

## Fact Sheet: The Lower Snake River Dams and their Power Generation

**The four lower Snake River dams provide limited output during extreme winter and summer weather.** Based on data from the Army Corps of Engineers, these dams produce about 1000 average megawatts of power over an entire year. More importantly, in the winter and summer months (December/January and July/August) when power demand is highest, over the last ten years, these dams have produced a monthly average of only 400 to 800 MW. They produced more than half of their annual output in a few spring and early summer months when the Northwest is awash in hydro-generation and demand is moderate. Even in these months of peak water flow, their output averaged only 1000 to 1500 MW. *See Figure 1.* Because these are “run-of-river” dams (with essentially no water storage), they produce the least power when we need it the most (winter cold and summer heat) and the most power when we need it the least. Climate change will only amplify this pattern as it affects river flows.

**The four lower Snake River dams have limited “peaking capacity” during extreme weather events.** The dams do provide some peaking capacity *but this capacity is quite limited in both amount and duration especially during key winter and summer months.* For example, during the coldest week in each year from 2017 through January, 2024, the *average* output from the four dams ranged between 550 and 850 MW and their *maximum* output during these cold weeks was between 1000 and 1600 MW. While this increase of 500 to 800 MW above their average output was certainly valuable, it also lasted for just a few hours each day in these weeks. *See Figure 2. At no point during these weeks did these dams actually provide a “sustained peaking capacity” of anywhere near 2300 MW as a BPA spokesperson asserted in a recent press release.* While the Snake River dams may have a theoretical peaking capacity of 2300 MW and a maximum output of 3000 MW, they have not and cannot provide anywhere near that amount of power during the winter and summer months when the Northwest actually needs it.

**We can replace the power these dams generate and improve our regional power supply.** We are in the midst of a transformative period in grid integration and clean, renewable energy development. Already – and critically -- this grid integration has allowed the Northwest to import more than 2500 MW of power during the recent January cold snap, mostly California, Rocky Mountain and Southwest wind & solar. *See Figure 3.* This is far more power than the lower Snake River dams were able to generate during the cold snap and this interchange was limited because one of the transmission interties was out of service in January.

In addition, with the development of the Western Energy Imbalance Market this inter-regional exchange was made more efficient and moderated market prices. With smart planning by BPA, power market development and grid integration will only expand and increase system capacity, efficiency and reliability and make the limited power from the lower Snake River dams even easier to replace. In addition, the cost of building clean, renewable power (wind/solar/battery) continues to plunge and has led to the development of thousands of megawatts of new renewable power and battery storage. And development of those resources is only accelerating. Recent investor-owned utility RFPs for development of clean resources have drawn responses that total 3 to 5 times the amount of power these utilities requested. The Northwest has also already “added” more than 7,000 aMW of power through advances in energy efficiency and demand management. These continuing advances in grid integration and renewable power development mean that replacing the generation and other power services of the lower Snake River dams is just a matter of smart planning, targeted federal investments and timely execution.

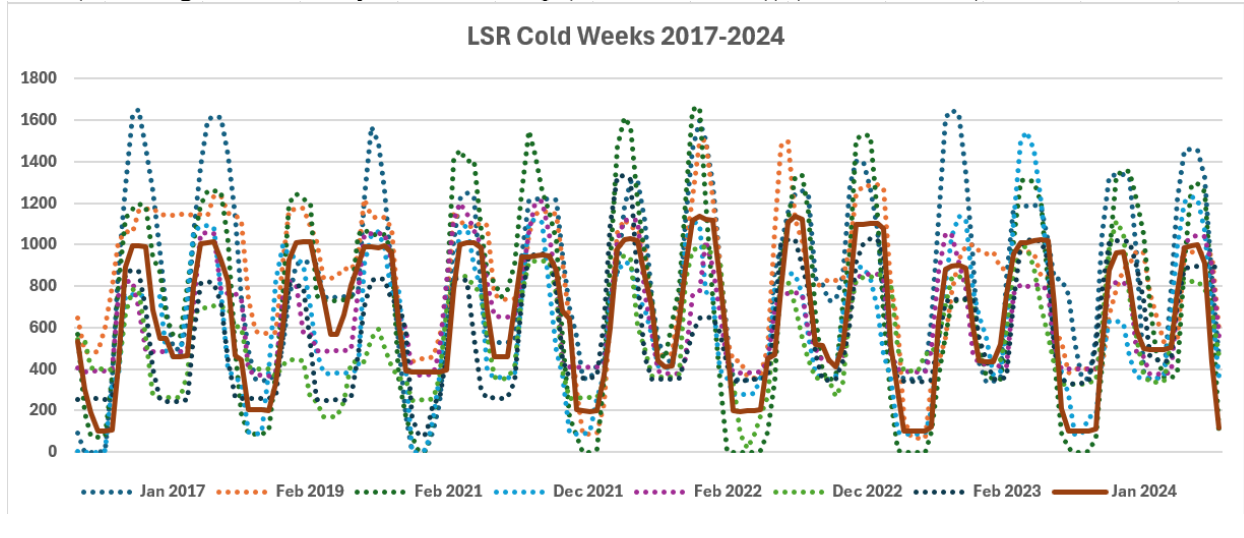
**The agreement with the Biden Administration will not cause consumer electricity rates to skyrocket.** BPA has estimated that the agreement with the Biden Administration, if it remains in place for ten years, would lead to only a 0.7% average annual rate increase. The impact on electricity rates of actually breaching the lower Snake River dams and replacing their power depends on how the costs of doing so are covered. Those costs can and should largely be covered by taxpayer, not ratepayer, dollars. With smart planning and appropriate support from Congress, electricity rates for Northwest consumers will not increase dramatically and need not increase at all beyond what would otherwise occur.

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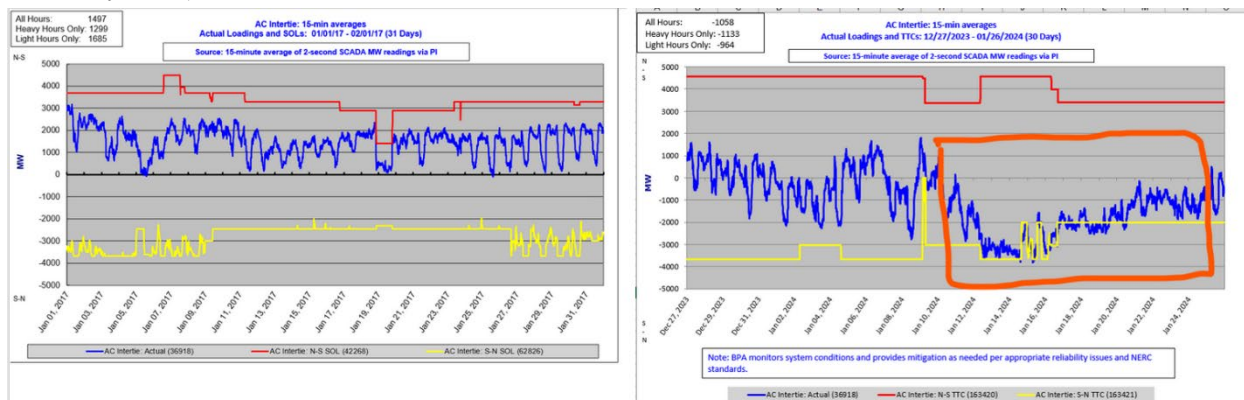
**Figure 1.** Lower Snake River Dam: Combined Maximum, Minimum and Average Monthly Power Generation 2014 to 2023 (in MW) (USACO data<sup>1</sup>).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Min</b>	589	583	753	446	648	606	401	331	506	438	427	566
<b>Max</b>	1220	1672	2256	1968	2110	1906	893	504	709	618	713	960
<b>Average</b>	795	1056	1425	1087	1428	1188	641	404	597	521	570	666

**Figure 2.** Lower Snake River Dams: Combined Output (in MW) During Cold Weeks from 2017 through 2024 (including recent January 2024 cold snap (solid brown line)) (USACO data).



**Figure 3.** Comparison of Power Over AC Intertie January 2024 vs. January 2017 (BPA Balancing Authority data<sup>2</sup>).



*In January 2017, during a very cold event, no power from California and the Southwest flowed to the Northwest on the AC Intertie (below the 0 line in the chart). At that time, very few NW utilities were in the Western Energy Imbalance Market. In January 2024, the EIM was a major factor in facilitating flows averaging over 2600 MW to meet demand during the cold snap/ freeze week, and no power flowed south because we needed it all here. The AC Intertie flows provided more than 2.5 times the combined generation of the four LSR dams for the entire week.*

<sup>1</sup> <https://www.nwd-wc.usace.army.mil/dd/common/dataquery/www/#>

<sup>2</sup> <https://transmission.bpa.gov/Business/Operations/Paths/default.aspx>