

Regional Integrated Resource Plan (RIRP)
Coordination Conference Call
August 4, 2009 10:00 a.m. ADT
Meeting Minutes

Began at 10:00 a.m. ADT

- Myron Rollins, Arlin Mire - Black & Veatch
- Henri Dale - GVEA
- Jeb Spengler, Dick Schober - Seattle Northwest
- Bob Butera - HDR
- Dave Burlingame - Electric Power Systems
- Brian Carey, Doug Ott - AEA
- Mark Fouts - Chugach Electric Association
- Gary Kuhn, Jim Walker - Matanuska Electric Association
- Louis Agi - Anchorage ML&P

Advisory Working Group Meeting

- Last week's advisory working group meeting went well. There were no specific takeaways or action items that came out of the meeting.

Number of coordination meetings

- Along with the Advisory Working Group Meeting, several coordination meetings were held.
 - Wind Project Grant Requests
 - Fire Island
 - RIRP Modeling
 - Railbelt Hydro Projects
 - Turnagain Arm Tidal Bridge Project
 - Paul D. Kendall
 - Chuitna Coal
 - Environmental Issues
 - Glacier Fork Hydro

Downsized Sustina Project

- Myron Rollins and Kevin Harper of Black & Veatch, Jim Strandberg of the AEA, and Brad Evans of Chugach Electric recently discussed methods of reducing the time necessary for preliminary hydro screening.
- Brad wants to make sure that an analysis of downsizing the Sustina Hydro project is completed such that Black & Veatch and HDR could stand behind as a consistent evaluation.
- Myron Rollins asked if HDR had identified any other different dams or projects outside of the 5 projects associated with the combinations of Watana and Devil Canyon and the High Devil Canyon option, such as a project in the 400 to 500 MW range.

- Bob Butera of HDR said that they are working on a scope to look at a Low Watana that can be built for the lowest capital cost that involves taking transmission lines out of the cost and taking a more detailed look at access constraints. The resulting cost is still uncertain.
- Bob noted that if Black & Veatch suggested a project in the 400 to 500 MW range, it should be added to HDR's scope for the Alaska Energy Authority.
- Bob inquired as to the percentage of generation requirements that need to be met by the proposed project and Myron mentioned that it is a question that is still difficult to answer, but that consideration also needs to be given for other generation options to be running to retain the reliability and stability in the Railbelt.
- Dave Burlingame suggested that HDR examine the load curve provided by Black & Veatch and create a Susitna alternative that provides 100% of the Railbelt's necessary generation. HDR might then analyze the cost of that project and then adjust the alternative as necessary to get down closer to the \$5 billion target.
- Myron asked if anything was possible with the High Devil Canyon option to get to \$5 billion. Bob mentioned that the costs associated with that option will not likely be developed too soon.
- Bob added that any dam can be reduced in height, but there are \$2 to \$3 billion associated with the project no matter what and that the cost to produce electricity changes with adjustments to the height. Also, reducing storage capacity shifts the project to more of a run-of-river project and thereby reduces the ability to use it during the winter.
- One idea that HDR was considering was reducing the thickness of the dam. This option reduces capital costs, but makes future expansion by increasing the dam height very difficult and expensive.
- Myron mentioned that the detailed hydro screening analysis may not provide an appropriate amount of value to the study given the limited options that HDR can analyze due to the cost constraints and that it may be more appropriate to look at the 2 to 3 projects here and running them as alternatives in the model.
- Myron believes that a 400 to 500 MW project would effectively cover the 50% renewable target for the regular scenario, but that loads have yet to be developed for the large load scenario.
- Bob asked that Myron describe the detailed hydro screening analysis that Black & Veatch plans to complete.
- The expansion plan period for the Railbelt Integrated Resource Plan is 50 years. Black & Veatch would run this 50 year period using a natural gas scenario. After that, Black & Veatch would run 50 MW blocks of hydro through the model at varying capacity factors and utilize the energy to the greatest extent possible to shave the peaks of the Railbelt system. For example, Black & Veatch would evaluate the cost of a 100 MW project with 20, 50, and 80 percent load factors and compare them

to the value of a 400 MW project at the same load factors. After analyzing the costs at various 50 MW increments, one might see that you can afford \$1 billion for a 100 MW, 50% load factor project or maybe \$3 billion for a 400 MW, 50% load factor project. This would narrow down the alternative sizes that HDR would need to choose from.

- Originally, the reasons we were going in increments of 50 MW, was that there were around 13 potential hydro projects for the region. Since then, we have learned that several projects are no longer viable.
- Myron mentioned that Brad Evans wanted to see preliminary results as soon as possible because of the schedule for drafting proposed appropriations for the 2010 legislative session. Myron asked if Black & Veatch can help HDR in some way to get some results out soon.
- Bob mentioned that results would probably trickle out as they developed them in the coming weeks.

Next Auxiliary Working Group Meeting

- The date of this meeting should be the 26th of August.
- A question was asked as to the individuals in this group. The group is very similar to that of the REGA Advisory Working Group.

Adjourned at 10:52 a.m. ADT