

GAO

Report to the Chairman, Subcommittee on
Water and Power Resources, Committee
on Interior and Insular Affairs, House of
Representatives

September 1987

ELECTRIC POWER

Rate Impacts of Utah Power and Light Lawsuit to Obtain Federal Hydropower



133881

**Resources, Community, and
Economic Development Division**

B-228806

September 11, 1987

The Honorable George Miller
Chairman, Subcommittee on Water
and Power Resources
Committee on Interior and Insular
Affairs
House of Representatives

Dear Mr. Chairman:

Your letter of March 25, 1987, expressed interest in the extent to which electric power rates might change as a result of a lawsuit filed by Utah Power & Light Company (Utah P&L) and about 156 communities it serves to obtain low-cost federal hydropower from the Western Area Power Administration (Western).¹ As agreed with your staff, this report discusses a study of this subject prepared for a group of Western's utility customers by an industry consulting firm, R.W. Beck and Associates. As also agreed, this report discusses a review of the Beck report prepared by Utah P&L, and presents our observations.

In summary, the Beck study and Utah P&L's comments on it present divergent views that provide insights into the potential rate impacts of Utah P&L's lawsuit. Each is based on assumptions about the court's pending decision and future market conditions. In particular, the Beck study highlights the potential increased cost to current federal power users. On the other hand, Utah P&L's comments and assumptions highlight potential benefits to certain of its customers. Neither provides a complete analysis of the costs and benefits to all those that could be affected. We believe estimating potential rate impacts at this time is speculative because factors essential to the actual rate impacts, including specifics of the court's decision and future market conditions, cannot be reliably predicted. However, the estimates are useful for indicating a range of possible outcomes.

The Beck study estimated that over a 15-year period starting in 1990, the rates of Western's current utility customers would increase 28.9 percent on a simple average basis, or 9.9 percent on a weighted average

¹Western is an agency within the Department of Energy that markets electric power produced at 1 coal-fired and 49 hydro generating plants in 15 central and western states. During 1986, the maximum operating capability of these powerplants was 9,930 megawatts and Western's revenues were about \$615 million.

basis, if Utah P&L succeeds in its lawsuit. Beck estimated the rates for Utah P&L's retail customers would decrease 5.1 percent.

Utah P&L disagreed with Beck's results and stated that the lawsuit has broad implications that would cause different results.² For comparison purposes, Utah P&L adjusted Beck's results to consider assumptions it considers reasonable and estimated that the rate reductions for its residential and irrigation customers would average 18 to 24 percent.

Background

The motivation for the lawsuit is the cost of power—Western's price is about one-fifth of Utah P&L's price for wholesale service. Utah P&L could lower its rates if it could obtain the federally generated power. However, the shifting of power from Western's wholesale customers to Utah P&L and the communities it serves would result in higher rates for Western's current customers. This would occur because Western's current customers would need to purchase replacement power from other sources at a higher cost than Western's rates.

Federal law authorizes Western to sell power generated at federal reclamation projects. The law requires that in making sales, Western give preference to "municipalities and other public corporations or agencies."

In 1983 and 1986, Utah P&L, on its own behalf and on behalf of the municipalities it serves, applied to Western for a preferential allocation of federal power from the Colorado River Storage Project (CRSP).³ Western rejected these applications. Western said that it will not make preference sales to investor-owned utilities, such as Utah P&L, even if the utility agrees to pass the benefits of the low-cost federal power on to municipalities (as Utah P&L has proposed), and even if the municipalities might be eligible for preference power in their own regard. Further, because the municipalities do not own and operate distribution systems (Utah P&L serves these communities), Western concluded it could not allocate preference power to them.

On October 31, 1986, Utah P&L and many of its municipal customers filed suit against Western in federal district court in Salt Lake City. Utah

²Interested parties to the lawsuit have also stated there are broad implications for federal power marketing. These parties include, among others, the American Public Power Association, the National Rural Electric Cooperative Association, and the Tennessee Valley Public Power Association.

³The lawsuit focuses on obtaining power from this project, which supplies power to Western's wholesale customers in Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming.

P&L and the municipalities asked the court to hold the preference provisions of the law unconstitutional and to declare Western's allocation criteria and practices unlawful and unconstitutional. Utah P&L and the municipalities have asked the court, as an alternative, to declare that the municipalities are preference entities under the law and that they may purchase preference power for resale to their residential and irrigation customers under a proposed arrangement with Utah P&L.

The Beck study was prepared for the Colorado River Energy Distributors Association, which is participating in the lawsuit. The Association is composed primarily of municipal utilities and rural electric cooperatives that purchase about 86 percent of the federal power produced by CRSP. It has 117 member utilities that serve about 1 million residences, 2.8 million people, and 18 percent of Utah's population. Utah P&L serves about 75 percent of the state's population.

The following sections discuss the Beck and Utah P&L estimates of federal power reallocations, rate changes for current preference and Utah P&L customers, and present GAO's observations.

Possible Reallocations of Federal Power

The Beck study assumed that CRSP power would be allocated to all utility systems in the CRSP area in proportion to each utility's electric load, and otherwise in accordance with Western's procedures. Beck estimated that about 70 percent of the firm (guaranteed) energy supplied to the current CRSP utility customers (947 megawatts in the summer and 1025 megawatts in the winter) would be reallocated to other utilities, both public and investor-owned, including Utah P&L (226 megawatts in the summer and 265 megawatts in the winter).

Beck also concluded that other utilities in Arizona, Colorado, New Mexico, Nevada, Utah, and Wyoming (including 13 investor-owned utilities) would receive federal power allocations if Utah P&L succeeds. However, it did not estimate the number of customers that would be affected or the rate reductions they would receive. A Beck representative explained that these estimates were not made because they expect the court to focus on the parties to the lawsuit.

Changes in Power Rates for Preference Utility Customers

The Beck study estimated that the rates for utilities currently purchasing CRSP power would increase 28.9 percent on a simple average basis or about 9.9 percent on a weighted average basis over 15 years, starting in 1990. Their power costs would increase \$2.1 billion on a present value basis. Simple and weighted averages (based on projected sales) were reported since a range of rate changes was estimated for individual utilities (see app. I).⁴ Utah P&L officials said they did not comment on these estimates because they did not have access to the information needed for an accurate analysis.

Rate Impacts on Utah P&L Customers

The 5.1 percent rate reduction that Beck estimated for Utah P&L customers (a total cost decrease of \$525 million on a present value basis) results from reduced Utah P&L fuel costs made possible by using federal hydropower and deferring plant construction scheduled to begin in 1997. The Beck study assumed that the benefits would be distributed to all of Utah P&L's retail customers and that the initial rate changes would be minimal—0.9 percent in the first full year and 1.0 percent over the first 5 years. The benefits to Utah P&L customers would increase to 6.3 percent in 1998, and to 9.6 percent in 2000, with the deferral of plant construction. Utah P&L commented that Beck's study approach was reasonable. However, Utah P&L took issue with the study assumptions in two areas: (1) the classes of Utah P&L customers who would have their power rates reduced and (2) the amount of benefits and when those benefits would begin. Utah P&L officials stated that the fuel cost savings Beck estimated were too low, but they did not quantify the differences.

Customer Groups Affected

Utah P&L stated that it intends to use federal power to reduce the rates of its residential and irrigation customers rather than all its retail customers, as Beck assumed. Utah P&L has proposed this distribution since its 1983 application to Western for federal power. Utah P&L officials said their proposed distribution is consistent with their view of federal power marketing concepts and the Pacific Northwest Power Act, which provides for a distribution of federal power benefits from the Bonneville Power Administration's Columbia River power facilities (referred to as the residential exchange program) to those customer classes in its Idaho service territory.

⁴The simple average places equal importance on the rate change of each utility. The weighted average is more heavily influenced by the rate changes of the larger utilities.

Utah P&L recalculated the rate changes that would occur under its intended distribution. (Residential and irrigation customers purchased about 26 percent of the retail energy sold by Utah P&L during 1986.) Utah P&L projected that the rate reductions for those customers would range from 2.4 percent in 1990 to 25.8 percent in the year 2000, on the basis of the power allocations contained in the Beck study (see app. II).

A Beck representative said the company did not evaluate this scenario because it believes that, if Utah P&L wins its suit, the preference provisions of law would not apply to CRSP. Attorneys for the Association said that, in their view, Utah P&L's proposed distribution is an unrealistic alternative without legal precedent that applies to Western. They added that, without legal support, the Utah Public Service Commission would have no basis on which to adopt a distribution scheme that discriminates among customer classes. Utah P&L's attorney said that, in his view, there is ample legal authority for Western to adopt Utah P&L's proposal.

Level and Timing of Benefits

Utah P&L stated that if it received an allocation of federal power, it would be able to make additional sales and larger margins on existing wholesale contracts because of lower total costs.³ These additional benefits would start as soon as it receives the federal power and would further reduce the initial power rates Beck estimated.

For its estimate, Utah P&L stated it made the optimistic assumption that it would make added wholesale power sales equal to the amount of federal power it receives. Utah P&L then estimated these sales would result in an average rate reduction for its residential and irrigation customers of 18 to 24 percent each year over a 15-year period. For comparison purposes, Utah P&L calculated the rate reduction would be 6.7 percent each year if the benefits were applied to all retail customers, as Beck assumed.

Beck representatives said that, to be conservative, their analysis was based on Utah P&L's forecasts and did not assume Utah P&L could make added firm sales. They recognized that such sales were possible—a number of Western's customers had informed them of plans to purchase power from Utah P&L and other utilities if Western's power had

³This figure does not include retail sales in Utah P&L's Idaho service territory, which is in the Bonneville Power Administration's marketing area.

⁴Utah P&L did not estimate the benefits of additional margins on current sales.

to be replaced. But, they said, Western's customers would want long-term contracts, and revenues from such additional firm sales would eventually be offset if Utah P&L could not then defer planned generating capacity in 1997. This could, in their view, result in fewer benefits for Utah P&L customers over the entire 15-year period than their study estimated. Utah P&L officials responded that they could limit the amount of power or length of their contracts so that the capacity additions could be deferred.

Conclusions

The extent to which the lawsuit might impact electricity rates in Utah depends on the specifics of the court's decision. If the court finds in favor of Western, the decision is likely to have no effect on rates because Western's present marketing criteria and allocations would stand unchanged. If the court finds in favor of Utah P&L and the municipalities, the decision will, of course, impact rates; the extent, however, would depend on the nature of the relief granted by the court.

The Beck study and Utah P&L's comments provide two views of the potential outcomes, although others are possible. The Beck study estimates rates under the assumption that the court will invalidate the preference provision of the law, and highlights the potential impacts on current customers. Utah P&L's rate estimates, which highlight the potential impacts on its customers, assume that Utah P&L will distribute its allocation of CRSP power to its residential and irrigation customers. Since this proposal would spread the benefits of federal power to about one quarter of Utah P&L's retail ratepayers, it would substantially reduce the rates for these customers, compared to all Utah P&L retail customers.

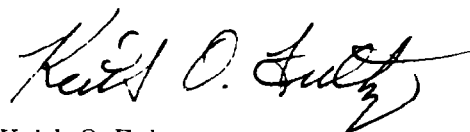
Assuming Utah P&L is able to make additional sales as a result of receiving federal power, it could further reduce its customers' rates. However, the extent of sales and amount of revenue from these sales could be affected by the existing power surplus in the area. Nevertheless, federal power allocated to Utah P&L would reduce the allocations to Western's current utility customers, some of whom are in Utah P&L's service territory and could be expected to purchase replacement power from the company. Thus, it is reasonable to assume Utah P&L would obtain some additional sales revenue but perhaps not the full amount of firm sales that the company estimated.

While Beck and Utah P&L provided a range of potential impacts on rates, the actual result would, of course, depend on future market conditions. Variations in fuel prices and the demand for power from those forecast will affect power costs and sales levels as well. Changes in these factors could either increase or reduce the estimated rate impacts.

We discussed the contents of this report with Beck representatives, Utah P&L officials, and attorneys for the Association; representatives for each agreed the report reflects their views. We also discussed the report with Western's General Counsel, who commented that our treatment of the subject was objective. As agreed with your office, we did not obtain official comments on a draft of this report.

We are sending copies of this letter today to the chairmen of the various congressional committees that have oversight responsibility for federal power marketing activities, to Congressman Wayne Owens of Utah, and to other interested parties. We also plan to make copies available to other interested parties on request.

Sincerely yours,



Keith O. Fultz
Associate Director

Contents

Letter	1
Appendix I Estimated Increases in Colorado River Energy Distributors Association Members' Rates	10
Appendix II Estimated Percentage Rate Reduction for Different Groups of Utah P&L Customers	12
Appendix III Projected Electrical Generating Capacity and Demand in Kilowatt Hours for Three Federal Regions	13
Appendix IV Scope and Methodology	14
Appendix V Major Contributors to This Report	15
Resources, Community, and Economic Development Division, Washington, D.C.	15

Contents

Abbreviations

CRSP	Colorado River Storage Project
DOE	Department of Energy
EIA	Energy Information Administration
REA	Rural Electrification Association

Estimated Increases in Colorado River Energy Distributors Association Members' Rates

Utility	Percentage increase, 1990-2004
Navajo Tribal Authority Utility, Arizona	10.5
Page, Arizona	28.3
Colorado Springs, Colorado	3.5
Platte River Power Authority, Colorado	34.9
Tri-State G&T Association, Colorado & Wyoming	4.7
Farmington, New Mexico	7.5
Plains Electric G&T Coop., Arizona	14.1
Truth or Consequences, New Mexico	58.5
Utah Associated Municipal Power Systems	
Beaver City	57.7
Bountiful	91.1
Enterprise	67.5
Ephraim	64.9
Fairview	40.9
Fillmore	116.2
Heber	57.0
Holden	51.9
Hurricane	56.9
Hyrum	66.5
Kanosh	49.0
Kaysville	50.3
Lehi	51.4
Logan	77.2
Meadow	53.0
Monroe	79.3
Morgan	87.4
Mt Pleasant	52.4
Murray	55.4
Oak City	60.8
Parowan	49.7
Payson	41.1
St. George	91.8
Spring City	25.8
Springville	69.7
Arizona Power Pooling Assn., Arizona	0.7
Salt River Project, Arizona	0.5
Colorado River Commission, Nevada	37.1

(continued)

**Appendix I
Estimated Increases in Colorado River
Energy Distributors Association
Members' Rates**

Utility	Percentage increase, 1990-2004
Deseret G&T Association	
Bridger Valley Elec. Assn., Wyoming	14.1
Dixie-Escalante REA, Utah	24.2
Flowell Electric Association, Utah	19.5
Garkane Power Association, Utah	19.5
Moon Lake Electric Assn., Utah	15.6
Mt. Wheeler Power Assn., Nevada	14.3
Utah Municipal Power Agency	
Levan	59.8
Manti	40.2
Nephi	42.6
Provo	62.6
Salem	33.1
Spanish Fork	34.6
Wyoming Municipal Power Agency	
Cody	11.9
Fort Laramie	9.0
Guernsey	7.8
Lingle	8.5
Lusk	12.4
Pine Bluffs	9.7
Powell	10.7
Wheatland	11.6
San Carlos Irrigation Project, Arizona	1.3
Safford, Arizona	41.1
Thatcher, Arizona	12.5
Chandler Heights Citrus Irr. Dist., Arizona	86.3
Queen Creek Irrigation Dist., Arizona	29.0
San Tan Irrigation Dist., Arizona	30.4
Electrical District No 3, Arizona	56.0
Electrical District No.4, Arizona	35.8
Electrical District No 5, Pinal, Arizona	30.0
Electrical District No 5, Maricopa, Arizona	106.1
Electrical District No 6, Arizona	13.0
Electrical District No 7, Arizona	63.9
Maricopa County Mun. Wtr Cons. Dist., Arizona	51.4
Ocotillo Water Cons. Dist., Arizona	95.3
Roosevelt Irrigation Dist., Arizona	29.3
Roosevelt Water Cons. Dist., Arizona	19.6
Wellton-Mohawk Irr. Dist., Arizona	1.7

Source: R.W. Beck and Associates, Impact Analysis, March 1987, Table III-1, pp 1-6

Estimated Percentage Rate Reduction for Different Groups of Utah P&L Customers

Year	All retail customers ^a	Residential and irrigation customers ^b
1989	0.28	0.80
1990	0.85	2.41
1991	0.87	2.44
1992	0.94	2.65
1993	1.00	2.80
1994	1.02	2.86
1995	1.02	2.84
1996	1.07	2.97
1997	3.19	8.68
1998	6.33	17.27
1999	9.05	24.18
2000	9.61	25.76
2001	8.68	22.81
2002	7.98	20.98
2003	7.23	18.61
2004	6.63	17.04

Note: This table does not include the effects of additional sales that Utah P&L expects it could make. Utah P&L estimates that if additional wholesale sales equivalent to the federal power received were included, the rate reductions for all retail customers would be 6.7 percent throughout the 15-year period. If the rate reduction applied only to residential and irrigation customers, Utah P&L estimates rate reductions of 18 to 24 percent throughout the period.

^aThese estimates were developed by R. W. Beck and include all of Utah P&L's retail customers. This designation includes Utah P&L's industrial and commercial customers as well as its residential and irrigation customers.

^bThese estimates were developed by Utah P&L for comparison purposes. They use the fuel cost savings estimated by R. W. Beck and limit the benefits to Utah P&L's Utah and Wyoming residential and irrigation customers. A Beck representative said that if power were reallocated based on Utah P&L's proposed distribution, the power allocations and rate changes estimated in its study would change somewhat.

Projected Electrical Generating Capacity and Demand in Kilowatt Hours for Three Federal Regions

Federal region	Kilowatt hours in billions		
	1985	1990	1995
North Central ^a			
Generating Capacity	104.9	142.1	157.4
Demand	70.5	84.1	97.8
Surplus (deficit)	34.4	58.0	59.6
Southwest ^b			
Generating Capacity	379.8	432.3	493.3
Demand	342.2	394.6	452.0
Surplus (deficit)	37.6	37.7	41.3
West ^c			
Generating Capacity	208.7	254.1	299.0
Demand	229.9	275.1	318.3
Surplus (deficit)	(21.2)	(21.0)	(19.3)

^aThe North Central region contains the states of Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming.

^bThe Southwest region contains the states of Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

^cThe West region contains the states of Arizona, California, Hawaii, and Nevada; it also includes American Samoa and Guam.

Source: Annual Outlook for U.S. Electric Power 1986, Energy Information Administration, DOE/EIA-047(86), Appendix A.

Scope and Methodology

We reviewed the assumptions and methodology of the Beck study and discussed the study with representatives of R.W. Beck and Associates and attorneys for the Association. We obtained Utah P&L's review of the study and discussed it with Utah P&L officials and their attorneys. We also discussed the potential rate changes with Western officials, and various aspects of this subject with Utah Public Service Commission officials. Our review was performed from April through August 1987.

The Beck study relied on data published by Utah P&L, data from Western's customers, Federal Energy Regulatory Commission filings, and other public sources. Utah P&L relied on Beck study data and company information. We did not independently verify the data or calculations made by Beck and Utah P&L.

Two models were used in the Beck study. One model was used for projecting return on investment, depreciation, taxes, and fixed operation and maintenance expenses. While we did not review this model, it was used previously by Utah P&L in rate filings submitted to the Utah Public Service Commission. According to a Commission staff member, the Commission has approved the model's technical operation.

The second model Beck used projected fuel costs and determined which generating plants are the most economical sources of power. Beck developed this model itself for use in its utility consulting practice, and it was described by the Beck representative as a standard type of model used in the industry. We did not review this model because of time limitations.

Major Contributors to This Report

Resources,
Community, and
Economic
Development Division,
Washington, D.C.

Keith O. Fultz, Associate Director, (202) 275-1441
Paul O. Grace, Group Director
Charles M. Adams, Evaluator-in-Charge
Delores Parrett, Evaluator
Carol Herrnstadt Shulman, Writer-Editor
Patricia McKimmie, Typist

Requests for copies of GAO reports should be sent to:

U.S. General Accounting Office
Post Office Box 6015
Gaithersburg, Maryland 20877

Telephone 202-275-6241

The first five copies of each report are free. Additional copies are \$2.00 each.

There is a 25% discount on orders for 100 or more copies mailed to a single address.

Orders must be prepaid by cash or by check or money order made out to the Superintendent of Documents.

United States
General Accounting Office
Washington, D.C. 20548

Official Business
Penalty for Private Use \$300

Address Correction Requested

First-Class Mail
Postage & Fees Paid
GAO
Permit No. G100