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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE INVESTIGATION)
OF TIME-OF-USE PRICING FOR IDAHO) **CASE NO. IPC-E-02-12**
POWER RESIDENTIAL CUSTOMERS.)
)
) **SUPPLEMENTAL 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 Comment Deadlines issued on July 14, 2003, submits the following comments.

BACKGROUND

The origin of this Time-of-Use (TOU) rates and Automated Meter Reading (AMR) investigation can be found in Idaho Power’s 2001 power cost adjustment cases, Case Nos. IPC-E-01-7 and IPC-E-01-11. In Order No. 28722 the Commission said it “...believes reinstating a comprehensive conservation program is now appropriate given the current volatility of market prices...” That Order also initiated the Demand-Side Management (DSM) docket in Case No. IPC-E-01-13 and required Idaho Power to file a comprehensive DSM program by August 1, 2001. Order No. 28722 at 21.

Idaho Power submitted its DSM Compliance Filing on July 31, 2001 in Case No. IPC-E-01-13. Staff and other parties and customers then submitted comments regarding the Company's DSM Filing. In its comments Staff noted:

Time-of-use (TOU) metering and rate options were noticeably missing from Idaho Power's list of potential DSM projects. Staff believes TOU rates could help some customers reduce their bills as well as help Idaho Power reduce its peak demands.... TOU rates would help provide proper price signals to customers, which could ultimately reduce Idaho Power's costs and its customers' bills.... Staff believes the Company and its Advisory Group should consider optional TOU metering and rates, including real-time rates, as a potential DSM program. This is consistent with Idaho Power's proposed Schedule 90 that states, 'Peak reduction or load shifting measures may also be included as available measures.'

Staff Comments at 7. In response to comments of Staff and other parties, Idaho Power stated:

While certainly rate design may have an impact through price signals on the consumption patterns of Idaho Power's customers, the Company does not believe that the Commission intended the current proceeding to be broadened past traditional conservation programs. The Company does not believe that rate design, such as time of use, decoupling, etc., is a part of the Commission's investigation of Demand Side Management (DSM) programs. This is not to say that the Company is not exploring and will continue to explore rate design issues...

Idaho Power's October 12, 2001 Response at 3. In January 2002, the Commission directed the Energy Efficiency Advisory Group (EEAG) to consider recommending the implementation of a TOU program using private contractors through a Request for Proposal (RFP) process. Order No. 28927 at 3. The Commission further indicated the advisory group should also consider recommending the installation of 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.*

On March 14, 2002, the Land and Water Fund of the Rockies filed a Motion on behalf of several parties to enforce Order No. 28894 issued in Case No. IPC-E-01-13 with respect to the formation of an Energy Efficiency Advisory Group (EEAG). As a result of this motion the Commission issued Order No. 28993 on April 3, 2002 requiring the formation of the EEAG and the filing of a DSM implementation plan by May 2, 2002. Order No. 28993 at 3.

Idaho Power filed its Demand-Side Management Report on May 2, 2002 absent a discussion or proposal for time-of-use rates. In Idaho Power's 2002 power cost adjustment

cases, IPC-E-02-2 and IPC-E-02-3, the Commission noted that it did not see time-of-use metering mentioned in the Company's DSM report and directed Idaho Power to file a report on the viability of residential time-of-use metering by September 12, 2002. Order No. 29026 at 22.

Idaho Power timely filed its Residential Time-of-Use Pricing Viability Study (TOU Study) and the Commission opened this case, Case No. IPC-E-02-12. The TOU Study found that mandatory, residential, critical peak time-of-use pricing (CP-TOU) had the potential to reduce Idaho Power's maximum load by 200 MW during times that critical prices would apply. TOU Study at 21. The TOU Study also suggested that this amount of load reduction would be worth \$12 million per year in reduced capital cost savings due to the avoided or postponed need for additional peaking capacity. TOU Study at 14 and 22. However, the Study concluded that CP-TOU pricing was not economically viable until such time that (1) Idaho Power had an automated meter reading system capable of CP-TOU pricing and (2) Idaho Power's power cost adjustment methodology is revised to remove consequential negative earning impacts that would result from CP-TOU.

In Staff's first comments filed in this case, Staff compared the 200 MW of potential load reduction presented in the Company's TOU Study to the 200MW of capacity shortage that the Company said it was facing in Case No. IPC-E-01-42. Staff concluded that CP-TOU pricing "is an option that should not be easily dismissed or unnecessarily delayed." Staff Comments at 6. Staff asked the Commission to take official notice of Case Nos. IPC-E-01-42 (Garnet facility) and IPC-E-02-08 (Integrated Resource Plan). *Id.* at 7. Staff said that the Company's analysis showed that AMR would be cost-effective based on reductions in meter reading costs alone¹ and that AMR would provide additional benefits to the Company and its customers. *Id.* at 7. Consequently, Staff recommended 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. *Id.*

¹ Staff's conclusion that AMR was cost-effective based on reduced meter reading costs alone relied on 1) Idaho Power's 2002 Automated Meter Reading Analysis that said AMR had a positive net present value of \$32 million over the life of the equipment, and 2) Idaho Power's October 30, 2002 response to Staff's First Production Request in IPC-E-02-12. Included in that production request response were sheets labeled as "Attachment Response No. 3," the second page of which contained a "Net Annual Costs/Savings" table that showed 1) a total annualized AMR cost for all customer classes of \$3.7 million, 2) annual meter reading and customer movement cost savings of \$5.9 million, and 3) a net annual savings of \$2.2 million (\$5.9-\$3.7=\$2.2). This sheet also indicated the total capital cost of a system-wide AMR with TOU capability was \$59 million, or \$13 million less than the \$72 million estimate for system-wide AMR that the Company provided in its September 12, 2002 "Residential Time-of-Use Pricing Viability Study."

In response to comments filed by Staff and other parties regarding the Company's TOU Study, Idaho Power stated on January 17, 2003 that while an AMR system would provide multiple benefits in addition to those associated with TOU pricing, such a system was not critical for reliability or ongoing business operations during 2003. Nevertheless, the Company expressed its intent to seek budget approval to begin implementation of an AMR system during 2004. Idaho Power Reply Comments at 5-6. The Company's Reply Comments did not disagree with Staff's contention that the Company's analysis showed that AMR was cost-effective based on meter reading cost savings alone.

On February 21, 2003, the Commission found that CP-TOU "has the potential to create significant load reductions during high cost hours and reduce the need for expensive peaking facilities." Order No. 29196 at 9. However, the Commission was reluctant to immediately require implementation of TOU absent a better understanding of its "collateral impacts." The Commission added that TOU pricing may be required in the future, given Idaho Power's forecasted generation deficit. *Id.* Furthermore, the Commission listed the many benefits of AMR and stated that it would reduce operational costs even without implementation of TOU pricing. "Based on the data in Idaho Power's Report, the math seems simple: the \$6 million saved annually in meter reading costs less AMR's \$4 million annualized costs results in approximately \$2 million of net cost savings." *Id.* at 10. With this in mind, the Commission required Idaho Power to submit a plan no later than March 20, 2003 to begin replacing current meters with advanced meters capable of both AMR and TOU pricing this year with completion in 2004. *Id.*

Idaho Power subsequently petitioned for a Stay and for Reconsideration of Order No. 29196. Idaho Power argued that instead of immediately saving \$2 million per year, an AMR system would increase its total revenue requirement for at least the first seven years. The Company indicated it was unclear where Staff obtained estimates of an annualized AMR cost of \$4 million and a meter reading savings of \$6 million per year. Petition for Reconsideration at 5 and 7. The Company's Petition for Stay was granted on March 19, 2003 by Order No. 29210 without deciding the merits of the issues raised.

On April 15, 2003, the Commission issued Order No. 29226 and amended portions of Order No. 29196 to allow the parties to collaboratively develop an Advanced Meter Implementation Plan that will best benefit ratepayers. Order No. 29226 at 2-3. That Order also required Idaho Power to update and file its 1999 AMR analysis with the Commission by May 9,

2003 and scheduled a public AMR workshop for May 19, 2003. *Id.* at 3-4. The Company timely filed its updated AMR analysis and the report was the subject of the May workshop. The workshop was attended by over 20 individuals, including Idaho Power representatives, the Staff, AMR equipment suppliers, consultants and interested parties. Several formal presentations were made and the parties had an opportunity to ask the Company questions to the extent that confidential information was not implicated.

On July 14, 2003, the Commission issued a Notice of Comment Deadlines seeking public input on the Company's May 9, 2003 updated AMR filing and other issues enumerated in the Notice. Order No. 29291. Accordingly, Staff submits the following analysis.

ANALYSIS

Staff has reviewed Idaho Power's May 9th updated AMR filing along with the earlier TOU study dated September 12, 2002. In response to Staff requests, the Company also provided numerous analyses incorporating different assumptions, including alternate implementation procedures. Because the detailed data necessary to do these analyses required intimate knowledge of the utility, Staff was dependant on the Company to provide the data and perform the analyses under a confidentiality agreement.

The threshold question in these comments is how and why the fundamentals supporting the Company's recommendation to further delay AMR implementation have changed from its initial position. The Commission stated in Order No. 29226 that

While the Commission is pleased Idaho Power agreed in its reply comments that AMR should be implemented, we do not understand Idaho Power's decision to delay AMR implementation until 2004. The Company has known of AMR's substantial benefits since it completed testing an AMR system in the Idaho City area in 1999. We believe that AMR should be implemented as soon as possible, with installation commencing this year and completed in 2004

As recently as January 17, 2003, Idaho Power filed Reply Comments in this case where the Company concluded that it is not economically viable to implement time-of-use pricing prior to the implementation of an AMR system. Reply Comments at 7. Idaho Power also acknowledged that automated meter reading provides multiple benefits, many of which are unrelated to its ability to enable time-based pricing structures. Thus "Idaho Power plans to request budget approval for the capital necessary to begin AMR implementation in 2004." *Id.* (Emphasis

added.) The comments also noted that "Idaho Power has been evaluating the potential costs and benefits of implementing TOU pricing for its various customer classes for several years...." *Id.* It appeared to Staff that the Company's conclusion to implement AMR was reached only after considerable time and study.

Yet in Idaho Power's updated AMR analysis filed May 9, 2003, the Company advised against implementing AMR because it was not a prudent investment at that time. According to the financial analyses it conducted in 2002 and 2003, the Company does not believe the cost of an AMR system is justifiable based on the savings achieved by eliminating the costs associated with manual meter reading processes. However, Idaho Power recommends that the Company and the Commission continue to monitor developments and conduct periodic assessments to determine the appropriate time for deployment. Over time, the Company believes that AMR will become more cost-effective as Operation and Maintenance (O&M) costs increase and AMR technology costs decrease.

While the Staff still has questions regarding assumptions used in the updated analysis, it is difficult to justify AMR on reduced meter reading costs alone based on the results provided by the Company. The Company's analysis assumes that AMR is implemented system-wide using a single AMR technology and that the benefits are limited to savings achieved by eliminating costs associated with manual meter reading. In that scenario, the AMR system would have a higher revenue requirement than standard meters for the first 6 years and would not reach a break-even point for 21 years. Consequently, AMR installation would require a \$9 million rate increase (or about 1.5% for a four-year period), essentially reflecting the time required to amortize the old meters.

Staff's review of the Company's analysis included changing a number of assumptions. The amortization period for the old manual meters was extended from 4 years to 10 years, average annual customer growth rates were increased from 2.1% to 2.5%, the discount rate was lowered from 7.24% to 5%, and the average annual Consumer Price Index (CPI) was increased from 2.23% to 3.3%. Combined, these changes reduced the break-even point from 21 years to 15 years.

Another factor that significantly affects the payback period is the amount of labor one assumes will be eliminated. In the Company's analysis only about 50% of the O&M expenses associated with metering are eliminated. The Company explains that even after meter reading is automated it will continue to incur labor and transportation costs associated with meter

installations, service connections and disconnections, meter testing and maintenance, back office systems, AMR system support, and collections. According to Idaho Power, these services constitute fully 50% of the labor cost in the meter reading account. When comparing these estimates with the costs of other utilities that have implemented AMR, Staff found that most utilities thought the estimates were high but were unwilling to share detailed information.

In speaking to other utilities, Staff also found that the business case for AMR was not usually made on the basis of meter reading cost alone. Although each utility weighed the value of the various features differently, it was the combined benefit of multiple functions (including load management) which made the AMR business case work. While these functions stop short of what is often envisioned with a "Smart Grid" (controlling customer appliances and even customer generation), AMR technology provides the basis for building Smart Grid capability. It also offers a variety of functions including automated meter reading, theft detection, accuracy improvement, improved outage monitoring, flexible billing schedules, account aggregation, improved customer service, and capability for TOU or CP pricing. It is Staff's understanding that the AMR system Idaho Power evaluated in its analysis also has these capabilities. The importance of the load management capability, either through peak pricing or direct load control, was recognized by the Christiansen TOU Study as providing significant economic benefit. That TOU Study projected a substantial savings (\$12 million annually) could be realized through AMR critical-peak time-of-use pricing by avoiding new generation resources. It should be noted that the Company's updated analysis does not include benefits that could be provided by any of the other AMR functions. While the benefits of these other functions may be difficult to quantify, Staff believes they should be considered in determining whether AMR should be implemented.

Staff acknowledges the Company's valid concern regarding the rapid change in AMR technology and the risk that a system implemented today may become obsolete tomorrow. However, Staff concurs with the Company in its selection of Power Line Carrier (PLC) as the most appropriate AMR technology, at least in a significant portion of its service territory. PLC is well suited for rural mountainous service areas and utilizes facilities well understood by the Company. The question at this point is how to implement a technology with clear potential advantages while recognizing that uncertainties in cost savings, benefits associated with multiple functions, and technological obsolescence exist.

CONCLUSION AND RECOMMENDATION

Staff continues to maintain that the Company should begin installation of AMR and that implementing an AMR system could result in many customer service, cost saving, and revenue enhancement opportunities. Staff continues to believe that this is an option that should not be easily dismissed or unnecessarily delayed given the future capacity deficit forecasted by Idaho Power. Idaho Power has transmission constraints that generally coincide with the peak demand. These constraints limit the Company's options in meeting peak demand to either constructing additional peaking generation or reducing peak demand.

A number of technologies and providers, including the system being considered by Idaho Power, have been proven on a large scale in numerous utilities across the country. A number of investor-owned utilities have installed AMR systems without any increase in rates and 38% of public cooperatives have implemented some type of AMR, including Kootenai Electric here in Idaho. Kootenai is installing the same PLC technology that Idaho Power is considering. Kootenai expects to see a reduction in its cost of serving 18,000 customers almost immediately after completing installation of the AMR system.

Additionally, the federal government allows significant tax benefits for certain kinds of equipment installed before January 1, 2005. These benefits include an accelerated depreciation allowance equal to 50% of the purchase price that can be taken the first year. This accelerated depreciation allows the Company to write the asset off faster and gain the tax benefit sooner, further justifying our recommendation as detailed below.

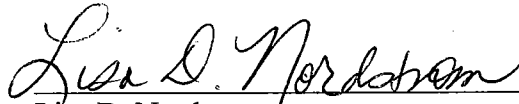
Based upon our review, Staff believes that AMR implementation should begin on a limited basis in areas best suited to the PLC technology. This would allow the Company to gain experience with the new technology, integrate it into its operations, evaluate the cost and benefit of various functions, and develop a more comprehensive business case for full implementation. The Company could also test TOU and CP-TOU pricing and load control to get a more accurate assessment of the value that AMR could provide in avoiding new generation.

To this end Staff worked with the Company to 1) carve out those Customer Information System (CIS) geographic areas that are electrically and operationally isolated such that implementation of AMR in those areas could be accomplished without affecting other operational areas, and 2) find a combination of CIS areas that would provide the best payback. The Company analyzed numerous combinations and determined that the shortest payback was achieved by providing AMR in the combined CIS areas of Emmett, Salmon, Hailey, McCall, and

Mountain Home. These areas tend to have higher costs for meter reading, connect/disconnect and collections. The Company also felt that an AMR system could be implemented in these areas without creating operational difficulties. These are mostly rural areas where the PLC technology would most certainly be the Company's technology of choice. Furthermore, by starting with a limited area, the Company estimates that the initial capital costs would be reduced from \$86.5 million for the whole system to \$11.5 million for this initial area. Staff recognizes the risk that payback might be lengthened if AMR is not eventually installed system-wide. This is because some fixed support equipment is required regardless of the size of the system. However, this solution (limited initial implementation with subsequent reevaluation) will hopefully address the uncertainties of cost savings, functional benefits and technological obsolescence while reducing the risk associated with full implementation at this time.

In conclusion, there is clearly uncertainty in evaluating AMR given that the Company's earlier finding that AMR's multiple benefits merited implementation in 2004 evolved into the Company's later position that AMR should not be implemented at this time. Staff does agree that, based on savings from meter reading alone, system-wide AMR implementation to all customers is not initially cost-effective. Therefore Staff is recommending an initial limited roll out of PLC automated meter reading in the most cost-effective areas followed by an opportunity for the Company to evaluate, monitor, and reassess implementation of the selected AMR technology to the rest of the system. Staff supports the Company's selection of Emmett, Salmon, Hailey, McCall and Mountain Home as the most cost-effective areas. The Company should submit a plan detailing the initial implementation, including: 1) the area to be metered, 2) the technology and its capability, and 3) the schedule for completing the first phase. It should also include details of how the monitoring and assessment would be accomplished, the time frame for that assessment, and when a decision might be made regarding implementation to the remaining system.

Respectfully submitted this 15th day of August 2003.



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Deputy Attorney General

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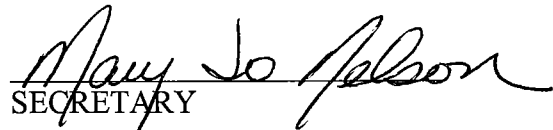
CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT I HAVE THIS 15TH DAY OF AUGUST 2003, SERVED THE FOREGOING **SUPPLEMENTAL 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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