savings, the availability and benefits from these types of efficient resources would be even greater, benefiting both ratepayers and society at large.

Customer-based alternatives, including QF resources, should have been evaluated on a fair and consistent basis with other resources, based on differing gas price and other assumptions, and mixed into the various portfolios, instead of being grafted on "after the fact" to the preferred portfolio. Also, QF projects should be eligible to participate in supply side resource RFPs, but should not be required to do so. QF projects should be aggressively pursued and encouraged, not relegated to the costly and perilous journey of an RFP respondent.

- *Interruptible Contracts*. The IRP identifies only 67 MW of Monsanto load and 60 MW of Nucor load as interruptible. The IRP also assumes, without explanation or discussion, that the Monsanto interruptible load will end in 2007 (IRP Appendix page 41, 81). No explanation is offered as to why the Monsanto interruptible load will cease to be offered as a resource after 2007, and the assumption appears extremely unreasonable. Also, the IRP does not include any of the US Magnesium interruptible load as a resource, even though US Magnesium's

85 MW load is subject to curtailment during the hottest peak hours of the summer and US Magnesium is required by contract and Commission order to assume the risk of both pricing and availability of market resources during peak summer hours.

c. An analysis of the role of competitive bidding for demand-side and supply-side resource acquisitions.

UAE Comments: PacifiCorp's IRP states a general intention to "use a formal and transparent Procurement Program in accordance with the then-current laws, rules, and/or guidelines in each of the states in which PacifiCorp operates," as well as a "robust procurement process, including, when appropriate, competitive bidding with an effective request for proposal (RFP) process." (IRP pages 182-183). The IRP was written before passage during the 2005 Utah General Session of SB 26, which generally requires an open, competitive, independent RFP process for supply-side resources. This process is crucial in that it creates procedures requiring significant involvement by the Commission and an independent evaluator, which are designed to assure Utah ratepayers that the most desirable electric generation resources will be developed or acquired, regardless of ownership or affiliation, and that owners or potential developers of other electric generation resources will have a fair opportunity to compete with PacifiCorp in providing new generation resources. The critical and active nature of the Commission's role in assuring lowest-cost resources is highlighted by SB 26.

d. A 20-year planning horizon.

UAE Comments: The IRP utilizes a 20-year planning horizon as required by the Standards and Guidelines. However, the action plan is limited to a ten-year period. Due to the length of time to build and/or acquire certain types of resources, particularly coal, this seems

short-sighted.

e. An action plan outlining the specific resource decisions intended to implement the integrated resource plan in a manner consistent with the Company's strategic business plan. The action plan will span a four-year horizon and will describe specific actions to be taken in the first two years and outline actions anticipated in the last two years. The action plan will include a status report of the specific actions contained in the previous action plan.

UAE Comments: In light of SB 26, specific Commission "guidance" is required on PacifiCorp's action plan. Given extensive deficiencies in the IRP, however, no particular action plan can be definitively shown to be superior. Indeed, even if one were to accept the IRP analysis, any number of specific action plans could be supported. UAE cannot support the action plan proposed by PacifiCorp. It does not appear to be the most prudent course of action. Indeed, it appears designed primarily to respond to perceived concerns and desires of other states and to minimize utility risk rather than ratepayer risk.

Construction of yet another large CCCT unit in this State - following immediately on the heels of 1100 MW of gas fired generation under construction as a result of the 2003 IRP, is neither prudent nor in the public interest at this time. Rather, PacifiCorp should delay its proposed Fall 2005 issuance of an RFP for a CY 2009 CCCT by at least a year. It should immediately begin aggressive pursuit and implementation of all cost-effective customer-based alternatives, including DSM, CHP/QF, interruptible contracts and rate design changes. To ensure short-term reliability, PacifiCorp should investigate all available market opportunities and issue an RFP this year or next for serial options to procure the output of up to five 100 MW IC

Aeros at desired locations, beginning in CY 2009.

PacifiCorp should be directed to file a corrected IRP by the end of the year, with corrections and changes as directed by the Commission. It should also commence immediate evaluation of the merits of less cumbersome and more transparent and available IRP models. PacifiCorp should be advised to reduce its continued emphasis and reliance on traditional natural gas resources and to increase its emphasis on resources capable of exploiting Utah's coal resources, particularly IGCC. PacifiCorp should also be instructed to increase its emphasis on resource options that permit greater flexibility in responding to changing circumstances and needs, such as 100 MW IC Aero units.

f. A plan of different resource acquisition paths for different economic circumstances with a decision mechanism to select among and modify these paths as the future unfolds.

UAE Comments: The IRP discusses factors that might affect resource acquisition plans (IRP pages 189-191), but it does not define a "decision mechanism" to be used to select among or to modify the paths. Annual updates to the IRP should include greater discussion of the decision mechanisms that will be utilized by PacifiCorp in choosing among available alternatives, given an expected range of possible future circumstances.

g. An evaluation of the cost-effectiveness of the resource options from the perspectives of the utility and the different classes of ratepayers. In addition, a description of how social concerns might affect cost effectiveness estimates of resource options.

UAE Comments: The IRP attempts to evaluate cost-effectiveness of various supply-side

resource options, to discuss incremental rate impacts, and to address some social issues. However, the IRP does not attempt to identify impacts on different classes of ratepayers, and the ratepayer impact section is somewhat cryptic and confusing. UAE recommends that PacifiCorp be directed in future IRPs to include a more comprehensive and understandable analysis of ratepayer impacts, collectively and by class. Moreover, as discussed above, future IRPs should consider elasticity of demand by various rate classes in response to projected rate increases resulting from anticipated resource acquisitions and rate design options.

h. An evaluation of the financial, competitive, reliability, and operational risks associated with various resource options and how the action plan addresses these risks in the context of both the Business Plan and the 20-year Integrated Resource Plan. The Company will identify who should bear such risk, the ratepayer or the stockholder.

UAE Comments: The 2004 IRP is lacking in attention to risk analysis. As discussed above, the risk analysis of continued and increasing reliance on natural gas is inadequate. Similarly, risk and reliability tradeoffs from the proposed 15% planning margin are not adequately developed.

The IRP discusses the allocation of risks between shareholders and ratepayers, but it does not discuss at least one very important risk dynamic that was clarified after the IRP was initially written. As a regulated utility, PacifiCorp is permitted to earn a return for its shareholders only on rate base assets. That reality creates a bias in favor of utility construction of resources over acquisition of resources from others. This bias is a significant part of the reason why UAE strongly supported an open, competitive RFP process, with independent, outside input and

evaluation, to assure ratepayers that the resources selected will be the optimal resources for ratepayers, and not just for PacifiCorp. This process resulted in SB 26, discussed above, which may assure PacifiCorp of a greater likelihood of resource cost recovery, thereby reducing risks to the utility and shifting it to ratepayers.

Finally, the IRP fails to adequately address or recognize risk mitigation inherent in the procurement of more flexible resources, such as the smaller IC Aeros.

i. Considerations permitting flexibility in the planning process so that the Company can take advantage of opportunities and can prevent the premature foreclosure of options.

UAE Comments: The IRP promises flexibility and updates as appropriate but, as addressed above, fails to incorporate adequate flexibility to allow meaningful responses to potential changes in circumstances.

j. An analysis of tradeoffs; for example, between such conditions of service as reliability and dispatchability and the acquisition of lowest cost resources.

UAE Comments: The IRP discusses certain conflicts and tradeoffs between cost and risk but, as indicated above, the analysis is incomplete and the resolution of these conflicts as proposed in the IRP may lead to significant and unacceptable cost increases that could damage ratepayers and the Utah economy.

k. A range, rather than attempts at precise quantification, of estimated external costs which may be intangible, in order to show how explicit consideration of them might affect selection of resource options. The Company will attempt to quantify the magnitude of the externalities, for example, in terms of the amount of

emissions released and dollar estimates of the costs of such externalities.

UAE Comments: The IRP discusses certain externalities in the context of CO_2 taxes and it includes an analysis of likely emission impacts. However, other externalities were not adequately considered in the IRP, such as potential impacts on the Utah economy. In addition, PacifiCorp's assumption of a 100% chance of $8/ton carbon taxes biases the results in favor of natural gas units.

l. A narrative describing how current rate design is consistent with the Company's integrated resource planning goals and how changes in rate design might facilitate integrated resource planning objectives.

UAE Comments: As discussed above, rate design discussions are inadequate and additional attention is warranted to the use of rate design (along with DSM) to address the inordinate and disproportionate growth of peak demand in Utah.

5. PacifiCorp will submit its IRP for public comment, review and acknowledgement.

UAE Comments: The IRP has been submitted for public review and comment. However, as discussed above, public and regulatory input to the IRP process is severely compromised by a lack of access to data and models relied upon in the IRP process. UAE strongly recommends that such access be mandated, to enhance the value of public input.

6. The public, state agencies and other interested parties will have the opportunity to make formal comment to the Commission on the adequacy of the Plan. The Commission will review the Plan for adherence to the principles stated herein, and will judge the merit and applicability of the public comment. If the Plan needs further work the

Commission will return it to the Company with comments and suggestions for change. This process should lead more quickly to the Commission's acknowledgement of an acceptable Integrated Resource Plan. The Company will give an oral presentation of its report to the Commission and all interested public parties. Formal hearings on the acknowledgement of the Integrated Resource Plan might be appropriate but are not required.

UAE Comments: Comments filed by UAE and others identify a number of serious questions and concerns regarding the IRP. UAE urges the Commission to "return it to the Company with comments and suggestions for change" as contemplated by the above-quoted Guideline. UAE specifically recommends that the guidance recommended above should be offered on PacifiCorp's proposed action plan.

7. Acknowledgement of an acceptable Plan will not guarantee favorable ratemaking treatment of future resource acquisitions.

UAE Comments: UAE recommends that the Commission confirm that acknowledgment of the IRP would not suggest approval or any particular ratemaking treatment of any specific costs incurred or resources acquired or constructed by PacifiCorp. The IRP does not present sufficient information to support any particular course of resource construction or acquisition other than contracts to cover projected needs in the immediate future and reasonable and prudent steps to preserve reasonable resource options in the future. However, as also discussed above, SB 26 adds a new risk-shifting element to the mix, mandating more active Commission input on and oversight of the IRP action plan.

8. The Integrated Resource Plan will be used in rate cases to evaluate the performance of the utility and to review avoided cost calculations.

UAE Comments: Properly designed, tested and verified, a meaningful IRP would be a very useful tool in developing avoided cost calculations, as well in determining values of other alternative supply side and demand side resources. However, the IRP will be valuable for such purposes only if regulators and intervenors have access to all data, spreadsheets and models necessary to fully analyze, test and verify the IRP with varying assumptions.

UAE Recommendations

As explained and detailed throughout these comments, UAE submits that the Commission's order should address and provide guidance on addressing the serious deficiencies in the IRP and its action plan. UAE urges the Commission to decline to acknowledge PacifiCorp's 2004 IRP and to return it to PacifiCorp with comments and guidance. Because of its failure to incorporate updated gas pricing information, to use feasible, verifiable modeling techniques, to make accurate comparisons of all available resources, including customer-side initiatives, and to provide a thorough analysis of risks, the action plan is not meaningful and may result in substantial harm to Utah ratepayers. The Commission should direct PacifiCorp to develop modeling and pricing mechanisms to better place customer-side initiatives, including DSM and cogeneration, on an even and comparable basis with supply-side resources. The Company should also be directed to emphasize resource alternatives, such as IGCC, that use coal resources in an efficient and environmentally-friendly manner.

UAE has explained above several specific recommendations that it proposes with respect to PacifiCorp's action plan. Modest and conservative adjustments to the IRP assumptions and action plan easily and comfortably allow a delay of at least one year in the necessity for PacifiCorp to commence an RFP process for the proposed new CY 2009 CCCT unit. The

following pages contain three charts that help illustrate this fact. The first chart reproduces PacifiCorp's load and resource capacity chart, taken from IRP Appendix F:

PacifiCorp's Load & Resource Capacity Report

PacifiCorp East Control Area (Ida., Utah, W. Wyo.)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Total East Resources	6,999	7,269	7,797	7,718	7,733	7,774	7,775	7,777	7,778	7,644
East Obligation x 15% PM	7,117	7,453	7,682	7,953	8,171	8,372	8,627	8,815	9,125	9,424
East Side Net Position - Long/(Short)	(118)	(184)	115	(235)	(438)	(598)	(852)	(1,038)	(1,347)	(1,780)
PacifiCorp West Control Area (California, Oregon, Washington, E. Wyo.)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Total West Resources	4,485	4,445	4,216	3,848	3,793	3,772	3,761	3,120	3,117	3,013
West Obligation x 15% PM	4,368	4,248	4,306	3,686	3,746	3,805	3,850	3,835	3,910	4,010
West Side Net Position - Long/(Short)	117	197	(90)	162	47	(33)	(89)	(715)	(793)	(997)
PacifiCorp Total System	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Total Resources	11,484	11,714	12,013	11,566	11,526	11,546	11,536	10,897	10,895	10,657
Obligation X 15% PM	11,485	11,701	11,988	11,639	11,916	12,177	12,478	12,650	13,035	13,434
System Net Position - Long/(Short)	**(1)**	**13**	**25**	**(73)**	**(390)**	**(631)**	**(941)**	**(1,753)**	**(2,140)**	**(2,777)**

The second chart reflects the annual impacts of each of following changed assumptions, which UAE believes to be reasonable and supportable:

- 12% reserve margin
- East-side QF Stipulation capacity at the time of system peak of 185 MW beginning in FY 2008
- Additional east-side CHP/QF/Cogeneration projects of 50 MW in each of FY 2009, 2010 and 2011

- Additional east side DSM of at least 50 MW in each of FY 2009 and 2011.
- Additional west-side DSM of at least 50 MW in FY 2009
- Continuation of 67 MW of Monsanto interruptible load after 2007
- Recognition of 85 MW of US Magnesium interruptible load
- As an alternative to any of the above, reliance, as necessary to ensure reliability, on available market resources (such as the Payson plant) or 100 MW IC Aero units beginning in CY 2009.

UAE's Recommended Adjustments to PacifiCorp's Load & Resource Capacity Report

PacifiCorp East Control Area (Idaho, Utah, W. Wyo.)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Reduce PM to 12%	(186)	(194)	(200)	(207)	(213)	(218)	(225)	(230)	(238)	(246)
QF Stipulation Resources *	0	0	185	185	185	185	185	185	185	185
Additional QF Resources *	0	0	0	50	100	150	150	150	150	150
Increased Class 1 DSM *	0	0	0	50	50	100	100	100	100	100
Monsanto interruptible load *	0	0	67	67	67	67	67	67	67	67
US Magnesium interruptible load *	85	85	85	85	85	85	85	85	85	85

PacifiCorp West Control Area (California, Oregon, Washington, E. Wyo.)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Reduce PM to 12%	(114)	(111)	(112)	(96)	(98)	(99)	(100)	(100)	(102)	(105)
Additional QF Resources	0	0	0	0	0	0	0	0	0	0
Increased Class 1 DSM*	0	0	0	50	50	50	50	50	50	50

PacifiCorp Total System	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Reduce PM to 12%	(300)	(305)	(313)	(304)	(311)	(318)	(326)	(330)	(340)	(350)
QF Stipulation Resources*	0	0	185	185	185	185	185	185	185	185
Additional QF Resources*	0	0	0	50	100	150	150	150	150	150
Increased Class 1 DSM*	0	0	0	100	100	150	150	150	150	150
Monsanto Interruptible load*	0	0	67	67	67	67	67	67	67	67
US Magnesium interruptible Load*	85	85	85	85	85	85	85	85	85	85

* Market purchases or 100 MW IC Aero units to be used if necessary for system reliability

The third chart shows the impact of these changed assumptions on PacifiCorp's load and resource capacity projections, and demonstrates the clear feasibility of deferring the RFP process for the FY 2010 500 MW CCCT plant by more than a year:

Impact of UAE's Recommendations on PacifiCorp's Load & Resource Capacity Report

PacifiCorp East Control Area (Idaho, Utah, W. Wyo.)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Total East Resources	6,999	7,269	7,982	8,003	8,068	8,209	8,210	8,212	8,213	8,079
East Obligation x 12% PM	6,932	7,259	7,482	7,746	7,958	8,154	8,402	8,585	8,887	9,178
East Side Net Position - Long/(Short)	152	95	652	409	262	207	(40)	(221)	(522)	(947)

PacifiCorp West Control Area (California, Oregon, Washington, E. Wyo.)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Total West Resources	4,485	4,445	4,216	3,898	3,843	3,822	3,811	3,170	3,167	3,063
West Obligation x 12% PM	4,254	4,137	4,193	3,590	3,648	3,706	3,750	3,735	3,808	3,905
West Side Net Position - Long/(Short)	231	308	23	308	195	116	61	(565)	(641)	(842)

Total Resources	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Total Resources	11,484	11,714	12,198	11,901	11,911	12,031	12,021	11,382	11,380	11,142
Obligation X 12% PM	11,185	11,396	11,675	11,336	11,605	11,860	12,152	12,320	12,695	13,084
System Net Position - Long/(Short)	**384**	**403**	**675**	**717**	**458**	**323**	**21**	**(786)**	**(1,163)**	**(1,790)**

These charts show how a few reasonable changes in assumptions defers the need for any significant new generating units until FY 2013 - rather than FY 2010 as proposed by PacifiCorp. Moreover, *any reasonable combination* of these assumptions comfortably permits a delay of a year or more in the RFP for the CCCT unit, to permit the re-analysis, investigation and other

actions suggested in these comments. UAE submits that such delay is reasonable and in the public interest.

Conclusion

UAE appreciates the efforts of PacifiCorp and others in developing the IRP. Given a number of serious concerns over IRP assumptions and conclusions, as well as the total absence of outside testing or verification, the IRP's usefulness is limited and Commission rejection of the IRP's proposed action plan is appropriate. UAE urges the Commission to require the utility to file a corrected IRP by the end of the year that responds to the concerns raised by UAE and other parties. Such a course of action is especially imperative given significant changes to PacifiCorp's cost recovery risk and ratepayer risk as a result of SB 26.

UAE appreciates the opportunity to participate in the IRP process and looks forward to continued involvement.

Dated this 22nd day of April, 2005.

Hatch, James & Dodge

_____

Gary A. Dodge,
Attorneys for the Utah Association of Energy Users

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was sent by email this 22nd day of April, 2005, to the following:

Edward A. Hunter
Jennifer Martin
STOEL RIVES LLP
201 South Main Street, Suite 1100
Salt Lake City, UT 84111
eahunter@stoel.com
jehoran@stoel.com
Attorneys for PacifiCorp

Michael Ginsberg
Patricia Schmid
ASSISTANT ATTORNEY GENERAL
500 Heber M. Wells Building
160 East 300 South
Salt Lake City, UT 84111
mginsberg@utah.gov
pschmid@utah.gov
Attorneys for Division of Public Utilities

Reed Warnick
Paul Proctor
ASSISTANT ATTORNEY GENERAL
160 East 300 South, 5th Floor
Salt Lake City, UT 84111
rwarnick@utah.gov
pproctor@utah.gov
Attorneys for Committee of Consumer Services

_____