November 4, 2013

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

RE: Case No. IPC-E-13-15
Application for 2013 Integrated Resource Plan

Dear Public Utilities Commissioners,

I have participated in Idaho Power's IRP development process since the 2002 IRP. During the 10 plus years that I have participated there has been continuous improvement in the quality and relevance of the resource plans. Karl Bokenkamp, Mark Stokes and now Tom Noll have each done an excellent job in leading the integrated planning process. While there are still opportunities for improvement, in my estimation, the 2013 IRP is the best yet.

Acknowledging that future resource investments are ultimately Idaho Power's decision, I appreciate that the Company listens to input from affected and interested parties. Most members of the Advisory Council have taken their participation in the IRPAC process seriously and offered constructive and insightful comments and suggestions. Meetings have been conducted in a fashion that also allowed input from non-Council members of the general public.

With the costs of upgrading coal plants to meet developing emissions standards still such an important topic, the removal of dissenting voices (specifically the Snake River Alliance) from membership in the Advisory Council is, in my opinion, regrettable. The demotion of the SRA notwithstanding, I believe that public input has been actively solicited and respectfully considered throughout the IRPAC process.

Much has been said about deficiencies in the Company's coal study (largely in case IPC-E-13-16). Idaho Power should be applauded for at least considering retirement of existing coal resources in the 2103 IRP.

Guided by multiple years of participation in the IRP development process, I request that the Commission consider **two suggestions** for improvement in subsequent IRPs: one related to the **IRPAC process**; the other related to the **analytical methods** employed.

Changes in the sequence in which materials are presented at IRP meetings could make Advisory Council members more productive and their contributions more effective

In my estimation, the IRP development process could be substantially improved by presenting materials to the IRPAC in a more logical sequence. To illustrate this concept, I've listed a six-step problem solving process (steps shown centered and numbered just below) with the six steps running from problem identification through submittal of a completed IRP. I've also color coded each of the 41 presentations made at the ten IRPAC meetings (shown with the meeting date and a summary of each topic presented at that meeting) to reflect where I see that topic fitting into the six-step process flow. As you can see from the mix of colors covered during each meeting, the topics aren't presented in a particularly logical sequence.

1 Identify/define the Problem(s)
2 Review inputs/constraints on possible problem solutions
3 Develop a set of possible problem solutions
4 Analyze benefits/costs of alternative solutions
5 Select preferred solution, document in IRP
6 Submit IRP to relevant Commissions

Aug 2012	Sep 2012	Oct 2012	Nov 2012	Dec 2012
6-Aug-12	6-Sep-12	Oct10-11, 2012	15-Nov-12	Dec 13, 2012
Review Peak day load profile by customer type	Review 2011 CO2 price forecasts	Review CO2 price forecasts	Present Coal study methodology	Present load and resource balance
Background on DSM	Review 2009-11 future coal usage estimates	Present Snake water for hydro constraints	Further DSM update	Present portfolio alternatives and analysis method
Background on transmission outages	Present 2013 coal price estimates	Present sales and load forecasts	Revision to peak load forecast	Present 2013 supply side resource cost estimates
Status on 500kV transmission projects	Present PURPA production forecasts	Present Snake water for hydro forecasts	Background on wind and solar intergration	Review Aurora modeling process
Status on ID & OR PUC 2011 IRP reviews	Present 2013 natural gas price estimates	DSM updated for 2013 assumptions		Background on distribution line voltage conservation
Background on ID & OR PUC IRP guidance	Present 2013 CO2 adder estimates			
Review 2011 supply side resource cost estimates				

Feb 2013	Mar 2013	Apr 2013	May 2013	Jun 2013
21-Feb-13	14-Mar-13	11-Apr-13	9-May-13	6-Jun-13
Present coal study	Risk analysis of resource alternatives	Risk analysis for resource portfolios	Review additional portfolios for loss of Valmy 1 & 2	Summarizes IRP, peak load, 9 portfolios
Alternative resources analyzed	Analyze seven portfolios	Review of Energy Efficiency and DSM	Review 2013 specific water conditions	Background on Energy Imbalance Markets
Review of B2H and Gateway West routes			Sustainability at IPCo	Background on Shoshone Falls upgrades
				Review 2013 summer operations
				28-Jun-13
				Submit IRP to ID PUC

Different people will characterize the topics and/or process steps differently. Nonetheless, grouping the 41 presentations by where they fit in a process flow (an example is shown below) could provide multiple benefits.

Meeting 1	Meeting 2	Meeting 3	Meeting 4	Meeting 5
Status on ID & OR PUC 2011 IRP reviews	Review of prior meeting problem identification	Review of prior meeting constraint identification	Review of prior meeting possible solutions	Review of prior meeting analyses
Background on ID & OR PUC IRP guidance	Revision to peak load forecast	Review 2011 supply side resource cost estimates	Present portfolio alternatives and analysis method	Review additional portfolios for loss of Valmy 1 & 2
Review Peak day load profile by customer type	Background on DSM	Present 2013 coal price estimates	Present coal study	Summarizes IRP, peak load, 9 portfolios
Present sales and load forecasts	Background on transmission outages	Present 2013 natural gas price estimates	Alternative resources analyzed	
Present load and resource balance	Status on 500kV transmission projects	Review CO2 price forecasts	Risk analysis of resource alternatives	
	Review 2011 CO2 price forecasts	DSM updated for 2013 assumptions	Analyze seven portfolios	Subsequent submittal of IRP to ID & OR PUC
	Review 2009-11 future coal usage estimates	Present Coal study methodology	Risk analysis for resource portfolios	
	Present 2013 CO2 adder estimates	Further DSM update		
	Present Snake water for hydro constraints	Present 2013 supply side resource cost estimates		
	Present Snake water for hydro forecasts	Review of Energy Efficiency and DSM		
	Background on wind and solar intergration	Background on Energy Imbalance Markets		
	Background on distribution line voltage conservation			
	Review of B2H and Gateway West routes			
	Review 2013 specific water conditions			
	Sustainability at IPCo			
	Background on Shoshone Falls upgrades			
	Review 2013 summer operations			

1. **Reduced duplication**

Some topics were covered multiple times. For example, in the 2013 preparation cycle, DSM was covered in four different presentations. Transmission and water conditions were each covered in three separate presentations. Fewer, better-integrated presentations could be used to cover these topics.

2. **Improve comparability and avoid anomalies**

Twice in the 2013 preparation cycle "placemat" presentations were made. These presentations (which show supply side resource cost estimates) are called "placemat" because the presentations are accompanied by a handout printed on 11 by 17 paper (that page size being needed to show all the columns of information related to each resource). The 2011 cost estimates were presented at the August 6, 2012 meeting. The 2013 estimates were presented at the December 13th meeting.

In the handout (presented at the August meeting) which shows 2011 supply side resource cost estimates, the 30 year levelized cost of 1 MW solar panel array installed in the Treasure Valley was estimated at $150/MWhr (as shown immediately below).

Supply-Side Resource Type	Technology Description/Prototype Project	Capacity (MW Rating)	Assumed Location(s)/ Region	Construction (Years)	Technological Availability	30 Year Total Levelized Cost/MWh
Solar - Flat Plate PV (Distributed)	PV panels that convert the sun's rays directly to electricity. Located at a centralized plant or distributed on top of buildings within a utility's service territory	1	Treasure Valley	0.5 Year	2012	$150

In the handout (presented at the December meeting) which shows 2013 supply side resource cost estimates, the 30 year levelized cost of 1 MW solar panel array installed in southwest Idaho was estimated at $220/MWhr (again shown immediately below).

Supply-Side Resource Type	Technology Description/ Prototype Project	Capacity (MW Rating)	On-Peak Capacity (MW)	Assumed Location(s)/ Region	Construction (Years)	Year that Technology is Available	30 Year Total Levelized Cost/MWh w/o Carbon	30 Year Total Levelized Cost/MWh with Carbon
Solar - Flat Plate PV (Utility)	Flat Plate PV	1	0.75	Southwest Idaho	0.5 Year	2013	$220	$220

IRPAC members don't appear to bring all their handouts from earlier meetings to the subsequent meeting(s). Most IRPAC members probably never compared the 2011 placemat sheet given to them in August with the 2013 placemat sheet they received in December. If both 2011 and 2013 resource cost estimates had been presented during the same session, an interesting discussion may have ensued. Most industry observers saw solar prices fall dramatically from 2011 to 2013. It might have been valuable to understand why the Company estimated in this instance that they rose almost 50% over that two year period. Perhaps it was because the 2011 resource was "distributed" while the 2013 resource was "utility". Regardless of the reason, I think the Advisory Council would be better served if the placemat presentations were made at the same meeting to identify anomalies like these two solar cost estimates.

3. **Add reviews of prior meeting contents**

The observation that IRPAC members don't all appear to bring handouts from earlier meetings to subsequent meetings leads to another possible process improvement. Many meeting facilitators

begin each meeting with a review of what was addressed/decided at the prior meeting. If the topics presented at each meeting were all related to a particular process step, Tom Noll, or whoever was serving as the meeting facilitator, could begin the next meeting with a review of the issues identified and decisions made at the prior session. This could help IRPAC members get back into context quickly and in so doing improve the efficacy of their participation.

4. **Reduce IRP preparation cycle time to accommodate rapid change**

The pace of change in the electric utility industry seems to be rising rapidly. As conditions change assumptions can rapidly become outdated. Many businesses, when challenged by rapid changes in their business environment, try to reduce their process cycle times to better accommodate the rising rate of change. I think that by reorganizing the sequence in which topics are presented to the IRPAC, the total number of IRPAC meetings needed to produce the bi-annual IRP could be substantially reduced.

Fewer meetings during the IRP development process could reduce both the IRP preparation cycle time and the time commitment of Advisory Council members. Additionally, fewer meetings during the IRP development cycle could free up Advisory Council members to participate in a couple of workshops during off years to address the most pressing concerns the Commission identifies when reviewing the submitted IRP.

A changed analytical method could better address the system peak load problem.

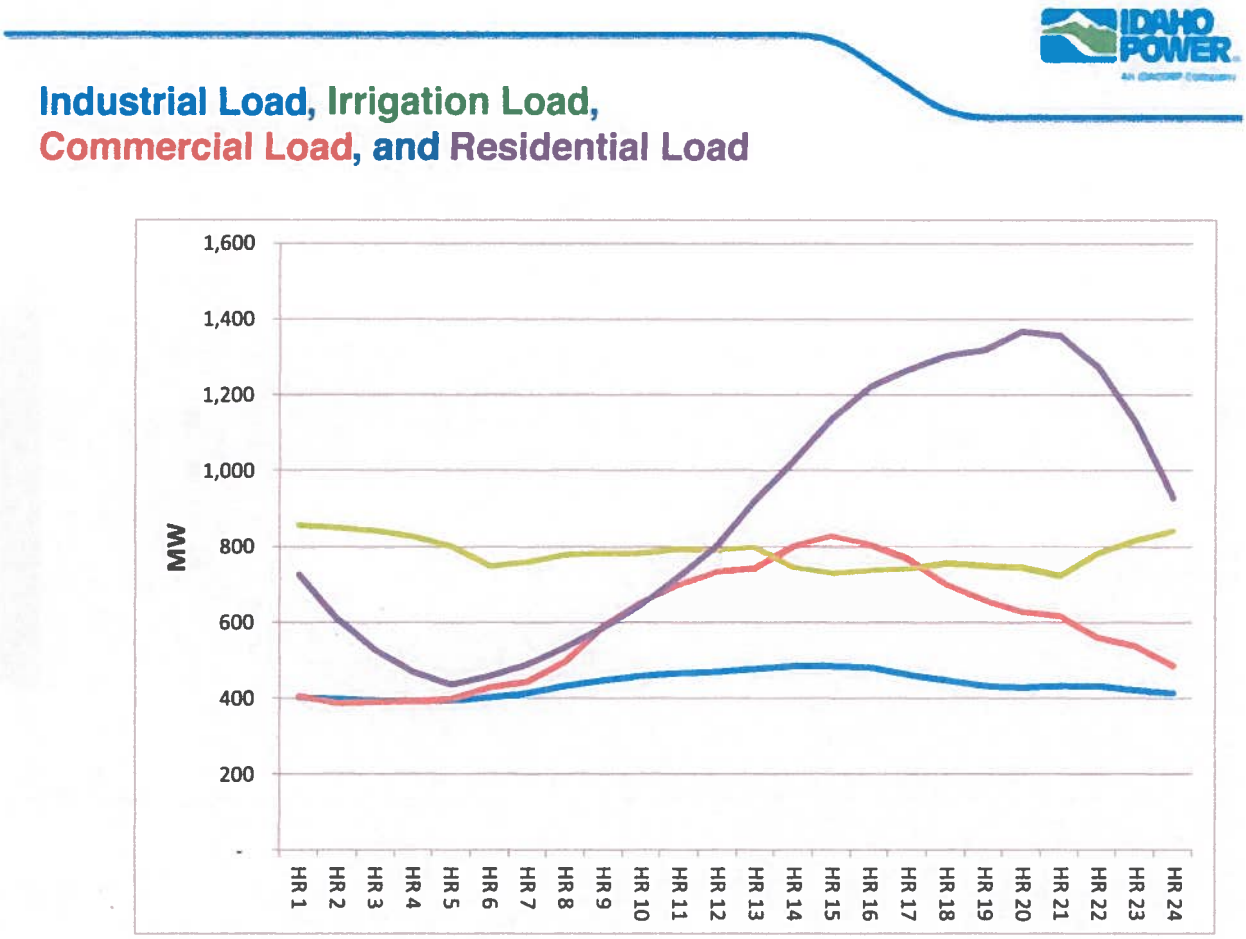
Load and resource balances show that over the next decade the primary challenge will come from growing system peak loads. I think it is time to bring additional tools to bear on the rising peak load challenge.

1. **Current analysis undervalues distributed generation**

It's having too much solar energy (drying crops and heating our homes and businesses) that causes the high summer irrigation and air conditioning loads that produce system peaks. Harnessing that surfeit of solar energy will eventually be part of the peak load solution. Several other commenters have already questioned the Company's solar cost estimates. I question the way the Company values distributed generation. Solar generation located at or very near load eliminates both the 13% transmission losses currently borne bringing power from remote central generators to load and, if properly sited, helps defer transmission and distribution system

upgrades. I don't see that the current analysis adequately accounts for either of these benefits and by so doing dramatically overestimates the net costs of solar and other forms of distributed generation.

2. Use market mechanisms for summer peak problem



As the graph showing the July 12, 2012 peak load above displays, irrigation adds to the base load in summer, but it is residential (read here, AC) loads that drive the peak. I request that you direct Idaho Power to review how time of day pricing for residential customers during the June 15th through August 15th peak period might be used in reducing peak load growth.

3. Combined electric and gas efficiency riders

Opportunities for lowering air conditioning loads are currently being missed for customers that cool their homes and businesses with electric powered air conditioning in the summer but use

natural gas to heat them in the winter. While this isn't just an Idaho Power issue, I request that the Commission consider establishing a combined Idaho Power and Intermountain Gas efficiency pool to pay for improved weatherization for customers that heat with gas and cool with electricity. This could help reduce both customer bills and summer electric peaks while freeing up therms to be burned at Langley Gulch in the winter.

In summary, I applaud Idaho Power for the improvements it has made in its IRP development process over the past decade and respectfully request that the Commission direct the implementation of the above listed potential future improvements.

Michael Heckler
2245 Roanoke Dr
Boise, ID 83712