

## **SUMMARY OF QUALIFICATIONS**

- Over 20 years of experience working on energy-related issues ranging from energy efficiency program design, management and evaluation to economic analysis of utility rates, integrated resource planning and electric industry restructuring
- Attended over one hundred seminars on energy issues
- Experienced with econometric modeling techniques
- Well developed written and oral presentation skills

## **PROFESSIONAL EXPERIENCE**

### **Economic and Statistical Analysis**

- Evaluated the methods and analyses of three Electric Utility Integrated Resource Plans. These plans estimate and evaluate the minimum cost of alternative supply and demand resources to meet growing demand for electricity over a twenty to fifty year period.
- Evaluated the methods and assumptions for estimating electric utility avoided costs.
- Performed over ten cost benefit analyses of electric utility special incentive or energy service contracts and programs. This entailed evaluating contract or program cost estimates against expected savings or avoided cost estimates.
- Evaluated and proposed cost-benefit standards for electric utility demand side resource projects. The standards were adopted by the Utah Public Service Commission.
- Reviewed impact evaluation draft and final reports for electric utility energy efficiency programs.
- Reviewed evaluation methods and provided comments on methods and results through active participation in the Evaluation and Net Lost Revenue Subcommittee.
- Provided review and comment on the *"Statistical Recoupling in Utah"* report, March 31, 1995. This report examined the potential effects of first breaking the linkage between utility revenues and sales and then recoupling the revenues to estimated electricity usage based on statistical equations.
- Developed econometric model for analysis of oil and gas severance legislation.
- Analyzed energy and emissions implications of a proposed light rail system in Salt Lake County.
- Developed statistical model for estimating energy savings.
- Performed an econometric evaluation of the Utah Energy Bank program, a federal government energy project subsidy program.
- Reviewed the technical feasibility of over 1,100 energy efficiency/renewable energy projects.
- Performed technical and economic analysis of solar and energy efficiency investments.
- Attended workshop on state of the art energy program evaluation techniques September, 1989.
- Conducted an electric market power study to examine the impacts on market structure of removing current regulatory obligations from the western electricity market.

### **Management Skills**

- As chair of the Economic Analysis Subcommittee, formed by the Utah Public Service Commission to examine changes in the structure of the electric utility industry, produced a report on the issues

- driving structural change.
- As chair of the Performance Standards Subcommittee, formed to develop cost benefit standards for the review and evaluation of demand side resource electric utility programs, produced a report recommending standards which were adopted by the Utah Public Service Commission.
- Designed and managed \$3.5 million demonstration loan program to identify, finance, monitor and evaluate energy efficiency projects in state buildings.

### **Written and Oral Presentation Skills**

- Recommendations adopted in twenty utility cases before the Utah Public Service Commission. (See attached list of electric utility work experience)
- Author of *"Utah Energy Bank Program Evaluation: Economic Analysis of a Government Subsidy Program"* for completion of a masters degree in economics.
- Authored *"Effective Uses of Appropriate Technology in Utah,"* a publication prepared for the U.S. Department of Energy and the State of Utah.
- Co-author of *"Demand-side Resource Collaborative Report"* to the Utah Public Service Commission, dated August 31, 1993.
- Primary author of *"Utah Demand Side Resource Program Standards Report"* of March 31, 1995.
- Co-author of *"Economic Analysis Subcommittee Report"* of September 4, 1997.
- Primary author of the Utah Division of Public Utilities draft report for the Utah Public Service Commission on market power in the electric power industry.
- Presented information on behalf of the Utah Division of Public Utilities before the Utah State Legislative Task Force on Electrical Deregulation and Customer Choice on four occasions.
- Authored the fact sheet "Residential Fuel Cost Comparison" for distribution to the public.
- Performed more than twenty-five oral presentations. Audience size has ranged from 15 to 350.

### **EDUCATION**

**M.S.**, Economics, 1986; University of Utah; completed three graduate level classes in statistics.

**B.S.**, Political Science, 1979; University of Utah

### **EMPLOYMENT HISTORY**

1999-present	Technical Consultant, Division of Public Utilities, Utah Department of Commerce
1994-1999	Utility Economist, Division of Public Utilities, Utah Department of Commerce
1992-1994	Senior Energy Economist, Office of Energy and Resource Planning, Utah Department of Natural Resources
1991-1992	Research Consultant, Division of Energy, Utah Department of Natural Resources
1989-1991	Economist, Utah Energy Office, Utah Department of Natural Resources
1986-1989	Program Manager, Utah Energy Office, Utah Department of Natural Resources
1984-1986	Program Specialist, Utah Energy Office, Utah Department of Natural Resources
1982-1984	Information Specialist, Utah Energy Office, Utah Department of Natural Resources
1980-1982	Energy Information Specialist, Engineering Experiment Station, University of Utah
1979-1980	Research Assistant, Utah Energy Office, Utah State Planning Coordinator's Office

### **OTHER TRAINING, CERTIFICATES AND AWARDS**

\* Attended 36<sup>th</sup> Annual Regulatory Studies Program, Michigan State University, July 31-August 12, 1994. Sponsored by NARUC.

\* Award for Educational Achievement: Alternative Financing for Energy Conservation conferred by University of Wisconsin, 1986

\* Certificate of Training: Practice, Problem-solving and Skills Development for Program Evaluation by Department of Energy, 1983

\* Certificate: Residential Energy Auditor conferred by the National Conference of States on Building Codes and Standards, 1983

\* Award for Educational Achievement: Light Commercial Energy Auditing conferred by University of Wisconsin, 1982