Peak Power Demand Is a Phony Excuse for Keeping the Four Lower Snake River Dams

The Bonneville Power Authority (BPA) and the Army Corps of Engineers (Corps) have argued to ratepayers and elected officials that these four dams play a vital role as reserve energy, to be used during periods of peak demand. This is not the case for these reasons.

- The four dams are constrained by seasonal flows and spill restrictions that virtually eliminate peak power demand benefits. Indeed, these dams are expensive, underperforming assets that are subsidized by the other dams in the Federal Columbia River Power System (FCRPS), at rate/taxpayer expense. McNary, John Day and the Dalles dams are used for short term peaking.
- Regional power demand is highest in December thru February, the coldest months, and again in July and August, the hottest months.
- During these months, the lower Snake River dams are usually limited to spinning just one or two turbines at each dam due to low water flows and court-mandated spill to improve juvenile migratory fish passage, thereby eliminating their ability to contribute power to peak demands.
- In addition, Corps and BPA hydropower operators rarely try to use the lower Snake River dams for peak power demands (termed "peaking power"), due to other technical complexities inherent in their low reliability ratings. These include:
  - Frequent onsite power system and fish bypass work prevent use of one or more turbines.
  - The dams are operated at the minimum operating pool most of the year to improve salmon passage. When operating at minimum operating pool, there is virtually no spare water to run a turbine for more than a few minutes without impairing navigation and fish passage.
- The dams are run-of-the-river dams, not storage dams. In essence, this means that the amount of water that flows into a dammed reservoir also flows out **at the same rate**, which in turn defines the water available for turbines to generate energy.
- Low flows preclude summer/winter peaking. To have any reserve/peaking power available during low flows would mean that the turbine would need to be idled and in standby mode. Standby mode is not favored because it further reduces power production and revenue from these dams.
- During high flow periods in the spring an opposite problem occurs. Hydropower over-generation is increased, since operators cannot simply reduce turbine generation. If water doesn't flow through turbines, more water must flow over the spillways. Too much flow over the spillways creates harmful dissolved gas concentrations that cause higher direct mortality to salmon and steelhead, than would passage through the turbines.
- BPA cites as an example peaking event in March 2014, this was possible by 4x normal flow in Snake.
- It is becoming just as easy to balance peak power demand with wind as it is hydropower, in many cases, since wind energy is available in much smaller increments. In contrast, each turbine on the Snake River must deliver at least 80 megawatts while operating. This means that if only 50 megawatts were needed, the energy could not be provided by a hydropower turbine, without either damaging the turbine or significantly increasing fish mortality.

Source Documents can be found at Damsense.org web page

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