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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE INVESTIGATION OF TIME-OF-USE PRICING FOR IDAHO POWER RESIDENTIAL CUSTOMERS.	)	**CASE NO. IPC-E-02-12**
	)	**COMMENTS OF THE COMMISSION STAFF**

COMES NOW the Staff of the Idaho Public Utilities Commission, by and through its Attorney of record, Lisa D. Nordstrom, Deputy Attorney General, and in response to the Notice of Filing, Notice of Modified Procedure and Notice of Comment Deadlines issued on September 27, 2002, submits the following comments.

In Case No. IPC-E-01-13, the Commission directed Idaho Power Company and the Energy Efficiency Advisory Group (EEAG; Advisory Group) in November 2001 to consider implementing a Time-of-Use (TOU) metering pilot program "using private contractors through a Request for Proposals (RFP) process." Order No. 28894 at 7. Although it did not set a deadline, the Commission further encouraged the Advisory Group to "consider installing time-of-use meters in new subdivisions and the feasibility of allowing existing customers to voluntarily install time-of-use meters and amortize the cost over multiple years." *Id.*

In Case Nos. IPC-E-02-2 and -3, the Commission reaffirmed this directive in the context of a May 2002 Power Cost Adjustment Order that funded DSM programs. Specifically, the

Commission directed Idaho Power and the Advisory Group to "evaluate and report to the Commission on the viability of a Time-of-Use residential metering program by September 12, 2002." Order No. 29026 at 22. In compliance with the Order, Idaho Power timely submitted its "Report on Residential Time-of-Use Pricing" (Report).

Automated Meter Reading and Time of Use Pricing

The Christensen Associates' analysis portion of Idaho Power's Report concluded that mandatory, critical peak time-of-use (TOU) retail pricing provides the potential for benefits exceeding $1 million annually. Report at 23. In addition, Christensen Associates stated that this form of TOU pricing provides potential for another $12 million annual benefit by avoiding the capital costs associated with 200 megawatts of new peaking facilities that would otherwise be needed. *Id.* at 22. Given Christensen Associates' analysis, Staff finds inconsistent Idaho Power's conclusion that "Until such time as an AMR (automated meter reading) system is available on Idaho Power's system, and a PCA (power cost adjustment) methodology is devised to remove the negative impact to Idaho Power's earnings due to the unequal treatment of the revenues and expenses impacted by load shifting, residential time-of-use pricing is not economically viable." *Id.* at 35.

This apparent inconsistency was strengthened by the results of a separate Idaho Power AMR study. In that study Idaho Power stated that even without consideration of TOU pricing, an AMR system has a positive net present value of $32 million over the life of the equipment compared to the current metering system. In addition, the AMR study listed many customer service benefits, cost savings, and revenue enhancement opportunities for the Company that would result from implementing an AMR system. These benefits included:

--additional revenue due to better meter reading accuracy with AMR;

--fewer customer calls and rebilling due to increased accuracy and fewer estimated bills;

--improved outage monitoring, reporting and locating;

--improved theft and malfunction detection;

--remote connects and disconnects resulting in quicker service and reduced labor costs;

--flexible billing schedules and account aggregating to meet customer preferences;

--increased employee safety and reduced liability and damage; and

--flexible rate design options.

Idaho Power tested an AMR system in the Idaho City area in 1999 and concluded that the AMR system was deployable and met the Company's technology requirements.

Given Idaho Power's opposition to TOU pricing absent an AMR system, Staff believes the Commission should first determine whether Idaho Power should immediately begin to plan for implementation of an AMR system. While TOU pricing can be accomplished with a variety of meter types, Staff believes the optimal form of TOU pricing is dependent upon AMR. According to Idaho Power, implementation of AMR is cost-effective even if TOU is not implemented.

Seasonal TOU pricing can occur with Idaho Power's existing meters. For example, Idaho Power could charge higher rates in the peak-demand summer months and lower rates during months when the demand for electricity is lower. It can do this with either single-price rates, tiered rates or a seasonal mixture of both, but it cannot charge different rates within the same day or even within a single billing cycle without estimating or prorating customer usage. Seasonal pricing with standard meters is currently used by Intermountain Gas and United Water Idaho.

If Idaho Power installed "traditional" or "conventional" TOU meters (i.e. without AMR), it would be able to charge different rates during two, or perhaps three, set periods each day. It could also vary those prices by season. Utah Power and Light (UP&L) uses this type of TOU meter to provide optional TOU rates to its residential customers in Idaho. UP&L's daily TOU rates include a peak and off-peak rate, both of which vary by summer and winter months. Idaho Power's Report estimated that the traditional TOU meters necessary for a mandatory TOU tariff would cost about $47 million.

With either existing meters or traditional TOU meters, TOU electricity rates will not reflect the actual cost of production or wholesale market prices during most hours of the year. In other words, rates will generally be either higher or lower than actual cost and will result in misallocation of resources as customers adjust their demand to erroneous price signals. The degree to which prices match costs will also vary among customers due to various fixed meter reading cycles. Although traditional TOU meters would allow more pricing flexibility (and thus enable Idaho Power to better match prices with costs than it can do with existing meters), the Report concluded that mandatory, conventional TOU "would produce very modest potential benefits." It also concluded that optional, conventional TOU would produce slightly higher customer benefits but result in net revenue losses to Idaho Power. *Id.* at 23. The cost of

traditional TOU meters is not offset by reductions in meter reading costs or service improvements.

The most effective TOU rates (i.e. critical-peak TOU) can be implemented only if an AMR system is in place. With AMR, retail prices can vary as necessary to track costs while treating all customers the same regardless of billing cycle because the monthly meter reading schedule is no longer a limiting factor. Although Idaho Power estimated the initial cost of an AMR system to be $72 million, or about 50% more than that required for traditional TOU meters, the entire cost of the AMR system is more than offset by savings in meter reading costs. While Idaho Power's Report stated that critical-peak TOU pricing provides the potential for significant cost savings in meeting the electricity demands of its customers, the Idaho Power study of AMR indicated that the cost of such a system will be more than offset by reduced Company costs and improved customer service.

As a result of reviewing Idaho Power's AMR study and TOU Report, Staff believes that consideration of TOU pricing should first focus on planning and installing an AMR system. After Idaho Power has begun AMR installations, the Commission could then consider whether TOU pricing, either mandatory or optional, is an appropriate rate design. Staff believes that determination of TOU rates would be best considered during Idaho Power's next general rate case. Once some of the new meters are installed, the Commission and Idaho Power will be able to test alternative TOU rate designs to more precisely estimate Idaho customers' price elasticity of demand. Although we believe AMR is justified without implementation of TOU pricing, Staff believes AMR is just the first step in establishing TOU pricing. We now analyze the Company's TOU Report in greater detail below.

Staff Analysis of Idaho Power's TOU Pricing Report

In preparing its Report for Idaho Power, Christensen Associates reviewed TOU pricing programs of several utilities including Puget Sound Energy in Washington, Gulf Power in Florida, and Electricity de France in France. This review did not include Utah Power and Light's TOU tariff that has been in use since 1981 in Idaho. Staff believes a study of UP&L's TOU program would have been informative given the proximity of its service area to Idaho Power's, its use by one-third of UP&L's residential customers, and its application to one-half of the kilowatt-hours sold. However, UP&L differs from Idaho Power in that its TOU rates are fixed for two daily periods during two seasons each year. Because UP&L does not have an AMR

system, its conventional TOU pricing system is not easily adaptable to critical-peak TOU pricing.

The Report stated that one of the primary problems with traditional TOU pricing (e.g. UP&L's) is the inherent inaccuracy of prices for most hours of the year, which results in the misallocation of resources. *Id.* at 5-9. Furthermore, the Report noted that "[c]onventional TOU pricing offers relatively small potential benefits." *Id.* at 14. Where TOU rates are voluntary (like UP&L's), relatively few customers participate. *Id.* at 15. Idaho Power has further clarified that "relatively few" generally means five percent or less of customers. Although Staff agrees with the Report's conclusion that voluntary, non-critical-peak TOU pricing is not the optimum form of TOU, Staff would have preferred that the Report analyzed UP&L's program given that one-third of its customers are voluntary participants.

Unlike traditional TOU, the Report indicated that "[c]ritical peak TOU pricing has the potential to produce substantial benefits." *Id.* at 14. Under mandatory, critical peak TOU pricing, the value of load reductions and cost savings potentially exceed $1 million annually. *Id.* at 23. But as previously stated, the Report also noted that the avoided capital cost reductions associated with the 200 MW load reduction would equate to an additional cost savings of up to $12 million per year. *Id.* at 22.

Following the analysis by Christensen Associates, Idaho Power discussed three additional issues: 1) metering capability, 2) power cost adjustment implications, and 3) thoughts from its Energy Efficiency Advisory Group. Regarding meter capability, the Report estimated that the AMR system required for critical-peak TOU pricing would cost $72 million as compared to an estimated $47 million for traditional TOU meters. *Id.* at 32. However, as previously addressed in Staff comments, Idaho Power's study of the costs and benefits of implementing an AMR system concluded that doing so would be cost-effective due to meter reading cost reductions alone -- even without consideration of critical peak TOU pricing or other benefits. Idaho Power estimated the annualized cost of an AMR system to be about $4 million, but that AMR would save nearly $6 million per year in monthly meter reading and customer movement costs.

With regard to TOU pricing's impact on the PCA, the Report stated TOU pricing will not be viable as long as 90% of the benefits of power cost reductions accrue to its customers and Idaho Power absorbs 100% of the revenue reduction. *Id.* at 32-33. It is not clear to Staff why Idaho Power believes that the PCA mechanism and TOU pricing necessarily results in lost revenue to the Company. To the extent that TOU prices are established to cover costs, reduced

revenues should not result from rate design. However, if necessary, the Company may file an application with the Commission for a regulatory ruling to accommodate new technology or innovative rate design that results in lower rates, better service to customers, or to allow the Company to earn its authorized return.

The Report stated that the Energy Efficiency Advisory Group (EEAG, Group) was more supportive of a rate increase for the existing tariff coincident with implementation of an optional TOU tariff than of implementing mandatory TOU pricing. *Id.* at 34. The Report also indicated that the EEAG favored a demand response program (e.g. air conditioner curtailment) over TOU pricing and that it did not support mandatory TOU pricing for customers in new housing developments. *Id.* at 34. Staff has participated in all of the EEAG meetings and agrees that these issues were discussed. However, Staff does not believe that the Group, as a whole, would agree with Idaho Power's assessment of the Group's conclusions. No vote was taken on these issues and Staff does not believe the EEAG reached any conclusions on the TOU issue.

Although Puget Sound Energy (PSE) recently sought early termination of its voluntary TOU pricing program, Staff believes this should have little impact on the Idaho Commission's consideration of either an AMR system or a critical peak TOU pricing for Idaho Power. PSE serves customers in a more temperate climate than does Idaho Power and does not experience the extreme summer peak demand that Idaho Power does. PSE's TOU program offers an optional tariff to customers, which as described in the Report, results in less than optimal benefits when compared to a mandatory TOU tariff. In addition, PSE serves primarily an urban area where costs to manually read meters are presumably much lower than Idaho Power's per customer meter reading costs.

Staff Conclusion

According to testimony filed in Case No. IPC-E-01-42, Idaho Power forecasts that it may face a capacity deficit of nearly 200 MW in July 2003 that may grow to over 200 MW in July 2004 and more than 300 MW by July 2005. Case No. IPC-E-01-42, Said Exh. No. 6 at 2. Based on Christensen Associates' conclusion that mandatory, critical peak TOU pricing has the potential to trim 200 MW from Idaho Power's peak demand, Staff believes that this is an option that should not be easily dismissed or unnecessarily delayed. TOU pricing, combined with other demand side management programs, may cost-effectively supplant the need for acquiring capacity from peaking plants and transmission upgrades for many years. Staff asks that the

Commission take official notice of comments and testimony filed in IPUC Case Nos. IPC-E-01-42 (Garnet) and IPC-E-02-8 (Integrated Resource Plan) for consideration in this case.

Given that Idaho Power's own analysis of implementing an AMR system shows that the benefits far exceed the costs and that Idaho Power has tested an AMR system that met the Company's requirements, Staff questions why the Company has not yet implemented a plan to install an AMR system and apparently is not planning to do so in the near future. Staff recommends that Idaho Power submit a plan to the Commission in early 2003 for installation of new meters capable of AMR and critical-peak TOU pricing. This recommendation is based on the facts that AMR: 1) has been shown by Idaho Power's analysis to be cost-effective due to the reduction in meter reading costs alone; 2) has been successfully tested by Idaho Power; 3) provides additional service and cost savings benefits for customers and the utility; and 4) may enable customers to receive substantial potential benefits from TOU retail pricing. Staff believes the Company should begin implementing AMR in those areas and for those customers where the benefits to Idaho Power and its customers are the greatest.

Respectfully submitted this 6th day of December 2002.

Lisa D. Nordstrom

Lisa D. Nordstrom
Deputy Attorney General

Technical Staff: Lynn Anderson

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT I HAVE THIS 6TH DAY OF DECEMBER 2002, SERVED THE FOREGOING **COMMENTS OF THE COMMISSION STAFF**, IN CASE NO. IPC-E-02-12, BY MAILING A COPY THEREOF, POSTAGE PREPAID, TO THE FOLLOWING:

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