

March 31, 2003

Public Service Commission of Utah  
160 East 300 South  
Salt Lake City, UT 84111

Dear Commissioners;

Salt Lake City is pleased to have the opportunity to comment on PacifiCorp's Integrated Resource Plan (IRP). As Salt Lake City becomes a national and international leader in environmental protection measures, we wish to understand and support industry decisions that will benefit our region economically and improve the natural environment. Our involvement in the IRP process is vital to achieving this goal.

Salt Lake City government is committed to improving regional air quality and slowing global climate change. Our goal is to abide by the emissions reductions for the United States of America as outlined in the Kyoto Protocol. We committed to a 21% reduction in greenhouse gas emissions from our 2001 levels, in order to reach a 7% below 1990 emissions reduction goal. Measures taken by Salt Lake City to date reduce our greenhouse gas emissions by over 1,000 tons of eCO<sup>2</sup> each year. These measures include, primarily, the use of energy efficient lighting and a substantial Blue Sky wind power purchase. The continued leadership of PacifiCorp in energy efficiency and renewable energy has great potential for environmental benefits regionally and globally.

Salt Lake City recognizes that the investments PacifiCorp makes in the immediate future will greatly affect the environment. We encourage PacifiCorp to invest in resources that will benefit both the environment and its customers. It is our understanding that the renewable portfolio analyzed by the Company better accomplishes this goal than the portfolio it plans on pursuing. Salt Lake City believes that the benefits from an environmentally friendly generation resources have been underestimated by the Company and that such issues should be given more weight in the selection process. Risks associated from fluctuating fuel prices and unknown changes in environment

regulations will be substantially mitigated by greater investment in renewable resources. Salt Lake City is willing to pay a premium for such insurance. It is our understanding that the renewable portfolio has a slightly higher projected present value of revenue requirement, but will have a negligible impact on rates. However, PacifiCorp appears to be hesitant to pursue this portfolio because of other perceived risks. It is our hope that PacifiCorp will aggressively pursue program options that will improve the company's understanding of renewable resources. Such knowledge is critical to understand the risks and the benefits associated with full implementation of the renewable portfolio.

Salt Lake City asks that the Commission direct PacifiCorp to establish a task force with interested parties to study how a pilot program of solar photovoltaic rooftop units can be established. The purpose of the task force will be to determine the value, in terms of reduced peak capacity and energy usage, which solar rooftop panels can contribute to the system. Once a value is determined, the group will look at establishing a pilot program to place 500 1 kW solar photovoltaic rooftop units in PacifiCorp's territory, preferably in Salt Lake City so that the Company can better assess solar resource capabilities. Such research and development will provide important information on this renewable resource, and provide a better understanding of the benefits and costs associated with implementing renewable generation resources.

Sincerely,

Lisa R. Romney  
Environmental Affairs Coordinator  
Salt Lake City Mayor's Office

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**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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In the Matter of the Acknowledgment of  
PACIFICORP'S Integrated Resource  
Plan 2003

DOCKET NO. 03-2035-01  
Comments from Million Solar Roof Partnership  
And Salt Lake City

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## Introduction

In its January 31, 2003 Order, the Commission requested comments from interested parties on the appropriateness of PacifiCorp's seventh Integrated Resource Plan (IRP) and recommendations on whether the Commission should acknowledge the IRP. Salt Lake City has participated in the IRP process through the Million Solar Roof Partnership (MSRP) and appreciates the Company's willingness to solicit public input into this important planning function. We have attended the public input meetings and have followed the Company planning process with interest. We appreciate the opportunity to comment on PacifiCorp's Integrated Resource Plan. (IRP)

Salt Lake City is taking aggressive steps to reduce its emissions of both regulated air pollutants and greenhouse gases. We are participating in the International Council of Local Environmental Initiatives (ICLEI) Cities for Climate Protection campaign. We have committed to reducing our green house gas emissions by 21% from our levels in 2001. By far the biggest contributor to our green house gas emissions is our electricity use, which comprises 66% of our corporate green house gas emission. We wish to encourage the Company to pursue a resource acquisition strategy that is cost effective to its customers and promotes our goals as an environmentally responsible city. The Company's choice of generation will have a great impact on our efforts.

Additionally, Salt Lake City has entered into a U.S. Department of Energy Million Solar Roofs partnership whose goal is to lessen the financial and regulatory barriers to roof top solar photovoltaic systems. Salt Lake City has a significant summer ground level ozone problem. Ground level ozone creates a serious health threat to residents along the Wasatch front; the major contributor to ground level ozone is the burning of fossil fuels. We feel that the inclusion of distributed renewable resources such as solar photovoltaic roof panels will be an important component of future electricity generation along the Wasatch front and elsewhere. Solar roof panels, while currently expensive, have output characteristics that closely match the Company's needs for peak energy and capacity.

## General Comments and Recommendations

The Million Solar Roof Partnership (MSRP) congratulates the Company on the effort it made in producing this IRP. The report is a vast improvement over recent IRPs and reflects the Company commitment to resource planning and meeting the Standards and Guidelines established by the Commission. Although we would rather see the Company pursue a resource portfolio that acquires more renewable resources, we are recommending that the Commission acknowledge the Company's IRP. It meets the requirements set forth in the Standards and Guidelines and provides a course of action that will develop both supply and demand side resources that meets the needs of ratepayers at low cost and low risk. We applaud the Company's decision to diversify its portfolio and invest in a substantial amount of wind resources. This will lessen the risk to the Company and its ratepayer and will provide considerable environmental benefits. Although, we are somewhat apprehensive about the choice of Diversified Portfolio I, we believe that if possible the Company should delay its

decision to build more carbon intensive generation resources until more information is known about future environmental regulations concerning carbon.

We appreciate that the IRP acknowledges fuel cost volatility, air quality issues along the Wasatch Front, uncertain costs associated with future climate change requirements, transmission and distribution constraints (especially along the Wasatch Front where the peak is growing faster than the load) as important variables that need to be accounted for in its planning process.

While recommending acknowledgment of the current IRP, MSRP believes that improvements can be made to planning process. In particular, more research should be done on other renewable resources.

The MSRP believes that the installation of solar roof panels will provide real benefits to PacifiCorp and its customers. The results of the Company's IRP modeling indicate that the acquisition of renewable resources lowers the expected present value of revenue requirement (PVRR) and provides valuable protection against volatile fuel prices. The Company concludes that the least-cost/ least-risk acquisition strategy should include a considerable amount of wind and possibly other renewable resources such as geothermal. Other renewable resources such as fuel cells and solar photovoltaics were studied and included in some scenario analyses. The full cost of these latter resources is higher than the other renewable resources and thus not included in the Company's acquisition strategy. However, the MSRP believes that some renewable resources were not fully analyzed and their potential benefits to the system have not been adequately quantified. Solar energy has particular beneficial attributes that are not possessed by other renewable resources. The most important is the ability of solar roof panels to maximize its energy output at the time of PacifiCorp's system peak, i.e., in the middle of a summer day. We therefore recommend further study of solar energy.

Specifically, we request that the Commission direct the Company to study this resource in greater detail. The current DSM task force should be directed to refine the preliminary solar decrement study using the output profile of solar roof panels as provided by MSRP. The Company has done a preliminary run on this data, but we feel that additional work is warranted. The Company has been very cooperative and helpful in this regard, but further direction by the Commission would be welcomed. We request that the Company continue to work with the Tellus Institute, SWEEP (Southwest Energy Efficiency Project), MSRP and others to ensure that the avoided costs calculated in the decrement model reflect the actual avoided costs as accurately as possible. The decrement model should ascribe a value to avoided distribution costs. As a starting point, we suggest looking to the Tellus analysis that was performed for SWEEP using NEMs data. That analysis showed avoided distribution costs valued at \$0.007 to \$0.01 per average kWh. The most cost effective programs target reductions in peak load; we would like to see an assessment of avoided distribution costs for these types of programs. We also request that the Company continue its discussion of the eligibility of solar roof panels for funding under the DSM tariff. This renewable distributive generation resource has the same properties as DSM and will cut peak demand on the Utah system while lowering emissions.

In addition, we also suggest a small task force be formed amongst interested parties to investigate the potential for implementing a program to lower the financial barrier to installing solar roof panels. The MSRP envisions using the output from the decrement study to calculate the value that solar roof panels' output would have on the reduction of the Company's peak load and energy. Using the output from this analysis, the present value of the stream of avoided supply-side costs including avoided transmission and distribution costs could be determined. The calculated avoided supply cost value could be used to determine an appropriate buy-down

amount for the initial cost of solar roof panels. Such a program will reduce the demand for peak power and lower the overall cost of providing electric service to PacifiCorp customers.

We recommend that the Company develop a research and development program that will install a limited number of solar roof panels. The information gathered from studying the actual output of solar roof panels will provide valuable information to the Company of the potential for this resource. It would help determine the value of avoiding peak energy and capacity as well as provide information on how distributed resources can avoid costs on transmission and distribution. This research and development project would be limited in scope and expense. The MSRP envisions a small pilot program of 500 roofs that would allow the Company to evaluate the potential of this resource. The research and development funds could be added to the buy down program to aid the pilot program.

The task force could also explore alternative sources of funding to further buy down the cost of solar roof panels. It is possible that funds could be obtained from the Blue Sky Program if participants are willing to allocate a proportion of their contribution to this resource. The DSR tariff funding could also allocate a small portion to this program. The MSRP pledges its resources to help the Company perform this analysis. Other parties interested in renewable resources are welcome to participate.

## Conclusion

We want to thank the Commission for the opportunity to provide comments on the Company's IRP. The Company's resource decisions will have a significant impact on air quality in the region and on global warming. We commend the Company for its efforts in this planning process and its efforts to address risk and uncertainty. The Company's new resource acquisition

plan includes a considerable amount of renewable resources. This is both a least-cost path and one that will also reduce risks.

We recommend that the Commission acknowledge this IRP and its action plan. However, we recommend that the renewable portfolio be reanalyzed and reconsidered in the Company's next IRP update. We believe that the quick acquisition of renewable resources will allow the Company to acquire the critical information necessary to assess the risks and benefits associated with integrating these resources into the Company system.

We recommend that the Commission direct the Company to pursue additional information on renewable resources, in particular the study of solar distributive generation that will cut peak demand and provide additional environmental benefits. The DSM task force can accomplish some of the research, while a small task force can develop a pilot program to implement the findings.

We want to thank the Company for its willingness to work with the City and its partners in our work so far to assess the impact of solar roof panels as a resource option. More work is needed and we look forward to working with the Company. Given the environmental uncertainties of the future, we feel that it is a prudent course of action to investigate an array of renewable resources that will protect the Company and its shareholders and ratepayers from these uncertainties.