

2009 IRP Advisory Council Meeting Minutes

Date: Tuesday, October 14, 2008

Location: Idaho Power CHQ Auditorium

Introductions/Meeting Overview - Mark Stokes

Mark Stokes welcomed the participants to the meeting. Mr. Stokes briefly reviewed the agenda and introduced Rich Pagoaga from Idaho Power's Power Supply Planning Department who provided a status update on the solar tax credit that was discussed in previous meetings.

Mr. Pagoaga explained that an amendment concerning the solar tax credit provision was contained within the Emergency Economic Stabilization Act of 2008. This amendment extends for eight years the 30 percent investment tax credit for residential and commercial solar installations. The amendment eliminates the prohibition of utilities benefitting from the credit and authorizes \$800 million for clean energy bonds for renewable energy generating facilities. As a follow-up, Mr. Pagoaga stated he would forward additional information to the group on PG&E's and SMUD's solar programs, as well as data collected from Idaho Power's rooftop solar array.

Dave Angell from Idaho Power's Delivery Business Unit was in attendance at this meeting and read the FERC Standards of Conduct disclaimer to the audience.

Mr. Stokes explained the focus of the morning's presentation was on hydro issues and then introduced the first speaker, Craig Jones.

Hells Canyon Relicensing – Craig Jones

Craig Jones, Idaho Power's Hells Canyon Project Manager, stated that the relicensing effort for the Hells Canyon Complex has been ongoing since approximately 1996. Mr. Jones explained that studies undertaken in connection with the relicensing process started in the early 1990's. Idaho Power filed the company's license application for the Hells Canyon, Brownlee, and Oxbow projects with the Federal Energy Regulatory Commission (FERC) in 2003.

Mr. Jones stated the relicensing of these projects is a regulatory process. In August 2008, FERC issued the Final Environmental Impact Statement (FEIS), which basically summarizes what will be contained in the new license and describes how the projects will be operated in the future. Currently two issues remain unresolved and must be addressed before a new license is issued; the Endangered Species Act consultation on anadromous fish and bull trout and the 401 Water Quality Certification.

Mr. Jones credited Idaho Power's extensive and thorough studies for effectively resolving many of the major issues raised during the relicensing process. However, water temperature is still an issue generating ongoing discussion. Mr. Jones stated that there are two proposals to address the temperature issue; watershed measures or a temperature control structure. He estimated the cost of a temperature control structure could range from \$50 million to \$1.6 billion, whereas watershed measures could reach approximately \$120 million. Mr. Jones pointed out that there are many factors affecting water temperature such as irrigation and municipal use. He stated that Idaho Power is willing to mitigate for its impacts on the resource, but wants to make certain that all factors influencing temperature are fairly considered.

Mr. Jones stated that ESA agencies will not move forward with their consultation until the project obtains a 401 certification. Recently, Idaho Power submitted its sixth request to Idaho and Oregon for the 401 certification. Under the Clean Water Act, the states have one year from water quality certification submittal to act upon the request. If outstanding issues remain, the company withdraws and re-files the request rather than risk a denial of water quality certification. As Mr. Jones explained, without the 401 Certification, FERC cannot grant a new license. He estimated that Idaho Power probably wouldn't see a license on the Hells Canyon Complex until early 2011.

There was general group discussion regarding the possibility of lawsuits associated with the Hells Canyon Complex, the impacts from Idaho Power and other water users to the resource, and the cost of the relicensing effort to Idaho Power's ratepayers.

David Hawk addressed the cost of relicensing to the ratepayers and praised Idaho Power for its role in the relicensing process. Mark Stokes responded that relicensing's impact on the operational flexibility of the existing projects factor into the IRP planning process because the company needs to offset the loss of capacity with new resources. Mr. Hawk stated that hydro is truly a renewable resource and that the most effective way to integrate wind energy is with hydro. If this ability is lost, the only other alternative is to use gas resources.

There was additional discussion concerning the cost of relicensing to the ratepayers. There was an inquiry regarding the cost of relicensing to date. Mr. Jones responded that it is approximately \$100 million. When questioned as to what the cost would be at the end of the relicensing process, Mr. Jones estimated the final cost to Idaho Power for the relicensing of the Hells Canyon Complex could run anywhere from \$500 million to \$1 billion. The question as to whether this amount has been rate based was raised to which Mr. Jones responded that it had not. It was mentioned that many believe the FERC estimates are low, and those figures do not account for the water quality issue.

Idaho Water Issues – Vince Alberdi

Vince Alberdi, retired General Manager of the Twin Falls Canal Company, addressed the group on the Eastern Snake Plain Aquifer (ESPA). In his presentation, Mr. Alberdi reviewed the location of the ESPA and provided the group with a brief history of irrigation development in eastern and southern Idaho. Additionally, he reviewed the groundwater elevations and covered the depletion of spring flows. Regarding water disputes, Mr. Alberdi explained that they follow the "first in time, first in rights" philosophy with the surface water rights senior to the groundwater rights due to the earlier priority of the surface water rights.

Mr. Alberdi briefly reviewed the Water Call of 2005, where the Surface Water Coalition made a call to fulfill water and supply the shortage of their irrigation water. He also explained the Idaho legislative action which took place in 2007 and established the Comprehensive Aquifer Management Plan (CAMP Process). He stated the goal of the CAMP process; to enhance groundwater levels in river reaches and spring flows incrementally by 600,000 acre-feet over twenty years. Mr. Alberdi concluded his presentation by discussing the impacts of the CAMP Process on hydroelectric generation and stated that for the near term, spring flows will continue to decline with the hope of stabilizing flows in the future. Furthermore, water rights currently being used for hydroelectric generation may be withdrawn and assigned to recharge.

David Hawk questioned what was driving the depletion of the spring flows. Mr. Hawk stated there has been a lot of work to eliminate water loss from evaporation, such as lining the canals. He suggested using a direct injection approach by laying pipelines which could eliminate water evaporation.

It was asked whether there was a cost effective method for aquifer recharge and whether legislative action would focus on the aquifer recharge issue or would again address the question of water rights.

Mr. Hawk asked about the length of time for the recharge to extend from one basin to another. Mr. Alberdi estimated it could take up to 50 years and that there would be losses due to evaporation.

Idaho Water Issues, Idaho Power's Perspective – Jim Tucker

Jim Tucker, Idaho Power Company's Senior Attorney, presented Idaho Power Company's perspective on the topic of water rights. Mr. Tucker provided a brief history of the decade-long conflict over water rights in the State of Idaho beginning with the 1984 Swan Falls water rights controversy. He further discussed the issues surrounding the Snake River resource such as litigation, baseflow decline, resource management, Hells Canyon Complex relicensing issues, and the Endangered Species Act (ESA) and Clean Water Act (CWA) influences on the resource. Mr. Tucker stated that through the ESA and CWA processes, there may be additional options for addressing the temperature load allocation through upstream system-wide watershed measures. He referenced the Comprehensive Aquifer Management Plan as discussed in Mr. Alberdi's presentation and pointed out the synergy of the various processes and the opportunities for cooperative solutions to benefit the resource.

The IRPAC raised additional questions regarding the issue of water temperature in Brownlee reservoir and whether the other water users would contribute towards the \$120 million. Mr. Tucker clarified that the \$120 million is Idaho Power's portion.

The subject of cloud seeding was discussed and it was stated that cloud seeding is included in the rate base.

Additionally, there was discussion regarding the TMDL process and the necessity of finding the root cause to the temperature issue rather than pumping dollars into other measure that may prove ineffective in the end.

Mr. Tucker concluded his presentation with the following paragraph:

“While the litigation has been costly to the Idaho Power Company, water users and the State of Idaho and has resulted in uncertainty over the future availability of water, it has served to stimulate much needed dialogue and study concerning prudent management of this vital natural resource. However, (Idaho Power Company and the State of Idaho) believe we have reached the point of diminishing returns in pursuing judicial resolution of the water right controversy. Achieving a proper balance among competing demands for a limited resource such as water in the Snake River system is a fundamental public policy question. Litigation is not the most efficient method to resolve complex public policy questions.”

Hydro Generation Forecast for the 2009 IRP – Phil DeVol

Mr. DeVol explained in his introduction that Idaho Power hydrologists derive streamflow forecasts for the Snake River Basin, and he is assigned the task of converting the forecast streamflow to forecast generation at the company’s hydroelectric projects. The streamflow forecasts are designated according to their level of exceedance, where the exceedance percentage (i.e. 50%, 70%, or 90%) represents the probability of exceeding a given water condition. For example, the 70% streamflow forecast can be expected to be exceeded in seven out of ten years (i.e. most years should be wetter). Based on his modeling, Mr. DeVol presented the following approximate amounts of hydro generation for the Idaho Power system:

- 50% exceedance year → 8.2 million MWh/year
- 70% exceedance year → 6.8 million MWh/year
- 90% exceedance year → 5.7 million MWh/year.

In a departure from previous IRP practice, declining baseflow contribution to Snake River flows (e.g. from spring discharge) was extended into the IRP planning period through calendar year 2014, with steady-state baseflows assumed for the remainder of the planning period (2015-2028). Therefore, the amount of forecast hydro generation under a given exceedance designation declines slightly from year-to-year through the first six years of the planning period, before stabilizing in year 2014 and beyond (it is noted that reference values given above as bulleted items are forecasts for year 2010). Mr. DeVol indicated that the assumed baseflow decline results in a year-to-year decline in hydro generation of about 0.5%. Mr. Vince Alberdi of the IRPAC expressed that this result agrees well with observed measurements of spring discharge.

Mr. DeVol also described how his modeling of the hydroelectric system distributes the annual generation totals (as given above) into monthly production levels. During this discussion, it was noted that fish augmentation water from above Milner and the Boise River system is assumed to be delivered in May-June, with no fish water from these sources occurring in July-August. This shift, which is expected to exacerbate summertime resource adequacy issues the Company is facing, is in accordance with recent federal biological reports.

Mr. DeVol explained that as a final step the forecast monthly hydro production levels are shaped into hourly hydro generation levels, which are then used in the hour-to-hour load-resource balancing performed to assess resource adequacy from a peak-hour perspective. It was emphasized that the modeled shaping of the hydro production in this step is in accordance with the system’s capability to dispatch hydro to follow load in practice, and assumes that operating constraints (e.g. constraints on outflow ramp rate) are as stipulated in the license application submitted for Hells Canyon Complex relicensing.

Sales and Load Forecast – Brad Snow

Brad Snow from Idaho Power's Load Research and Forecasting Department provided an overview of the forecasting model and the factors impacting load growth. The primary factors are DSM (including code changes), economic conditions, and usage trends, particularly during the summer peak period. Mr. Snow showed the growth of DSM conservation in the forecast period. He stated the growth rate would result in DSM being over 5% of the future forecast compared to the same forecast period without DSM. He further explained that the model's level of DSM will require additional analytical effort to ensure that the embedded rate of growth in the historical data is not double counted in projecting the future. It was emphasized that this is particularly important for peak capacity planning. Mr. Snow stated that the new DSM resulting from the DSM Potential Study was not included in the forecast, but would be introduced into the resource stack for determining impact.

On the subject of residential use per customer, Mr. Kjellander inquired about the level of phantom load. Mr. Snow indicated that he believed phantom load was between 5 to 10 percent, but stated he would verify this and follow-up at a future meeting.

Mr. Snow then presented each of the customer segment load forecasts. He explained the impacts of an expected recession and indicated residential new customer growth would continue to decline into 2009. Commercial and Industrial sectors also were shown to be impacted by slowed economic growth. Special Contract customer growth was impacted significantly by the addition of Hoku in 2009. Mr. Sterling asked if the recent financial market turmoil had been factored into the forecast. Mr. Snow responded that a recession had been modeled into the forecast, but that the forecast was completed in early July, prior to the recent financial market problems. Mr. Sterling asked if it were possible to re-forecast with the recent economic impacts. Mr. Stokes indicated the analytical process timeline precluded such a possibility. Mr. Snow added that the recent economic impacts could make a recession more severe; however it was not clear how much of the impact would reach Idaho. Indirectly, the impact on states like California could have positive as well as negative implications for Idaho Power's service territory.

Mr. Snow stated that the nature of Idaho's economic growth, native household creation notwithstanding, was highly dependent upon in-migration, particularly from California. He showed the statistical relationship between migrations from California into Idaho, and indicated that historically the worsening of California's state budget and increased taxes tended to increase outmigration to Idaho.

Mr. Hawk said he wouldn't disagree with the growth rates forecast, adding that customers will relocate to Idaho Power's service territory because of the cheaper cost of living and quality of life, and that a 100 MW requirement from a single large customer was possible. Mr. Hawk also indicated that the 2009 turnaround in residential customers might be little ambitious. Mr. Snow agreed that there is a great deal of uncertainty associated with the impact of a recession on customer relocation.

Mr. Snow then presented the peak load forecast by showing the growth in peak as a function of air conditioning penetration. Because thunderstorms have previously reduced load on peak days, this has created some risk for modeling peaks in operations and capacity planning. Mr. Hawk stated that the Hemingway to Boardman transmission line would have made handling peak easier.

Mr. Snow concluded with a discussion of other issues facing load forecasting, including the impact of Hybrid Plug-in Electric Vehicles, DSM integration into forecast, the impact of heat-island effect on peak use in urban areas and the need to evaluate weather normalization in urban vs. rural areas.

Supply-Side Resource Stack Introduction – Randy Henderson

Randy Henderson from Idaho Power's Power Supply Reporting Department distributed a draft supply-side resource table to the group. The table lists the specific supply-side resources Idaho Power intends to include in its resource cost analysis for the 2009 IRP. Randy explained the specific operating and cost inputs were derived from a variety of internal and external data sources. He requested the IRPAC review the list and assumptions and provide feedback, comments or ideas by October 24th. Randy stated the assumptions from this process will ultimately drive the levelized cost calculations and have an impact on the development of the various portfolios.

Meeting Wrap-Up and Summary – Mark Stokes/Brian Hedman

Mr. Stokes reviewed the follow-up items that were captured during the discussions. Those items are as follows:

- Evaluate the impact of excess capacity
- DSM – Avoided Cost Methodology
Interruptible Load Program
- Review adding solar at existing thermal sites
- Check with PG&E regarding solar roof program
- Report on data from Idaho Power's rooftop solar system
- Specifics on phantom load

Mr. Stokes thanked the meeting participants and stated the focus of the next meeting would shift to portfolio development. He reminded everyone that a tour of Idaho Power's rooftop solar array would begin shortly after the meeting and encourage interested individuals to attend.