
RENEWABLE ENERGY COALITION MEMORANDUM

TO: COALITION MEMBERS
FROM: DR. NANCY ESTEB
SUBJECT: AVISTA IRP MEETING
DATE: NOVEMBER 27, 2018

Hello -

Avista is still in the process of their merger with Hydro One. Because of this and other factors, they think they have a lot of policy uncertainty right now. This meeting focused on new resource choices, including several storage options.

They use Aurora for some of their modeling. They have a new model called PRiSM, for Preferred Resource Strategy Model, which is an Excel based linear/mixed integer program model to enable them to minimize an output (total power supply cost on a NPV basis) when selecting new resources.

One of the company speakers noted that although they are including nuclear in their resource options, management has no appetite for adding a nuclear resource, but they might be open to a partial PPA from a nuclear plant.

In this IRP they are including PPAs as a resource option. This appears to be a risk reduction strategy.

In new resource options, they are adding a hybrid SCCT, which makes it more efficient. Because Avista is a smaller utility (1,778 MW average peak load in winter and 1,636 MW average peak load in summer, average hourly load of 1,081 MW), they shy away from really large CCCTs. For wind, they are including on-system, off-system, Montana, and off-shore wind choices. For solar, they are including fixed PV array, on-system single axis tracking array, off-system single axis tracking array, and on-system system axis tracking array with storage. One of the storage options is liquid air, which could use solar or wind during the day and then release the power at night. They are including several resource upgrades in their new resource choices, including Northeast gas peaker, Rathdrum CT peaker, Kettle Falls biomass, Post Falls redevelopment hydro, Long Lake Second Powerhouse hydro, Monroe st/Upper Falls hydro, and Cabinet Gorge hydro. All of the hydro could total 266 MW. All of the others are small. They also include market

power purchases, renegotiating their mid-Columbia hydro contract from PUDs, acquiring existing resources from IPPs, renegotiating the Lancaster PPA, and purchasing more power from BPA.

They spent quite a bit of time on their calculation of LOLP, which they try to keep at 5%. They will be doing more studies, to be reported on in subsequent meetings.

Although Idaho has no RPS standards for renewables, WA has a 15% requirement by 2020, 80% by 2030, 90% by 2040, and 100% by 2050. The City of Spokane has a goal of the entire city to be served with all renewable power by 2030. Because of uncertainties, they will use three futures rather than an expected case for environmental policies.

Their gas price forecast will be complete by December 2018. They state that historically prices were highly volatile, but recent history is more stable. They are using two consultants, and will finalize their results later. So far, it appears they will use a levelized price of \$4.57/dth for the period of 2020-2039. They will do a stochastic analysis since no one knows what gas prices will be.

They say they are trying to move away from one expected case, partly because they have time before they have to add resources. Another reason given was the large amount of uncertainty in current modeling.