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IDAHO PUBLIC  
UTILITIES COMMISSION

May 3, 2013

Idaho Public Utilities Commission  
Attn: Jean D. Jewell, Secretary  
472 West Washington Street  
Boise, Idaho 83702

RE: Case No. IPC-E-12-27  
Proposed Net Metering Changes

Dear Public Utilities Commissioners,

Technological developments and market forces present Idaho with an opportunity for rapid solar growth over the next decade. Such growth can bring substantial benefits to the state. A fundamental question facing the Commission in this net metering case involves devising a structure that allows Idaho to reap these benefits while remaining fair and reasonable for both Idaho Power and its customers. I thank you in advance for the time you spend reading my comments below. If you don't have time to read them all, they can be summarized as follows:

- Solar is poised to grow rapidly
- Growing solar could be very good for Idaho
- Solar net meters provide net benefits to all customers
- The key to success lies in making such growth good for Idaho Power, too.

I believe there are useful insights, learned during the last decade dealing with the growth of wind-generated electricity, which can be helpful when considering how best to harness the potential for growth in solar generated electricity over the next ten years. I worked as a wind farm developer in Idaho during the last decade. Based on that experience I offer the following thoughts.

**Huge potential: >200,000% increase**

As you know, the growth in wind-generated electricity in Idaho during the past decade was enormous. Ten years ago, in 2003, commercial wind generation in Idaho started when a retired engineer connected three used 100-kilowatt wind turbines within the Idaho Power

balancing area. A decade later that .3 megawatts of wind generator capacity has grown to more than 600 megawatts, a >200,000% increase. Solar today is like wind in 2003, poised to grow rapidly.

## **Growth of wind power has been good for Idaho**

Harnessing Idaho's wind resource has been good for Idaho, the comments Idaho Power has made recently in its bill stuffers notwithstanding. Economic benefits include:

- Idaho wind farms provide good jobs, tax payments and substantial rental payments to landowners across multiple counties in southern Idaho.
- The power generated by those wind farms has been fairly priced
  - Elkhorn prices were based on market competition
  - Rockland prices were negotiated by Idaho Power
  - Other contracts were based the best estimate of avoided costs available at the time the contracts were executed.
- Fixed price contracts for wind power purchases provide price stability for all rate-payers.

In contrast,

- Natural gas prices are highly variable having ranged from \$1.92/mmbtu to \$4.35 in the past fifteen months
- Hydro costs are stable but quantities generated fluctuate dramatically from year to year causing substantial rate variability (as we see in the current PCA docket)
- Tightening emission controls will likely add unknown but potentially very significant costs for upgrades to coal generated powerplants

While the past decade's harnessing of Idaho wind resources has been good for Idaho, Idaho Power may have a very different perspective.

## **Idaho Power perspective on wind a decade ago**

In 2003 (the same year Leuwendowski brought his three used Micon turbines on-line down on Simco Road) my boss and I met with John Prescott and Karl Bokenkamp. We discussed Idaho Power's potential interest in one of the wind sites we were attempting to develop. At the time John Prescott held a position within the Idaho Power management structure roughly equivalent to Lisa Groh's current job.

Mr. Prescott explained Idaho Power's perspective on wind in 2003 as follows:

- Wind wasn't a good fit for the Company. Wind offered minimal capacity value, the Company was facing peak load growth and they were much more interested in adding gas generation (this was before Danskin or any other gas generation had been built)
- The Company was concerned with the unknown operational impacts of wind generation on IPCo's system (The 2002 IRP had talked about adding one turbine on their system to test its effects)
- The Company had no interest in PPAs. If they were ever going to participate in wind generation it would be as an owner and they would seek to rate base the generation.

### **Wind power has not worked out well for Idaho Power**

Ten years later, if we look back to John Prescott's concerns, we can see that the growth of wind did not work out well for Idaho Power. One might say in baseball parlance that they "went zero for three". It hasn't been good for the Company operationally, reputationally or financially.

- **OPERATIONAL IMPACTS** - Idaho Power currently bears all the challenges of managing the variability of 600+ megawatts of wind in their Balancing Area without any of the operational controls that wind farm ownership would have provided
- **REPUTATIONAL IMPACTS** – People may disagree on the efficacy and the outcome of what some call the "PURPA Wars" but those conflicts certainly didn't help the Company's reputation with the public it serves.
- **FINANCIAL IMPACTS** - Not a good story here either. Wind represents 180-200 aMW generated in their service territory that the Company doesn't own. Except for some minor transmission upgrades the Company gets no opportunity to earn a return on investment as the power comes through under PPAs.

If the Company sees the future of solar as similar to their experience with wind, one shouldn't be surprised that the Company has taken the very negative stance vis-à-vis solar growth that we see in the current net metering case.

## **This net metering docket is really about growth in solar**

Although net metering customers use hydro, wind and solar power to generate electricity, a review of the past ten years of net metering growth shows that hydro and wind aren't growing rapidly. There has been almost no growth in hydro net metering since 2006. While there has been a small increase in wind net metering, combining both hydro and wind sums to only about .6 megawatts of generation. As Tim Tatum acknowledged at the April 25<sup>th</sup> workshop the impact of all current net metering on rate structure fairness is de minimus. The small and stable subset of net metering customers using wind and hydro does not now, and will not in any foreseeable future, produce a rate structure problem.

The problem, from what I perceive as the Utility's perspective, is that Solar is starting to grow. Solar today is in many respects like wind was in 2003 - poised to grow rapidly. During the past decade wind turbine manufacturers created new turbines that could economically "harvest" lower speed wind sites. Between 2003 and 2009 new wind turbine technology expanded the portion of the state with commercially viable wind speeds from <1% of the Idaho landmass to >20% of the state. Those low wind speed turbines changed the Idaho wind resource from a small niche player to a substantial potential resource. In a decade wind generation went from almost non-existent to providing nearly 10% of the Company's annual energy needs.

## **Individual liberty**

While improvements in the technology were essential elements for the growth of wind power over the recent past, technology alone was not sufficient. Without the forward-looking and courageous Public Utilities Commission stance in balancing the rights of independent power producers under federal legislation with the monopsony power of a regulated utility such growth could not have occurred. Having participated in some of those "PURPA wars", I know making those decisions were not pleasant tasks for the Commissioners or PUC staff.

Now fate again puts a similar issue before you. Net metering really is an individual's liberty issue, balancing the interests of customers who want to exercise a real property right (by harnessing some of the solar resource on their property) against the interests of the Utility and other non-net metering customers. Fortunately, the value of solar net metering is so high that it is possible to construct a solution where all parties win.

## **Solar net metering provides both an energy and a capacity value**

Until a net metering customer produces more power than he or she is currently using that customer is analogous to one who invests in efficiency. It's only when the customer starts to produce more power than he is consuming, i.e. until the meter "runs backwards", that we face the question of how to value that contribution. Solar net meters' provide a very valuable product, a product of far above average value.

The excellent solar resource in Idaho during the summer helps meet long-term capacity needs. To quote Idaho Power:

*"Idaho Power customers experienced an all-time system peak of 3245 MW during the hour ending 4:00 pm, Mountain Time, on Thursday July 12, 2012."*

On that peak day, July 12, 2012, throughout the hour ended 4:00 solar in Boise was producing more than 65% of rated capacity. In fact, on sunny days all during June and July solar produces more than 60% of rated capacity during the 4:00 hour. And all-time system peaks don't happen on cloudy days, they occur on sunny summer days, when solar is generating.

If we fairly value solar generated power, (i.e. calculate both the time value of the energy solar net metering produces plus its capacity value measured by the potential for partially offsetting the requirements for firm transmission and additional peak generation to meet expected future system peak loads) we find that solar net metering produces value in excess of what solar net meters' are receiving under the existing tariff. Far from harming their non-net metering neighbors, solar net meters provide benefits to all customers. More solar net metering should be encouraged.

## **Harnessing more Solar energy is great for Idaho**

When viewed from a statewide perspective, I think it is clear that harnessing more of Idaho's solar energy resources is great for our state. Solar power is a clean, non-polluting, domestic, free fuel that won't run out in our lifetimes. Investing in more solar power provides multiple benefits on an economic level, including:

- Providing investment opportunities for individuals who would rather invest on their rooftops than an some low rate CD
- Investing in Idaho solar creates jobs in Idaho

- Producing power locally reduces dollars flowing out of state for power produced elsewhere.

More solar generation is clearly good for Idaho. The challenge comes in devising a way for that growth in solar power to be good for, and not a threat to, Idaho Power.

### **How can Idaho Power invest in distributed solar?**

In their filings and comments Idaho Power suggests that its concerns with net metering arise from a rate structure fairness perspective. Given their experiences over the past decade with the rise of wind generated electricity, one might wonder if they are not also concerned with the potential of private solar generation to further erode what was once their largely exclusive position as generator of power for local consumption. They present the net metering matter as a rate structure issue. I fear that there is also an issue related to the potential loss of opportunities for investing in generation on which the Company can earn a rate of return.

The rise of solar generated electricity isn't going away. Having the past decades' "PURPA wars" reappear as the "net metering wars" during this next decade is in no one's interest. We have an opportunity to learn from our experience with wind during the last decade and do better with solar in this coming decade. In their current IRP, as has been the case in all recent IRPs, the Company feels that solar carries too high a capital cost for them to invest in it directly. This net metering case presents an opportunity to find a way for Idaho Power to make some, partial perhaps, investment in new rooftop solar.

The parties should be strongly encouraged to settle this net metering case by devising a structure that gives Idaho Power a financial incentive to work with their solar customers and clean energy businesses not against them. Until Idaho Power can win when a customer installs solar panels on his roof, the threat of a new round of "net metering wars" will not go away.

You have hundreds of other comments submitted on this docket. Thank you for the time you've spent reading mine.

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