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From: Aimee Christensen <aimee@christensenglobal.com>
Sent: Thursday, October 13, 2016 3:17 AM
To: pzcounter
Subject: Proposed redundant transmission line

Dear Blaine County P&Z Members:

I am writing regarding Idaho Power's proposed redundant transmission line.

Since moving home to the Wood River Valley in December 2009 after close to 20 years in energy and climate matters in the federal government, private sector, as an attorney, as a strategist and as an investor, I have increasingly been drawn into energy matters in our community. Recognizing the very real risks - and opportunities - economically, environmentally and to reliability from our current energy sources and infrastructure, I have dedicated more and more of my time to understanding and working to increase the resilience of our energy system.

Local energy resilience requires a more localized energy system with local generation, a modernized, dynamic grid and storage, with critical loads being top priorities. As I'm sure you are aware and as we have experienced, transmission and distribution lines are vulnerable to outages from a multitude of causes, whether vandalism, auto collisions into poles, weather, fire, or merely aging. Increasingly, communities as well as military installations are building localized energy systems (or distributed energy resources, DER) to protect their emergency loads and benefit their communities. Some communities are choosing to invest in local generation and storage and micro grids as an alternative to new lines, including to reduce the fire-related risk to the lines (in the case of Borrego Springs, CA), while others are augmenting their grid with local generation and storage and micro grids to protect their critical needs and local economies (Rutland, VT et al).

I participated as an active member of Idaho Power's Wood River Renewable Energy Working Group with the aim to finding ways to increase our resilience while building a collaborative relationship with Idaho Power as a critical partner in delivering our energy goals. This group included representatives from government, the private sector and nonprofits from throughout the valley with an agreed-upon goal to develop the first 100% renewable energy offering in the state. Idaho Power initiated this working group in response to local interest in renewable energy. Months later, Idaho Power started a separate conversation about the redundant line via the Citizens Advisory Committee; I believe keeping those two conversations separate has hampered our ability to come to a clear and compelling consensus on how best to meet our reliability goals.

In an effort to better understand the state of our infrastructure and how to reduce our risks, Ketchum asked Idaho Power to join the City's team at the Rocky Mountain Institute's Electricity Innovation Lab (eLab) in March 2015. The goal was to get advice for increasing our local energy resilience and to delve into the issue of distributed energy options and explore how that could be an alternative to a line or work complimentarily to a line (including asking about redundant distribution versus transmission). It is important to note that such DER options do not exclude the utility; indeed in other communities the utility is nearly always a key partner if not actually driving the alternatives, not only to respond to customer wishes to maintain their customer relationship and not lose opportunities to third parties, but also recognizing that there are very real business opportunities in

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these sectors, whether installing solar panels, selling batteries, operating larger scale renewable energy projects, and/or owning and operating microgrids.

The Ketchum team at the eLab included planning staff from Ketchum, myself and another member of the KEAC, two Idaho Power representatives, Sun Valley Company and a representative of NRG, a company leading in work on DER and microgrids. Out of that three+ days together, we learned more about our infrastructure and identified possible ways to work together for greater energy resilience. Next steps were to increase rooftop solar and efficiency in our community as it financially made sense and was allowed under Idaho regulations, and then together collaborate on our local resource assessment to understand what our local generations are (geothermal, biomass, solar, perhaps micro hydro), and how we can address critical load needs and potentially work toward an islandable microgrid. IPCO provided initial analysis on solar possibilities for local generation following that meeting. Here is a blog on that effort, approved by the participants and in it IPCO noted it was aiming to bring in redundant distribution: http://www.rmi.org/elab_accelerator_2015_ketchum_energy_resilience.

Since that time, Idaho Power has evolved its proposal for the redundant line and it is proposed as a transmission line. And key questions remain. It is my hope that in this process of considering the line, they can be answered. These include:
First, whether this redundant transmission line investment ($21-30M over the years) is the most cost-effective and locally beneficial investment to provide the level of reliability desired by the community;
Second, if a redundant line comes in, whether and if so how can it be tailored to be an optimal platform upon which to build increasing local generation, storage, and potential islandable sections for critical loads and the wider community needs.
These questions have not been answered adequately in the case of the first and at all in the case of the second. Fundamental to the second question is how local renewable energy generation can be added into the line(s) running N-S to increasingly localize the system. For instance, would redundant distribution be superior to redundant transmission?

The City of Ketchum has asked for this information informally since 2013 and formally since 2014. As you are likely aware, Ketchum has written to request the Idaho Public Utilities Commission to require IPCO to pay for an independent cost-benefit ("techno-economic") analysis of alternatives to the line in an effort to get answers to these questions. The $30M of ratepayer funds coming to this community for increased energy reliability deserves scrutiny to ensure it is the best use for the local community while meeting regulatory expectations of quality of service. The alternatives analysis would evaluate how investments in grid upgrades and storage and other back up options would contribute to reliability compared to a line. Local generation itself would arguably be financed by private investors as local generation has been to date (solar PV and solar thermal primarily).

Then, if a line is determined to be a desired investment for reliability, it is very important to be sure that the line is - as much as is feasible - located and structured (distribution vs transmission, substation locations, etc.) to be an optimal platform for integrating local generation, storage and islandable sections for times of crisis - with a major focus on critical loads (e.g., fire, police, medical).

These questions deserve answers prior to proceeding with the transmission line as proposed. Ketchum's information packet on the letter to the PUC and request for analysis is available here: http://ketchumidaho.org/DocumentCenter/View/4645. As you will see, there was included a proposal from an independent third party, NRG, a company with experience in distributed energy resources and microgrids, as

a possible independent expert advisory firm to provide the analysis. They have estimated that these questions can be answered in full within 4 weeks. As I am dedicated to increasing the resilience of our energy system, I do not want to delay increased reliability; I do want to ensure we get optimal reliability, however, for as soon as possible and to allow it to be increased in the future.

On that note, we have just learned of a new and arguably very important opportunity to advance local energy resilience. The Idaho National Laboratory's nation-leading groups with expertise in microgrids, storage, electric transportation and renewable energy resources have offered to work with our community on our local resilience goals. This would include addressing critical loads needs and evaluating broader opportunities for increased local generation, (including a geothermal energy assessment), and storage and upgraded grid system to increase our energy resilience. We have similar offers from the National Renewable Energy Laboratory and universities and private companies on a pro bono basis. This opportunity to work with INL and our cities and county and others and with Idaho Power would be of great potential benefit to our area. Even with a redundant line, risks continue, but can be turned into an opportunities for cost savings, innovation and job creation as well as for the environment. Idaho Falls Power is also working with the Lab and Idaho Falls on a similar effort and has offered to work with us alongside to share learnings as we proceed. This is a new opportunity and we look forward to hopefully tapping into it with involvement by Idaho Power. Greater collaboration is very positive and desirable.

In conclusion, I am not necessarily opposed to the line. I am, however, committed to helping reach an optimal decision on this massive investment - both whether to do it and, if so, how to design it optimally for community benefit. I believe having clarity on these questions is important.

Thank you for your consideration and please let me know if you have any questions. It is an incredibly exciting and dynamic time in energy and I look forward to working with you to help ensure our community continues to increasingly benefit from new developments and hopefully help others to do so as well.

Very Best,
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