CLEARING UP

Energy and Utility News for the Pacific Northwest and Western Canada

NewsData LLC, Seattle & San Francisco: August 13, 2021 • No. 2017

The Week In Summary

[1] BPA May Get 'Breathing Room' With $10B Borrowing Authority Bump

The U.S. Senate on Aug. 10 passed the Infrastructure Investment and Jobs Act, which includes a $10 billion increase to BPA's borrowing authority. Where might the agency invest the potential new capital? Given that BPA manages a power system that dates back to the 1930s, just about any generator or transmission line in Bonneville's portfolio could use an infusion of capital. ***At [15], new borrowing authority would provide "flexibility and future funding certainty."***

[2] Infrastructure Bill Includes Provisions for Columbia River Treaty, Fish

Sen. Maria Cantwell (D-Wash.) added provisions to the $1.2 trillion infrastructure bill that passed the U.S. Senate Aug. 10 that power advocates say would put the U.S. in a better position to negotiate a new Columbia River Treaty. If it passes the House and is signed into law, the $1 billion it provides for upgrading transmission capacity between Canada and the U.S. could help convince Canada to agree to rebalance its entitlements. ***At [12], environmental groups wonder where the money is for Snake River dam removal.***

[3] Power Advocates Ask Oregon to Stay Its Request for More Spill

Saying that Oregon can't legitimately litigate and negotiate at the same time, electric utilities and public power advocates sent a letter to Gov. Kate Brown asking her to withdraw or stay the state's request for a preliminary injunction for more spill at the eight lower Snake and Columbia river dams. The groups note that Oregon is one of four states to initiate the Columbia Basin Collaborative to help rebuild healthy and harvestable salmon and steelhead runs in the basin. ***They say the additional spill would increase power costs, prompt reliability issues and add to carbon emissions, at [14].***

[4] NWPP Opens Resource Adequacy Program to Western Participants

Dozens of utilities and other entities across the West have expressed interest in joining the Northwest Power Pool's resource adequacy program. Once enough of them have committed, the program will move to a real-world test phase. ***In the meantime, several participants are already benefitting from an informal capacity-sharing program serving as a stopgap until the full program launches, at [10].***

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Weather Continues to Drive Prices, But Impact Scattered ***Details on Page 6.***

Energy Jobs Portal

Go to www.EnergyJobsPortal.com for the latest in regional energy career opportunities.

[5] Where Have All the Steelhead Gone? Most Still Not Passing Bonneville Dam

Forecasts for steelhead returns to the Columbia Basin were already low. But in the middle of what should be peak passage at Bonneville Dam, the run is just 20 percent of the 10-year average. Fish biologists are hopeful that the run will pick up. ***Even if it does, it's not likely to pick up enough to reach already low expectations, at [13].***

[6] WUTC OKs 2-Month Delay of PSE Clean Energy Implentation Plan

Washington regulators extended Puget Sound Energy's deadline for filing its plan to implement the state's Clean Energy Transformation Act. The planning process is new and much bigger than PSE has ever done, the company told commissioners. Stakeholders said the company has been dragging its feet and not sharing data they need to give meaningful input. ***The process is new, but stakeholders say their frustrations are anything but new, at [11].***

[7] POTOMAC: Budget Resolution Passes Senate

The Senate on Aug. 11 passed a $3.5 trillion budget resolution that paves the way for legislation including a "clean-electricity payment program" and incentives for zero-carbon energy, electric vehicles, home electrification and weatherization, a day after passing a $1 trillion bipartisan infrastructure package that includes funds for grid upgrades, EV chargers, battery production and advanced energy technologies. Meanwhile, the Department of Energy proposed reinstating lighting definitions that would open the door to tighter efficiency standards. ***IPCC report says global warming will surge past Paris Agreement targets without "deep cuts" in emissions, at [16].***

Briefs

[8] NWPCC Power Committee Sends Power Plan Draft to Full Council

The Northwest Power and Conservation Council's Power Committee unanimously voted Aug. 10 to send the draft 2021 Power Plan to the full Council to review for public release.

A revamped model, climate change and profound shifts in the industry have produced surprising—and sometimes controversial—results in the latest installment of the Council's eighth regional plan. The plan has a 20-year outlook, but the focus is on the first six years.

The draft approved by the Power Committee's four members recommends the region acquire 750 to 1,000 aMW of energy efficiency by 2027 and 2,400 aMW by 2041. That compares to a goal of 1,400 aMW during the current Seventh Power Plan's first six years (2016-2021).

Slashing projections for cost-effective EE drew considerable comments from industry insiders. The Oregon Department of Energy sent the Council a letter encouraging it to set the target at 1,000 aMW by 2027 (CU No. 2013 [9]).

The 2021 Power Plan views the region differently than the current power plan does. Energy efficiency is no longer the default least-cost option, and the draft plan projects levelized costs of solar and wind energy at or below $50/MWh. When the current plan came out in 2016, energy efficiency was considered cost-effective up to a levelized cost of $100/MWh, which at the time was slightly less than solar and wind (CU No. 1989 [8]).

The draft plan recommends BPA acquire 270 to 360 aMW of the region's 2027 energy conservation target. Council staff advise that BPA achieves most of that—at least 243 aMW—through programmatic savings. By 2041, the plan recommends Bonneville procure at least 865 aMW of energy savings.

The resource adequacy projection in the draft has drawn sustained criticism since staff shared it earlier this year with one of the Council's advisory groups. Using the old version of the modeling software GENESYS, Council staff projected the region faces a nearly one-in-four chance that it would need to take emergency actions to meet demand at least once in 2025. In contrast, using the model's overhauled version drops the projected risk to less than 2 percent, well below the industry standard guideline of 5 percent. According to the NWPCC analysis, massive expansion of renewable energy capacity will fundamentally shift market dynamics, in particular making it economically viable to use more thermal units as reserve capacity.

The full Council now has to approve releasing a draft for public comment. ***[Dan Catchpole]***

[8.1] Idaho Power Says Running North Valmy 2 Through 2025 Is Cheapest Option

Keeping coal-fired North Valmy Unit 2 running through 2025 is the cheapest option to ensure reliability, Idaho Power says in filings submitted to Oregon regulators.

The company had previously considered exiting its 134 MW share of Unit 2 as soon as 2022 if it could sign a power purchase agreement to make up for the lost capacity during peak summer hours. Going to the market and cutting the cost of running the plant potentially could save the company a few million dollars, the utility estimated (CU No. 1975 [13]). However, Idaho Power asked for power contract bids in the spring and received no replies, the company says in a filing with the Oregon PUC *[LC-74]*.

Market conditions are much tighter now than last year, when Idaho Power first floated the idea of an earlier exit, the filing says.

The utility and Valmy co-owner and operator NV Energy already plan to retire Unit 2 by the end of 2025 *[IPC-E-19-18]*. Idaho Power exited its stake in Unit 1 on Dec. 31, 2019.

If Idaho Power exits Unit 2 next year, the least-cost option would be delaying the start of its phased exit schedule from the Jim Bridger coal-fired plant from 2022 to 2025. That would cost the company nearly $16 million more than using North Valmy 2, according to the filing.

Replacing Valmy with demand response would cost almost $24 million more. Solar-plus-battery would cost an additional $28 million. Using only batteries would cost about $31 million more, according to Idaho Power's estimates in the Aug. 4 filing.

After examining its options, "it is clear that Idaho Power is unable to meet reliability requirements if participation in coal-fired operations of Valmy Unit 2 ceases in 2022 without procuring an alternate source of peak capacity," the company says in its filing.

The utility issued the request for proposals for a power purchase agreement on April 26, with bids due May 4, according to a June 30 filing with the Idaho PUC *[IPC-E-21-12]*.

Also on June 30, Idaho Power issued an unrelated all-source RFP for up to 80 MW of peak-hour capacity available by summer 2023. Responses were due Aug. 11.

Idaho Power expects it will need to acquire 400 MW of peak-hour capacity by summer 2025. Those needs will be addressed in its 2021 integrated resource plan, according to the company. ***[D. C.]***

[8.2] NWPCC Spends FY 2021 Cost Savings on Screens, Hatcheries

The Northwest Power and Conservation Council unanimously agreed Aug. 11 to spend $449,800 from the Cost Savings Fund earmarked for fiscal year 2021 on hatchery infrastructure and fish screens.

Council staff recommended splitting this as $211,800 for hatchery infrastructure and $238,000 for fish screening materials.

Mark Fritsch, the Council's project implementation manager, told the Fish and Wildlife Committee Aug. 10 that staff is working with BPA to create a mechanism for determining a prioritization process for spending each year's cost savings from the Fish and Wildlife Program funded by BPA. He noted that the 2014 Fish and Wildlife Program and the 2020 Addendum describe using cost savings to fund program priorities recommended by the Council, and that maintaining past investments is a high priority.

He said because the collaborative process has not yet been established for prioritizing the spending of cost savings, Council staff and BPA agreed the funds this year should be used in two other programs with prioritization systems already set up—fish screening and hatchery infrastructure.

Program hatcheries to receive the funds include: $40,000 to the Nez Perce Tribal Hatchery for a backup generator that is now rented for between $7,000 and $10,000 annually; $75,000 for a boiler at the Sherman Hatchery that failed in 2021; $45,000 to the Spokane Tribal Hatchery to replace the roof at a hatchery residence; and $35,000 to replace a forklift at the Umatilla Hatchery.

For fish screening programs—operated by the state fish and wildlife agencies—Idaho Department of Fish and Game will receive $100,000; Washington Department of Fish and Wildlife will get $100,000 and the Oregon Department of Fish and Wildlife will get $38,000. ***[K.C. M.]***

[8.3] First In-River Sockeye Return to Idaho's Sawtooth Basin

Despite dangerously warm water in the Snake and Salmon rivers this summer, the first two endangered Snake River sockeye have made the 900-mile in-river journey from the Pacific Ocean to Sawtooth Basin, the earliest arriving Aug. 7.

Sockeye usually begin to return to the area around the third week in July and continue to migrate into the basin through late September or early October. But this year's run started later than usual and also faced dangerously warm water from lower-than-average flows in the Snake River and summer heat waves.

That prompted the Idaho Department of Fish and Game to initiate emergency transport of about one-third of the adult sockeye that made it to Lower Granite Dam. It was only the second time the agency trapped and hauled sockeye, giving them a free ride to the Eagle Fish Hatchery instead of leaving them in the river for the second half of their journey. Biologists trapped and hauled 201 of 617 sockeye that made it past eight dams on the lower Snake and Columbia rivers to Lower Granite Dam.

"A couple fish made it through the hot water in the lower Salmon [River]," IDFG biologist Jonathan Ebel told fellow members of the Columbia River Technical Management Team on Aug. 11.

"While this is good news that a sockeye has made the full migration to the Sawtooth Valley basin, we still expect the percentage of fish able to make that trip this year will be well below the average conversion rate of approximately 51 percent, IDFG Principal Fisheries Research Biologist John Powell said in the agency's news release about the first arrival.

In the last 10 years, sockeye returns to the Sawtooth Basin have ranged from 17 in 2019 to 1,579 in 2014, with a 10-year average of 437. Although the run is not completely over, the number of sockeye making it past Lower Granite Dam is slightly lower than last year's total of 640 fish, and significantly lower than the 10-year average of 800 fish. Of last year's run, 151 sockeye made it to the Sawtooth Basin to spawn. ***[K.C. M.]***

[8.4] Brief Mentions: News Roundup

Therese Hampton, executive director of the Public Generating Pool, has announced plans to retire at the end of 2021, after serving since 2013. Hampton says she plans to move to southern Utah and looks forward to staying engaged in the energy industry in a consulting role. Prior to joining PGP, she served as managing director of hydro regulatory compliance at PacifiCorp, and before that was with BPA in roles as VP of environment, fish and wildlife, manager of power and operations planning, and manager of transmission and reserve services. PGP is actively recruiting to replace her, and plans to review initial applications after Sept. 10.

TUUSSO Energy has opted to cancel two of the five 5-MW arrays in its Columbia Solar Project planned for Kittitas County, Wash., and sell the remaining three to Greenbacker Renewable Energy. Greenbacker provided a $10 million loan in 2019 to move the project along and funding to help pay more than $264,000 in permitting and administrative fees the developer owed Washington's Energy Facility Site Evaluation Council (CU No. 1932 [8.3]). In a July 28 filing with EFSEC, TUUSSO said the two abandoned projects had stalled due to "unresolvable transmission constraints." The filing asked that the site certificates granted to the three remaining projects be transferred to Greenbacker

subsidiaries. EFSEC will take up the matter at a special meeting on Aug. 17.

The Washington Fish and Wildlife Commission agreed Aug. 6 to maintain the state's delisted status for Steller sea lions as part of its five-year status review. The agency removed them from the state's list of threatened species in 2015 after an assessment found the state's population had fully recovered. Steller sea lions have since been traveling up the Columbia River to forage for fish, including salmon and steelhead listed under the Endangered Species Act. The commissioners determined the federal Marine Mammal Protection Act continues to safeguard Steller sea lions and that the commission can revisit the issue if numbers begin to decline.

Puget Sound Energy has asked FERC to approve the sale of shares in its parent Puget Holdings held by its biggest stakeholder, Canada Pension Plan Investment Board. CPPIB proposes to split its 31.6 percent stake equally between asset management companies Macquarie Asset Management and Ontario Teachers' Pension Plan Board *[EC21-112]*. That would make British Columbia Investment Management the biggest shareholder with its 23.94 percent share. PSE asked FERC to approve the deal by Oct. 8. The Washington UTC must also sign off on the deal.

Wahkiakum County PUD commissioners appointed Daniel Kay as the new general manager at their Aug. 3 meeting. Kay has spent more than 20 years at public utilities, and has a bachelor's degree in electrical engineering and a master's degree in business administration. He takes over Sept. 3 from David Tramblie, who is retiring after more than two decades at Wahkiakum. Due to a record high number of new customers and the BPA rate decrease, Tramblie said in the latest PUD newsletter, he does plan to ask commissioners to increase rates.

Grant County PUD Commissioner Dale Walker died Aug. 8, from complications with lung cancer, according to the utility. The 75-year-old had served on the PUD's board of commissioners since 2011, a period of intense growth in the county. During his tenure, Grant PUD navigated the rise of cryptocurrency miners, server farms and extended fiber-optic service throughout the county. Walker championed financial policies to pay down the PUD's debt while maintaining low rates.

The NW Natural Holdings board of directors has elected Malia Wasson as its first woman chair, effective Aug. 9. She was also elected to chair the board of gas utility subsidiary NW Natural. Wasson has been a board member for seven years, most recently chairing the audit committee. Wasson is CEO of Sand Creek Advisors, which provides business consulting to chief executive officers of public and private companies. Prior to that she was an executive VP of commercial banking at U.S. Bank, and served as president of the Oregon and Southwest Washington operations from 2005 to 2015.

The Centralia Coal Transition Grants program has granted $450,000 to the Lewis County Public Facilities District for the NW Sports Hub expansion project, using the program's economic and community development funds. The expansion project will add four new basketball courts and eight volleyball courts, and expand spectator viewing and parking areas. The facility hosts indoor sporting and community events. The public facility district was created in 2007 in order to build a new regional center for Lewis County. ***[C. U.]***

[8.5] CORRECTION: Four Dams Would Host Whooshh Portals, Not Eight

A Bearing Down piece in last week's edition of Clearing Up (CU No. 2016 [8]) incorrectly reported that an alternative to help recover salmon and steelhead in the Snake River would install Whooshh Passage Portals to replace fish ladders at the four lower Snake River dams and at the four lower Columbia River dams. The proposal is to replace eight ladders—two at each of the four lower Snake River dams, and none in the lower Columbia River. We regret the error. ***[C. U.]***

[8.6] CORRECTION: PacifiCorp Saw No Emergency Alerts in August 2020

A story in the previous issue (CU No. 2016 [9]) incorrectly stated that Pacific Power President and CEO Stefan Bird said several emergency energy alerts were issued in the company's service territory in August 2020. He in fact said the alerts were issued in areas adjacent to PacifiCorp's service territory. The story also misidentified him as president and CEO of PacifiCorp. We regret the errors. ***[C. U.]***

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Opinion & Perspectives

Bearing Down

[9] Battery Storage Beginning to Help in Calif. After the Sun Goes Down

Battery energy storage is being added at a furious pace in the California ISO's territory and is already working to meet the evening net peak, the time of tight supply each day that is giving grid operators more and more gray hair as the risk of rolling blackouts looms.

There are hundreds of thousands of megawatts of energy storage—primarily lithium-ion batteries—being added to the CAISO grid, where storage is now regularly pumping 1 GW onto the grid in the critical evening hours. Analysis of recent CAISO data shows battery storage providing 1,219 MW at about 7:20 p.m. on Aug. 1.

The Golden State is set to add about 1.1 GW of storage each year from now until 2030 and 2.2 GW each year from 2030 to 2045. Each year over the past decade, less than 100 MW has been added per year, according to state energy officials.

Currently, battery storage is charging in the early morning hours when solar supply is plentiful, reaching maximum state of charge around 2 p.m. It then provides power during the critical 7 p.m. to 9 p.m. period as solar drops off the grid, with a typical maximum state of charge being about 3,000 MWh. Storage can also arbitrage the wholesale energy price by charging during hours when energy is cheaper and discharging when it is more expensive.

There are hundreds of thousands of megawatts of energy storage being added to the CAISO grid.

Consulting firm Energy GPS in a recent note said that "2020 has been something of a launchpad year for grid scale batteries. We saw our 1,054 MW of battery capacity across the U.S. balloon to 1,435 MW in 2020, but that only begins to tell the whole story." Last August, the largest battery system in the world, LS Power's Gateway Energy Storage in Otay Mesa, near San Diego, came on line with 250 MW/250 MWh of capacity.

Energy GPS noted that Gateway's record won't stand for long, as there are four 250 MW projects due to come on line next year, and 15 projects with 250 MWh or more of energy storage. The Golden State's three large investor-owned utilities procured 1,580 MW of battery capacity across three separate requests for offers, with those projects scheduled to come on line over the next three years.

But the influx of storage has also encountered supply chain challenges and COVID-19-related slowdowns. San Diego Gas & Electric, which recently opened its Top Gun battery facility near Marine Corps Air Station Miramar (former home of the Top Gun naval aviation training program) said an unspecified amount of storage did not come on line by an Aug. 1 deadline set by the California PUC. But the company would not say which projects had been delayed, or why.

CAISO said in a new report about grid performance in June that storage provided about 600 MW "during critical intervals across the gross and net load peaks."

There is a stunning 148 GW of storage in the CAISO interconnection queue, although as few as one in 10 proposed projects will actually get built, according to the grid operator. This was a large jump from the 69,190 MW in the queue last year and 45,583 MW in 2019.

The influx of new storage and renewables was one factor in the CAISO Board of Governors' recent decision to reform its interconnection queue process.

Eighty-nine percent of new solar capacity in CAISO consists of hybrid projects paired with energy storage, leading the nation's regions, while in the rest of the West, 67 percent of proposed solar is hybrid, according to a recent report from Lawrence Berkeley National Laboratory. The next-closest region is the Southwest Power Pool, with 22 percent of proposed solar being hybrid projects, followed by Texas at 21 percent.

CAISO also dominates proposed wind projects paired with storage, at 37 percent of such projects, followed by the rest of the West at 13 percent. All other regions, such as Texas, SPP, the Mid-Continent, Mid-Atlantic, New York state and New England, are at 6 percent or less of proposed wind projects being hybrids, with zero wind-hybrid projects in the queue in New York, New England and the Southeast.

The majority, or 7 percent, of all hybrid projects in all queues have requested to come on line by the end of 2023, and 11 percent have an executed interconnection agreement, LBNL said.

Amid the zeal of these additions, there are some questions about the safety of lithium-ion batteries, including many publicized accounts of much smaller-scale laptop batteries exploding, and a disastrous explosion at Arizona Public Service's McMicken Substation in Surprise, Ariz., in April 2019 that sent eight first responders to the hospital and seriously injured two of them. In the wake of the explosion, the company instituted a pause in battery project development pending the outcome of an extensive investigation into the accident. APS restarted its effort in May with new safety and operational standards.

One limitation of battery energy storage is that current commercial technology only allows for four hours of discharge. Also, the capacity contribution of storage could decline by 90 percent by 2045, according to researchers.

To deal with the duration issue, the U.S. Department of Energy last month launched a long-duration storage "Earthshot" to reduce the cost of grid-scale energy storage by 90 percent within the next decade for systems that deliver more than 10 hours of duration.

"While shorter duration storage is currently being installed to support today's level of renewable energy generation, longer duration storage technologies are needed as more renewables are deployed on the grid," DOE said.

As storage begins to proliferate on California's grid, the state will be one of the world's largest test beds for this burgeoning technology, and provide many lessons regarding how it will interact with solar to make a more reliable system. ***[Jason Fordney]***

Price Report

Weather Continues to Drive Prices, But Impact Scattered

Weather continued to drive energy prices across the Western U.S., although there wasn't a clear correlation between conditions and prices.

Pacific Northwest power prices, for example, jumped as temperatures soared, while conditions across Southern California neared seasonal norms. However, North and South of Path 15 values gained between $12 and almost $15 week over week.

Prices at California-Oregon Border and Mid-Columbia moved near $200 Aug. 11, but moderated to around $125/MWh by Aug. 12.

Western peak prices generally increased by between $11.50 and as much as $32.20, led by Mid-C. Palo Verde daytime power, however, slid $7.50 to $91.50/MWh. By Aug. 12, prices ranged from $86.50/MWh at SP15 to $125/MWh at COB.

California ISO demand reached 41,989 MW Aug. 12, which should be the week's high.

The grid operator did not have renewables data for Aug. 12 available. Total CAISO renewables reached 15,911 MW on Aug. 6, meeting roughly 42.5 percent of demand. That same day, solar supplied 12,598 MW of power, which was almost 34 percent of demand.

Off-peak power prices varied at the end of trading. Pacific Northwest hubs gained a couple of dollars, while other hubs' values dropped by as much as roughly $9 by Aug. 12. Palo Verde off-peak power lost the most value, down $8.50 to $47/MWh.

Western natural gas values generally fell, with hubs losing between 9 cents and as much as $1.22 in trading, which the U.S. Energy Information Administration in its weekly report attributed to softening demand. It did note that current California prices "remain at highly elevated levels compared with mid-August last year and two years ago." Demand was roughly 0.5 Bcf greater than it was for the same week last year, the EIA said.

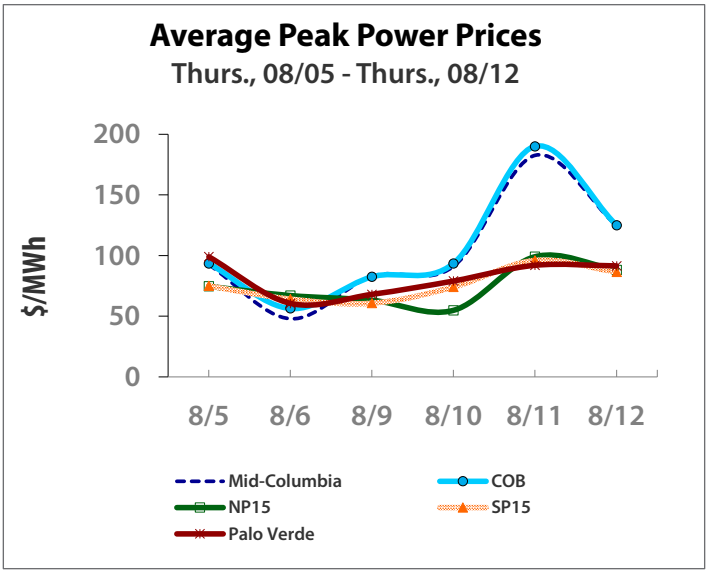
SoCal CityGate natural gas fell the most in trading, dropping $1.22 to $6.57/MMBtu. SoCal Border gas fell by $1.14 to $4.77/MMBtu. Four hubs traded above $4 by Aug. 12, including PG&E CityGate, which ended that day at $5.39/MMBtu. "Prices at the PG&E Citygate have averaged over $5.50/MMBtu this month through the 11th, the highest levels for the first half of August since 2008," the EIA said in the report.

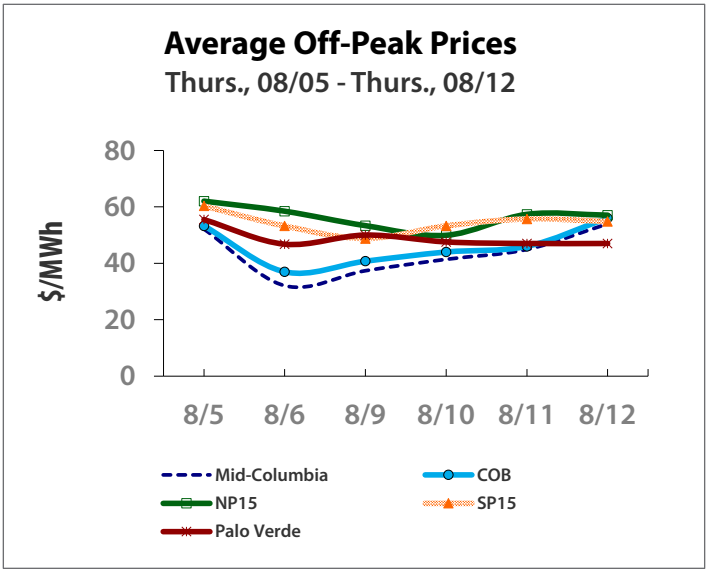
The mean price of Western natural gas dropped 41 cents week over week to roughly $4.18/MMBtu by the end of trading.

Henry Hub natural gas values dropped 16 cents to end at $4.01/MMBtu Aug. 12.

National working natural gas in storage was 2,776 Bcf as of Aug. 6, according to EIA estimates, which is a net increase of 49 Bcf compared with the previous week.

[Linda Dailey Paulson]



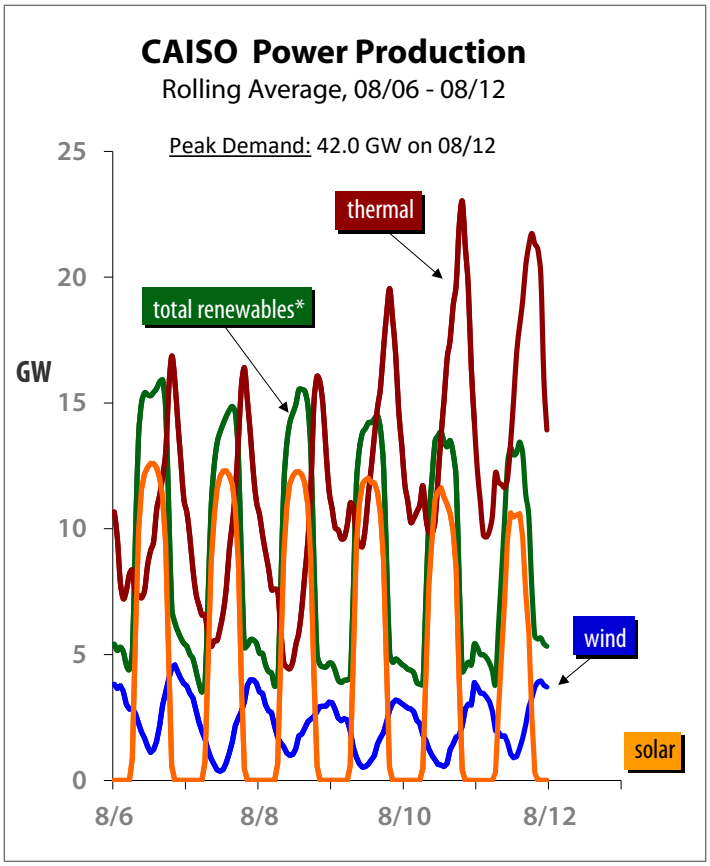


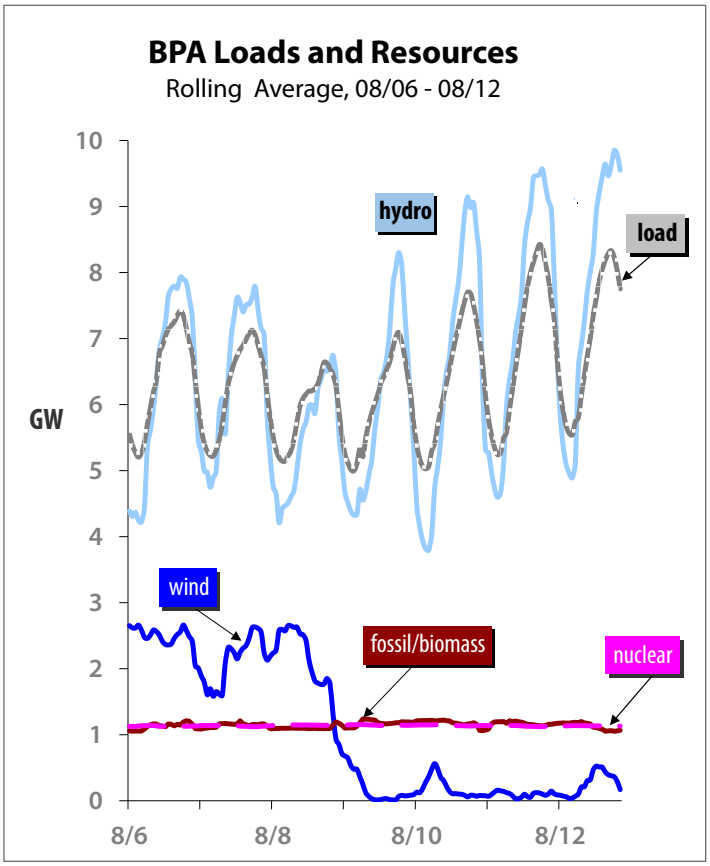
Average Natural Gas Prices ($/MMBtu)

	Th. 08/05	Tues. 08/10	Th. 08/12
Henry Hub	4.17	4.11	4.01
Sumas	3.91	3.80	3.71
Alberta	2.71	1.36	2.17
Malin	4.23	4.11	4.00
Opal/Kern	3.99	3.86	3.78
Stanfield	4.07	3.85	3.76
PG&E CityGate	5.63	5.56	5.39
SoCal Border	5.91	5.73	4.77
SoCal CityGate	7.79	7.09	6.57
EP-Permian	3.90	3.90	3.81
EP-San Juan	3.95	3.86	3.79

Power/gas prices courtesy of *Enerfax*

Power Gauge





Sources: CAISO and BPA

* includes small hydro (<30 MW)

Supply & Demand

[10] NWPP Recruits RA Program Participants Across the West • *from [4]*

The Northwest Power Pool is recruiting as big a cast as possible for its budding resource adequacy program.

Talks have already happened with electric utilities across the West interested in the capacity-based program, which is about to move into an in-depth test phase.

"We've had dozens and dozens of conversations at this point," NWPP COO Gregg Carrington said. "It's really important to get as many people join as possible."

When the NWPP floated the idea of a RA program in 2019, the focus was on the organization's 30-odd members—a collection of utilities, power producers and marketers. Now the project has expanded as load-serving entities, federal power marketing agencies and power producers such as Powerex consider joining the program. Entities as far away as the Desert Southwest are expressing interest, Carrington said.

The goal hasn't changed—to improve reliability for participants by synthesizing and sharing information and facilitating sharing capacity, while not weakening autonomy.

NWPP has developed the program using a steering committee with representatives from 20 utilities and industry organizations, such as BPA, Powerex and the Balancing Authority of Northern California. A detailed design was released July 28.

The program will move from the design phase to a nonbinding test phase once enough entities sign up in coming months, which will allow spreading costs around and will provide enough reserve capacity and geographic diversity to create a robust capacity coordinating program.

The non-coincident peak load in 2020 was 86 GW for the NWPP's footprint, which stretches from Canada to Nevada and Colorado, according to NWPP data.

"We have to get more than 50 percent of that to make it work," Carrington said. "We also need anchor tenants, like BPA."

Interested parties are supposed to tell organizers if they are in or out for the test phase by Sept. 30, Carrington said.

BPA is evaluating how joining would affect its operations and customers, Bonneville COO Jeff Cook said during a July 29 webinar.

The agency plans to issue a draft decision by Aug. 25, according to a timeline shared during the webinar.

If interest is strong enough outside the Northwest, the power pool plans on starting a second scheduling hub to coordinate the rest of the West. For the Northwest, the program will use the Mid-C scheduling hub, Carrington said.

Every potential member has questions to consider, he said. For example, "for smaller entities [with a few thousand ratepayers], spending maybe $100,000 [for program costs] is big money."

NWPP estimates it will cost a total of about $7 million to $10 million over the next couple years to launch the program and about $5 million annually to keep it running, he said. The recently released design document included some details on how costs could be allocated, a question that will take some time to resolve.

So far, interest in the RA program is stronger than expected across the West, NWPP President Frank Afranji said.

Given the Northwest's history of false starts organizing regional programs, some entities probably are waiting to see if this program gets off the ground and will join once the fully functional version goes live, which is slated to happen in early 2024, he said.

'The program worked, and we were able to find resources needed.'

"These are the most formative years of the program, when theory meets the real world," Afranji said.

Several Northwest utilities have already benefited from an informal capacity sharing program that began in June 2020 with about 12 participants. Avista, Chelan County PUD, Douglas County PUD, Eugene Water and Electric Board, Grant County PUD, Idaho Power, NorthWestern Energy, Portland General Electric, Seattle City Light and Snohomish County PUD confirmed they participated in the program.

It is a rudimentary stopgap until the full-fledged program goes live. Day-ahead load forecasts from participants are manually compiled by NWPP. In certain circumstances, such as extreme weather events, an entity can ask for help to close an anticipated capacity shortfall.

"Ultimately, this is not a resource adequacy program," steering committee member and PGE representative Geoff Moore said in a video on NWPP's website. "This is more of a space to call in an extreme event to say, can you help me? And to make sure there are people there to help you and put those people together more effectively."

Members have already turned to the program to meet demand several times during summer months last year and this year. In 2020, participants made a handful of requests for capacity, including one utility that used the program to secure 50 MW of capacity in August (CU No. 1968 [12]). This past June, four requests were made—three on the same day and one the following day—for a total of about 275 MW of reserve capacity. About half of the amount was provided. In July, another three requests were made over a couple days for a total of 250 MW, all of which was provided.

"We've participated every season since inception and called on the program over the heat dome heat wave," Snohomish County PUD's Garrison Marr said in an email. "The program worked, and we were able to find resources needed." ***[Dan Catchpole]***

Courts & Commissions

[11] WUTC Extends PSE Clean Energy Implementation Plan Deadline • *from [6]*

The Washington UTC on Aug. 12 granted Puget Sound Energy more time to file its Clean Energy Implementation Plan, after the utility said it needs to get its newly created equity advisory group up to speed on the intricate industry issues in the implementation plan.

Delaying the deadline would also give PSE time to incorporate updated information in the plan, according to the July 21 petition requesting the additional time.

The plan is required under the 2019 Clean Energy Transformation Act, and outlines how the company intends to implement the state's mandate to severely and rapidly slash greenhouse gas emissions.

WUTC unanimous approval moved the deadline from Oct. 1 to Dec. 17 with conditions requiring PSE spend more time and share more information with its four advisory groups *[UE-210571]*.

The commission rejected most conditions requested in a letter signed by representatives of 13 advocacy groups, including more transparency about how PSE calculates GHG's social costs and updating load forecasts with climate change risk and cost projections.

Despite approving the request, commissioners said they were frustrated with how often advisory group members have criticized PSE as dragging its feet and watering down public input processes required by WUTC. Two commissioners—David Danner and Ann Rendahl—expressed interest in a separate docket considering stronger requirements on PSE's conduct in the advisory group process.

"We've gotten to a point where it's basically untenable, so these need to be addressed," Rendahl said.

PSE Director of Clean Energy Strategy Ben Farrow said the company could comply with the conditions approved by WUTC given the extended schedule.

This year has been an intense planning juggling act for the company, he said.

In the spring, PSE finished its latest integrated resource plan, which included a clean energy action plan, as required by CETA. The action plan is meant to outline the cheapest, most practical way the utility can meet the legislation's targets over the next 10 years while still providing reliable, cost-effective energy. At the same time, the company has started shopping for new resources.

Meanwhile, PSE has been working on its implementation plan, which details specific actions and targets for the next four years based on the action plan and integrated resource plan. CETA requires that each IOU work with an equity advisory group in crafting the implementation plan, something not previously required *[UE-191023, UE-190698]*.

The subject matter and the process are bigger than any prior PSE planning process, Farrow said.

While the process is new, "the issues stakeholders are experiencing are not," NW Energy Coalition Policy Director Lauren McCloy told commissioners. "In fact, they're the same issues that we experienced during the multiyear process of developing the 2021 IRP. So far, the company has failed to answer basic questions about how it plans to comply with CETA, questions like 'what are PSE's proposed interim targets?'"

In early July, WUTC approved PacifiCorp's request to push back its CEIP deadline from Oct. 1 to Jan. 1. Challenges with modeling had put the company behind schedule, according to its petition *[UE–210223]*. No stakeholders weighed in on the request.

Before the commission took up PSE's request at its Aug. 12 meeting, WUTC reviewed the company's transportation electrification plan *[UE-210191],* which will move forward in 2022 building on the successes of its Up and Go pilot program, PSE's manager of new products and services Malcolm McCulloch told the commission.

PSE intends to ask the commission to sign off on the plan's phase 1 programs, which include education and outreach, supporting electrification of private and public fleets, and expanding charging infrastructure at apartment buildings.

WUTC voted unanimously to acknowledge the plan. ***[Dan Catchpole]***

Environment

Fish

[12] Provisions for Columbia Treaty Included in Infrastructure Bill • *from [2]*

A $1.2 trillion infrastructure bill that passed the U.S. Senate Aug. 10 includes an amendment from Sen. Maria Cantwell (D-Wash.) that supporters say will help the U.S. negotiate a new Columbia River Treaty that will provide more equitable entitlement payments to British Columbia.

Environmental groups, however, say they're disappointed the bill does not include funding for a plan to remove the four lower Snake River dams, and that Cantwell's amendment includes nothing to ensure fish and the environment are protected in a new treaty.

The bipartisan bill—which passed 69-30 and included 19 Republican votes—now goes to the U.S. House of Representatives, where its future is uncertain. Some members of Congress are worried about the price tag while progressive Democrats have pledged to hold up a vote on the bill until there's enough support for a $3.5 trillion budget with new investments for Medicare, aid to children's programs, money to combat the climate crisis and other measures that didn't make it into the infrastructure bill.

"We're very hopeful and optimistic about this making it through the House," Scott Simms, chairman of the Columbia River Treaty Power Group, told Clearing Up.

Simms, who is also executive director of the Public Power Council, said this is the first time the CRT Power Group has seen legislation addressing inequities of the Columbia River Treaty, which the group has calculated to be about $1 million every three days. He said seeing language and funding to spur movement on treaty negotiations demonstrates that the Northwest congressional delegation also sees urgency in moving forward.

While public power advocates applauded the Columbia River Treaty provisions, conservation groups were left wondering how they actually help the negotiations, or whether they're designed to prepare for a possible pullout of the treaty. While commending other measures in the bill to help salmon and steelhead populations in the Northwest, environmental groups were also disappointed in the lack of funding for their priorities in the Columbia Basin—like the $33.5 billion Snake River dam removal proposal outlined by Rep. Mike Simpson (R-Idaho), and reintroduction of salmon above Chief Joseph and Grand Coulee dams.

"My big question to Sen. Cantwell is, 'Do you want the treaty to be modernized, or do you envision a future with no joint flood risk opportunity, no Canadian entitlement, and no coordination for how and when water comes across the border?'" Greg Haller, executive director of Pacific Rivers, told Clearing Up. "Conservation groups have been advocating for ecosystem-based function as a new leg of the treaty, and I don't see anything in these amendments that points to that future."

Haller—who is on the U.S. Treaty Conservation Caucus—said environmental groups have always been sympathetic to the Columbia River Treaty Power Group's position that Northwest ratepayers are overpaying B.C. for storage that is not used to generate power, as the 1961 treaty does not include provisions to discount the water that goes over spillways to help juvenile fish passage. But he's not sure how the provisions in Cantwell's amendment would convince Canada to rebalance the payments, known as the Canadian Entitlement.

"Collectively, what these amendments look like to me is Sen. Cantwell preparing for a future with no Columbia River Treaty, which is pretty alarming if that's indeed her vision," he said.

In an interview with Clearing Up, Chelan County PUD GM Steve Wright said Cantwell's provisions may inch the U.S. closer to the option of issuing a 10-year notice of termination of the power provisions. "That's really different from getting out of the treaty," he said.

The Power Group has repeatedly asked the U.S. Department of State to serve Canada with a notice of intent to terminate the treaty. "The historical record clearly illustrates the treaty's benefits were calculated on a 60-year lifespan. Both countries acknowledged conditions would change over time. A notice of intent to terminate the Treaty would provide sufficient time

to modernize the Treaty and the downstream power provisions," the Power Group's website states.

Because of changes, the Power Group contends that the U.S. overpays B.C. for about 3 billion kWh per year, resulting in an overpayment in the last decade of about $1.25 billion.

The provisions in Cantwell's amendment to help push forward the Columbia River Treaty, as summarized by Chelan County PUD, include:

- Approximately $1 billion to upgrade transmission capacity between Canada and the Western and Southern U.S., contingent on the establishment of a more equitable entitlement payment to British Columbia.
- $100 million to create a new program to rehabilitate and enhance water storage at the John W. Keys III Pump Generating Plant at the base of Grand Coulee Dam.
- $10 million to determine ways to improve coordination of water and power flows between British Columbia and the Pacific Northwest, which could save ratepayers tens of millions of dollars.

Wright—who chaired the U.S. Entity designated to implement the Columbia River Treaty while he was BPA administrator—said he had the opportunity to work with Cantwell's office as the amendment was being crafted. He explained how the measures would help move the treaty negotiations forward.

Wright confirmed that upgrading transmission capacity between Canada and the U.S. could offer an incentive for rebalancing the Canadian Entitlement by giving B.C. more opportunities to sell power in U.S. markets.

"They're adding new hydropower generation with Site C," he said, referring to a 1,100 MW hydropower project under construction in B.C. that could be used in conjunction with new solar and wind in the U.S.

"The way the river is released from dams, and the way it produces power needs to be modernized," Wright said. "We can find value in that, and in finding value, that can be distributed across the West."

In a July 14 hearing in the Senate Committee on Energy and Natural Resources, Cantwell talked about the imbalance, saying "Much of the water that flows to the mighty Columbia starts in Canada, but way too much of the electricity generated in the United States is then gifted back to British Columbia, costing regional ratepayers hundreds of millions of dollars a year. This amendment would create a number of incentives to improve transmission between Canada and the Western and Southwest United States in order to increase on demand and clean electricity supplies."

The bill authorizes the BPA administrator to use funds equal to an aggregated amount of the Canadian Entitlement over the last five years. Wright said that figure will have to be calculated, but it's estimated at between $150 million to $200 million per year, or as much as $1 billion in the past five years.

"Sen. Cantwell is driven a lot by, 'how do you make the clean energy agenda work?' It takes a lot of transmission and a lot of storage to do so," Wright said.

So, while the first provision involves transmission, the second involves storage, he said. It provides $100 million for enhancing water storage at the Grand Coulee Dam pumping station.

The John W. Keys III Pump Generating Plant would be upgraded under new provisions. ***Photo: K.C. Mehaffey***

According to a description by the Bureau of Reclamation, the John Keys plant at Grand Coulee contains 12 pumps that lift water from the Columbia River to a canal that flows into Banks Lake, providing irrigation water to more than 670,000 acres of farmland. Six of the pumps can be reversed to generate hydroelectricity when demand exists.

Wright said it's been difficult to make the economics of the hydro generation work, and this provision would replace obsolete equipment and improve efficiencies in the system. It would also create new storage for irrigation in case flows from B.C. are insufficient. He said that from the standpoint of treaty negotiations, issuing a 10-year termination notice could impact irrigators. But costs of resolving the flood control and storage issues in the U.S. amount to about $50 million or less to expand the size of pumps and extend the intake for irrigation.

"We estimate the power value lost is in excess of $150 million a year," he said, adding it's "economically irrational" not to resolve the issues of flood control and storage while allowing the power inequities to continue.

The final provision provides $10 million for studies where BPA and B.C. Hydro would work together to figure out how to better coordinate flows of water and power between the two countries.

"It's going to take some pretty detailed studies," he said. The bill says studies shall analyze projected changes to the Northwest electric supply, potential reductions in greenhouse gas emissions, potential need to increase transmission capacity and any other factors deemed relevant for bilateral coordination.

In a prepared statement, Wright applauded the legislation for making the Columbia River Treaty modernization a higher priority. "Action is needed now to fix what the Treaty framers knew would be planned obsolescence. Without successful renegotiation Pacific Northwest ratepayers will be on the hook for substantial overpayments to Canada," he said.

In addition to the amendment addressing Columbia River Treaty negotiations, the infrastructure bill included other funding that could help fish in the Pacific Northwest, including:

- $1 billion for the U.S. Department of Transportation to create a new program aimed to remove, replace or restore culverts.
- $172 million for NOAA's Pacific Coastal Salmon Recovery Fund.
- $400 million for fish passage removal grants.
- $168 million for EPA's estuary programs in the Northwest, including $89 million for Puget Sound and $79 million for the Columbia River basin.

John DeVoe, executive director of WaterWatch of Oregon said he's disappointed there were no funds to address the removal of the four lower Snake River dams.

"We're happy to see the culvert money. I would note that Oregon has thousands of fish passage barriers and impediments to fish that also need attention," in addition to replacing culverts, he said.

DeVoe said there are many obsolete irrigation diversions, power dams and other barriers that impede salmon from reaching suitable habitat.

Haller, of Pacific Rivers, said a judge already ordered Washington to address its issues with culverts. "Money for fish and culverts—those are nice things. I don't want to be dismissive of that, although that is the federal taxpayer relieving the state of Washington of its duty. Puget Sound has a lot bigger issues than culverts." ***[K.C. Mehaffey]***

[13] Steelhead Counts Plunge at Bonneville Dam, Fish Managers Report • *from [5]*

It's not time to celebrate, but when 812 steelhead passed Bonneville Dam on Aug. 11, fish biologists who were watching got at least a glimmer of hope that this year's run might be picking up.

So far, steelhead returns to the Columbia River—for both hatchery and natural-origin—are dismally low, even lower than forecast.

"If the run doesn't pick up in the next week, it will be time to sound the alarm," Chris Sullivan, anadromous fisheries coordinator for the Idaho Department of Fish and Game, wrote in an email to Clearing Up.

Sullivan noted that the day's tally of 812 steelhead that passed Bonneville Dam on Aug. 11 was the single highest one-day count so far this year. The previous high count was 637 steelhead on July 20.

According to information from the Fish Passage Center, the daily steelhead counts usually peak from late July to late August, and counts remain somewhat high through mid-September. Last year's single-day high count was on July 28, with 2,377 steelhead passing Bonneville Dam. Averaging the past 10 years, the peak occurs on Aug. 1, with an average of 3,553 steelhead passing in a single day.

On Aug. 11, before the day's counts were tallied, Claire McGrath, representative for NOAA Fisheries on the Columbia River Technical Management Team, called the counts "exceedingly low," noting that the run so far was just 20 percent of the 10-year average at Bonneville Dam, with wild steelhead coming in at 24 percent of the 10-year average.

As of Aug. 12, the total number of steelhead passing Bonneville stood at 20,057 fish, including 10,923 unclipped or "wild" steelhead.

Photo: Oregon Department of Fish and Wildlife

Sullivan said that juvenile survival estimates for the 2020 migration year—the fish that would be coming back now after one year in the ocean, known as A-index steelhead—from release sites to Lower Granite Dam were close to the 10-year average for most groups, so there were no red flags in that part of their downstream migration.

He said there's still a chance for the B-index steelhead—those bigger and more prized fish that return after two years in the ocean—to come back stronger than the A-index run, although forecasts for both runs were low.

Bill Tweit, Columbia River fishery coordinator for the Washington Department of Fish and Wildlife, said his agency also forecasted very low steelhead returns this year, far below the 10-year average. "Based on those forecast for very poor returns, prior to the season we developed fishery plans that minimized impacts to wild A and B steelhead," he noted.

But the forecasts were not as low as 20 percent of the 10-year average, and biologists are beginning to doubt that total numbers will catch up to their predictions.

In a March presentation to the Northwest Power and Conservation Council, Sullivan said 14,450 natural-origin summer steelhead were forecasted to return to the Snake River this year, including 13,750 A-index and 700 B-index fish. The 10-year average is 22,713 total natural-origin steelhead.

Idaho also forecasted 35,470 hatchery steelhead would return this year, compared to the 10-year average of 79,097 hatchery steelhead.

Sullivan said it's possible that steelhead are waiting for better river conditions, but he noted that river conditions were warmer in 2015 and the steelhead counts at this point in the season were much higher.

Ryan Lothrop, Columbia River fishery manager for WDFW, said although there are likely some steelhead holding up in cooler waters, including in the ocean, in the estuary at Buoy 10 and in cold water refuges, it is unlikely that the warm water conditions are having that drastic of an effect. "Most years, the water hits 70-72 [degrees Fahrenheit] and steelhead pass Bonneville Dam then too," he wrote.

He said the river did get warm earlier in the season compared to most years, but conditions have been largely cooler than in 2015.

Lothrop said that the Columbia River has the capability to update run sizes during the season, while most other systems don't have that ability, so it's too soon to know if steelhead runs throughout the Northwest are having a rough year.

"What we are seeing coastwide is steelhead are in decline," he noted, pointing to the Fraser River in British Columbia, the Olympic Peninsula and the Oregon coast. He said in general, impacts to steelhead are not limited to the Columbia River. He also noted that A-index steelhead are more difficult to forecast because they spend only one year in the ocean. A-index steelhead are the key stock passing Bonneville Dam from July to September, while B-index fish will pass from late August to September.

"We do have concerns with the low counts as the trend has been downward for the past 5-10 years. The difference is the low counts pertain to A-index steelhead rather than B-index," Lothrop wrote. Most concerns in recent years have been focused on the larger B-index steelhead, he noted.

For comparison with 2015—when river conditions were also lethally warm—A-index returns to Bonneville totaled 243,000 steelhead, and B-index run came in at 19,000 steelhead. This year's forecast is for 89,200 A-index and 7,600 B-index steelhead. "The difference is largely attributed to poor survival in the ocean (and potentially freshwater as juveniles)," he wrote.

Lothrop said it's unlikely that the A-index steelhead will stay in the ocean for another year, as they have a life-history strategy to return after one year in the ocean. And even if the daily counts pick up, it's also unlikely that this year's run will catch up to the forecasted numbers for A-index steelhead since there was not a temperature barrier that would result in a later passage.

"Temperatures are currently not the highest on record post-dam construction in the Columbia," he added. ***[K.C. Mehaffey]***

[14] Electric Utilities Ask Ore. Gov. Kate Brown to Stay Injunction Request • *from [3]*

Electric utilities and organizations that represent them sent a letter to Oregon Gov. Kate Brown Aug. 11 asking her to withdraw or stay Oregon's July 16 request in federal court for a preliminary injunction to significantly increase spill over eight Snake and Columbia river dams beginning next spring.

"Oregon's motion for spill puts the entirely speculative impact of salmon benefit ahead of clear and present harm to the economy, environment, and electric system reliability," the letter states. "Put plainly, additional spill of this magnitude is going to cause blackouts if we continue down this dangerous course."

The group says officials in Brown's administration had assured electric utilities its earlier legal filings were procedural, to preserve the option to litigate while remaining committed to resolving the issues of fish recovery through collaboration. "This recent move by Oregon is not a commitment to collaboration. It is simply a tactical move to create maximum leverage," the letter states.

Oregon's motion for a preliminary injunction in *National Wildlife Federation et al. v. National Marine Fisheries Service et al. [01-640]* asks the judge to boost spring spill at most of the dams for 24 hours a day to the maximum level allowed by water quality standards (CU No. 2013 [13]).

It also seeks to restore summer spill through Aug. 31, provide continuous spill from Sept. 1 through the following spring through at least one surface passage route, and operate the projects at their minimum operating pool levels through spring and summer. Eleven conservation groups joined Oregon in a separate motion.

The letter says the spill will result in significant costs to public power customers—potentially over $100 million a year. It will also result in substantial increases in greenhouse gas emissions, and impact lower and underserved communities the hardest.

It urges the governor to allow the flexible spill regime—which provides 16 hours of maximum spill and 8 hours of generation daily in the spring—to continue long enough to figure out whether it's helping salmon.

It asks the governor to "put this matter on hold to give the Columbia Basin Collaborative, that you helped start, a chance to solve what decades of endless litigation have not."

The four states of the collaborative—Idaho, Montana, Oregon and Washington—have held two organizational meetings designed to reach consensus on ways to build healthy and harvestable levels of listed and nonlisted salmon and steelhead throughout the Columbia Basin. Its membership is expected to be announced soon, and will include representation from the states, tribes, federal agencies and stakeholders.

The electric utilities wrote that they do not accept Oregon's decision to simultaneously litigate and negotiate, and by filing the preliminary injunction, "we think Oregon has risked delivering the fatal blow to finding a lasting peace in the Salmon Wars," the letter concludes.

The issue of whether Oregon can, in good faith, participate in the collaborative while pursuing action in court is not new. Public Power Council and Northwest Requirements Utilities also issued a news release on July 23 in response to Oregon's motion for a preliminary injunction, noting that the spill operation threatens grid reliability, affordable electric rates, and Oregon's and Washington's climate goals, stating that it could cost public power ratepayers in the Pacific Northwest up to $100 million a year (CU No. 2014 [16]).

The utilities and the associations representing them also sent a letter to Brown in December after Oregon filed its notice of intent to sue (CU No. 1983 [15]), asking her to "stand down on litigation and come to the

McNary Dam. ***Photo: U.S. Army Corps of Engineers***

table for the good of our region and the state."

Ted Case, executive director of the Oregon Rural Electric Cooperative Association, told Clearing Up that many of the Oregon utilities met with officials from Brown's office last summer and were assured that any filing would be a tool to protect the state's ability to remain involved in the lawsuit in the future. "Obviously, that wasn't the case. They always intended to sue," he said.

He said when one of the states that was a driver of the whole collaborative process is also seeking injunctive relief in court, it puts the whole process in jeopardy. "The collaborative is just getting going, and now you've got this big hammer that's been put down on it," he said.

Even if Oregon were to withdraw or put a stay on its injunctive request, a similar motion with the same request was filed by conservation groups.

Brown's office did not respond to Clearing Up's request for comments.

The letter was signed by the Pacific Northwest Generating Cooperative, PPC, ORECA, Oregon Municipal Electric Utilities Association, Washington Rural Electric Cooperative Association, Idaho Consumer-Owned Utilities Association, Montana Electric Cooperatives' Association, Northwest RiverPartners and dozens of managers and board members from PUDs and electric cooperatives across the Northwest. ***[K.C. Mehaffey]***

Clearing It Up

[15] Cantwell Promotes Requested BPA Borrowing Authority Increase • *from [1]*

The region was buzzing this week with the prospect of BPA's borrowing authority increasing by $10 billion, after the U.S. Senate passed the $1.2 trillion Infrastructure Investment and Jobs Act on Aug. 10.

The bill, which includes $550 billion in new spending over the next five years, now heads to the U.S. House of Representatives where it faces an uncertain future.

If approved, the legislation would lift BPA's borrowing authority from $7.7 billion to $17.7 billion that would be used "to finance the construction, acquisition and replacement of the Federal Columbia River Power System," according to a release from Sen. Maria Cantwell (D-Wash), who championed the provisions.

Where might BPA invest that additional $10 billion in capital? Given that the agency manages a power system that dates back to the 1930s, just about any generator or transmission line in Bonneville's portfolio could use an infusion of capital.

"This would give Bonneville much more flexibility in how it funds capital programs, so it doesn't have to resort to revenue financing, as it has often done over the last few years," Randy Hardy, former BPA administrator and currently principal at Hardy Energy Consulting in Seattle, told Clearing Up.

The region is lacking transmission capacity to move renewable energy from Montana and Wyoming to loads in Seattle and Portland. Building—or even finding—that capacity has become especially important now that Puget Sound Energy and Portland General Electric, two of the region's largest utilities, need to scrub their portfolios of carbon by 2025 and 2030, respectively.

In Washington, PSE and Avista need to remove coal from their portfolios by 2025, be greenhouse gas-neutral by 2030 and 100 percent carbon-free in 2045. In Oregon, PGE and PacifiCorp are required to reduce emissions by 80 percent by 2030, 90 percent in 2035 and be running 100 percent clean energy by 2040.

Hardy says the region simply doesn't have enough east-west transmission capacity to meet those goals.

"It probably should be used to finance new east-west transmission, to enable PGE and PSE, and others, to get renewables from the east into the westside," Hardy said. These utilities "are facing very significant challenges, and right now we don't have enough transmission capacity to get renewables to the load centers by 2030."

Hardy suggested that the potential increase in borrowing authority could help pay for Bonneville's share of the Boardman to Hemingway transmission line, or install capacitors to increase available transmission. However, he said, even if the B2H line is completed, there is still a need to move power from the Mid-Columbia into PGE's territory to meet Oregon's clean energy mandates.

"There are some real constraints from the Mid-C to PGE, you just can't get there," he said. "You need something to improve transfer capacity, and that will be expensive."

Bonneville last had its borrowing authority raised in 2009, when it was bumped by $3.25 billion to the current level of $7.7 billion.

"Sen. Cantwell deserves a ton of credit," Spencer Gray, executive director of the Northwest and Intermountain Power Producers Coalition, told Clearing Up. "But for her efforts, I don't think we would have had the BPA provisions."

NIPPC, together with Renewable Northwest and Avangrid Renewables, urged the bill's prime sponsors—Sens. Kyrsten Sinema (D-Ariz.) and Rob Portman (R-Ohio)—to retain the BPA language just days before the Senate vote.

An earlier version of the measure had asked for only $2 billion of additional borrowing authority, but Cantwell succeeded in raising it to $10 billion, and added a requirement to update BPA's financial plan by the end of 2022. The revised terms also say BPA can't access more than $6 billion of the new borrowing through 2028.

The Cantwell language also mandates stakeholder engagement on the plan update, and on BPA financial and cost management efforts, a provision power and transmission customers of the agency had requested earlier this year be in the bill (CU No. 2015 [9]).

A letter sent by NIPPC, Avangrid and Renewable Northwest noted that this additional access to capital would help lower the price of power from Bonneville, particularly through reduced transmission rates.

"About 60 percent of BPA's outstanding treasury bonds are assigned to transmission," the letter said. "BPA forecasts that this percentage will increase in the coming years to as high as 89 percent in 2030. In short, most of the borrowing authority is dedicated to the transmission system, not to maintaining federal electric generation that sometimes receives more public attention."

Gray has high hopes for the provisions if they manage to survive in the House.

"For BPA, I hope that having a lot of breathing room on the borrowing authority will spur them to avoid undersizing projects, will reduce pressure for revenue financing, and hold down rates for transmission customers."

He also notes that the bill's Transmission Facilitation Program language would greatly help clean energy development in the Northwest. The program sets aside $2.5 billion to support new transmission lines or upgrade existing lines by authorizing the Department of Energy to buy a portion of the planned capacity, which it may then sell after determining the project has financial viability.

"I would expect utilities and merchant transmission developers to have a much better shot at getting projects on line in the next three to five years under these provisions," Gray said.

He said it solves the chicken-and-egg problem that a line can't be built by any single utility because of the cost, but it can't attract offtakers until it is built.

"I think it's fantastic news for meeting Western renewable needs going forward," he said.

Scott Simms, executive director of the Public Power Council, described the potential increase in borrowing authority as a "rare opportunity to give BPA some additional financing tools," but cautioned against earmarking the money for any specific need.

Initially, the plan called for splitting the $10 billion in borrowing authority evenly between transmission and generation, Simms said.

"At this point, it's best to be in a global state and not dictate a specific amount between transmission investments and generation investments," Simms said. "The focus should be on the process and dialogue and about using the borrowing authority prudently."

John Hairston, CEO and administrator of BPA, said in a statement emailed to Clearing Up that an increase in borrowing authority would provide "Bonneville with flexibility and future funding certainty to meet our near term and future capital funding levels."

"While access to additional borrowing from Treasury would provide us these benefits, it doesn't change our focus on our long-term financial goals," Hairston said. "We will continue to prioritize prudent debt management and sustainable capital funding practices, which are focuses of our upcoming Financial Plan refresh initiative." ***[Steve Ernst and Rick Adair]***

[16] POTOMAC: Budget Resolution Passes Senate • *from [7]*

The Senate passed a $3.5 trillion budget resolution on Aug. 11 that paves the way for legislation including a "clean-electricity payment program" and incentives for zero-carbon energy, electric vehicles, home electrification and weatherization.

Passage of the resolution on a party-line, 50-49 vote came a day after the Senate passed an approximately $1 trillion bipartisan infrastructure bill on a 69-30 vote.

The budget legislation, which would be considered under filibuster-exempt budget reconciliation rules, would also include a broad range of health, education and housing spending, offset with increased income taxes on corporations and high-income individuals.

Senators held a "vote-a-rama" on resolution amendments. Among those adopted were Sen. Deb Fischer's (R-Neb.) amendment to means-test electric vehicle tax credits and Sen. Dan Sullivan's (R-Alaska) amendment aimed at barring renewable-energy projects receiving federal funds from sourcing critical minerals from China.

Senate Majority Leader Charles Schumer (D-N.Y.) said the infrastructure package and budget legislation make up a "two-track" strategy that congressional Democrats are pursuing to adopt Biden administration priorities for energy, climate and other issues.

"The Democratic budget will bring a generational transformation to how our economy works for average Americans," Schumer said.

Republicans blasted the resolution. Senate Minority Leader Mitch McConnell (R-Ky.) called it "a reckless taxing and spending spree."

"Once again, we will have the highest tax rates of the developed world, or at least very near the top," Sen. Mike Crapo (R-Idaho), ranking Republican on the Senate Finance Committee, said in floor remarks.

Several hurdles must be crossed before reconciliation legislation can be sent to President Joe Biden's desk. The Senate and House must agree on a budget resolution, which does not require a presidential signature, and follow-on legislation implementing the resolution's budget instructions would have to be passed in both houses. Like the budget resolution, the follow-on legislation is exempt from filibuster in the evenly divided Senate.

Sen. Joe Manchin (D-W.Va.), who voted for the resolution, said he has "serious concerns" about spending $3.5 trillion. "I firmly believe that continuing to spend at irresponsible levels puts at risk our nation's ability to respond to the unforeseen crises our country could face," Manchin said.

White House press secretary Jen Psaki on Aug. 11 said "there's going to be a negotiation, moving forward."

The resolution assigns Senate committees 10-year budget amounts for the follow-on legislation, but the Senate Budget Committee cautioned that the numbers could be changed during bill drafting.

The Energy and Natural Resources Committee would be assigned $198 billion to cover, among other programs, a "clean-electricity payment program" that would serve as a clean-electricity standard; consumer rebates for weatherization and home electrification; financing for clean-energy manufacturing and vehicle supply chain technologies; and federal procurement of energy-efficient products.

The clean-electricity payment program would be a system of fees and payments to prod electricity suppliers to increase the share of power they sell from clean sources, aiming toward a goal of 80-percent clean power by 2030.

The Finance Committee was allocated $1.8 trillion in spending, including funding for clean energy and vehicle incentives.

Sen. Ron Wyden (D-Ore.), chairman of the Finance Committee, said his bill to overhaul energy tax policy "will be the linchpin of our efforts" to carry out the budget resolution's instructions. Wyden's bill, which the committee reported out May 26, would consolidate energy tax preferences into three for incentivizing zero-carbon power generation, electric vehicles and energy efficiency. The bill would eliminate fossil energy tax preferences.

Wyden's bill would authorize technology-neutral production and investment tax credits for power plants that emit no or net-negative greenhouse gas emissions.

In addition, the legislation would drop manufacturer caps for the $7,500 EV credit, authorize a credit for home energy efficiency improvements and adopt a commercial energy efficiency deduction.

"Incentives to boost electric vehicle sales and clean-energy manufacturing, including everything from semiconductors to solar components, will also be central to our package," Wyden said.

House Democrats called for higher spending.

"You can't spin away the fact that it doesn't offer the Interior Department enough money to meet some of our critical climate goals, including pressing needs like drought mitigation throughout the West," Rep. Raúl Grijalva (D-Ariz.), chairman of the House Natural Resources Committee, said.

The bipartisan infrastructure bill next goes to the House, but speaker Nancy Pelosi (D-Calif.) has said the House will not take up the package until the Senate has passed the reconciliation bill.

At an Aug. 10 briefing, Psaki said the Biden administration is "confident and comfortable with the strategic approach of Speaker Pelosi."

A group of nine House Democrats, however, told Pelosi Aug. 12 they want the House to take up the infrastructure bill, warning they "will not consider voting for a budget resolution until the bipartisan Infrastructure Investment and Jobs Act passes the House and is signed into law."

The group, led by Rep. Josh Gottheimer (R-N.J.), included Reps. Jim Costa (D-Calif.) and Kurt Schrader (D-Ore.).

House Democrats on Aug. 10 asked Pelosi to include expanded production and investment tax credits for renewables, including direct-pay options, in the infrastructure package.

All Senate Democrats voted for the infrastructure package. Western Republicans were split, with supporters including Idaho's Crapo and Jim Risch and Utah's Mitt Romney. Voting against the bill were Montana's Steve Daines, Wyoming's John Barrasso and Cynthia Lummis, and Utah's Mike Lee.

Utility groups praised the legislation. Tom Kuhn, CEO of the Edison Electric Institute, said the legislation "would provide a good down payment on the electric vehicle charging infrastructure and low/no-emission buses that we need to accelerate the electrification of the transportation sector, which currently is the largest source of carbon emissions in the U.S. economy."

The National Rural Electric Cooperative Association pointed to grid-modernization components in the legislation, including $3 billion for smart-grid matching grants and funding for demonstration of advanced technologies, including carbon capture and advanced nuclear.

"We commend the senators on both sides of the aisle who worked together on this compromise, and we applaud their commitment to the bipartisan pursuit of solutions," NRECA CEO Jim Matheson, a former House lawmaker from Utah, said.

The infrastructure legislation would provide $550 billion in new spending on energy and other infrastructure above baseline spending. The bill includes about $60 billion for grid and clean-energy development, according to a White House estimate; $5 billion for electric-vehicle charging stations; and $2.5 billion for EV charging and other alternative fuel infrastructure.

In addition, the bill includes $10 billion in increased borrowing authority for BPA; $1 billion for removal, restoration or replacement of culverts that can impede fish passage; and $600 million for fish passage restoration.

Other energy spending in the bill includes $5 billion in matching grants for utilities to strengthen grid systems against wildfires; $6 billion for battery material processing, manufacturing and recycling grants; $16 billion for cleaning up abandoned mines and orphaned oil and natural gas wells; $6 billion in credits for economically stressed nuclear power plants; $3.5 billion for weatherization; and $1 billion for modernizing gas distribution lines.

Another provision in the bill would authorize FERC to permit proposed interstate transmission lines in high-priority corridors designated by the Department of Energy if state commissions deny approval.

Dan Farber, co-director of the Center for Law, Energy and the Environment at the University of California, Berkeley, law school, said in a Legal Planet blog post that the provision "may put pressure on state utility commissions to approve projects rather than ceding their authority to the federal government."

DOE Proposes Reinstating Lighting Definitions

DOE on Aug. 10 proposed reinstating 2017 definitions of general-service and general-service incandescent lamps, opening the door to tighter efficiency standards on lighting used in 2 billion sockets across the U.S.

The proposal would unwind a 2019 Trump administration rule that dropped exemptions of specialty lamps from efficiency standards. The lamps include reflectors, globe-shaped bulbs and candelabra lights.

The Biden administration is considering another proposal to undo a 2019 rule that determined a "backstop" provision in the 2007 Energy Independence and Security Act had not been triggered, which in effect allowed continued sale of Type A incandescent bulbs that could not meet the 45-lumens-per-watt backstop standard.

Triggering the backstop standard would lead to replacement of incandescent bulbs with LEDs, efficiency advocates said. "The LED options are so affordable and last so long that it's predatory at this point to sell incandescent bulbs that cost a lot to use and need to be replaced frequently," Andrew deLaski, executive director of the Appliance Standards Awareness Project, said.

The National Electrical Manufacturers Association had pushed for the 2019 rules, arguing that in adopting the 2017 definitions, the Obama administration had "misconstrued" the 2007 statute.

In comments submitted to DOE in June, NEMA asked

Photo: Jacek Poblocki/Unsplash

for a one-year grace period to continue manufacturing incandescent bulbs if the 45-lumens standard is triggered and an additional year to sell off inventories. The group said the lighting market is shifting to LEDs anyway, and estimated that carbon dioxide emissions associated with Type A lamps fell 89 percent between 2007 and 2020 as a result.

IPCC: Deep GHG Cuts Needed to Stabilize Climate

Increases in global temperatures likely will exceed the Paris Agreement target of holding them to 1.5 degrees Celsius above preindustrial levels unless "deep reductions" in carbon dioxide and other greenhouse gas emissions are made in the coming decades, the United Nations' Intergovernmental Panel on Climate Change said in its latest climate science report, made public Aug. 8.

The report says reaching net-zero CO2 emissions "is a requirement for stabilizing the CO2-induced global temperature increase."

The world could emit no more than 500 billion metric tons of CO2 to have a 50-50 chance of keeping the increase in global average temperatures above preindustrial levels to 1.5 C, the report says. The estimated "carbon budget" for holding the increase to 2 C would be 1.35 trillion metric tons.

In 2019, the world emitted 36.44 billion metric tons of CO2, according to the Global Carbon Atlas.

If a "net-negative" emissions target is achieved with CO2 removal, temperature increases would be "gradually reversed," but other climate change impacts, such as sea-level rise, would continue for decades to millennia, the report says.

The IPCC said "it is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred."

The report notes, "Each of the last four decades has been warmer than any decade that preceded it since 1850."

The IPCC laid out five scenarios for how climate change might play out in the future. Only under a "very low" emissions scenario would the increase in warming fall below 1.5 C by the last two decades of the 21st century, the report says.

In western North America, the report says there is "high confidence" there will be continuing increases in drought and "fire weather." It also says there is "high confidence" there will be "strong declines" in North American glaciers and snow cover.

Climate change driven by energy-related GHG emissions and other human activities "very likely" has contributed to the decline in spring snow cover in the Northern Hemisphere since 1950, the report says.

The IPCC said snowpacks are likely to melt earlier, with diminished flows in the summer. "There is high confidence in an earlier onset of spring snowmelt, with higher peak flows at the expense of summer flows in snow-dominated regions globally," it said.

In addition, the report says "it is virtually certain that hot extremes (including heat waves) have become more frequent and more intense across most land regions since the 1950s, while cold extremes (including cold waves) have become less frequent and less severe, with high confidence that human-induced climate change is the main driver of these changes."

As warming continues, weather extremes are expected to increase in intensity, the report says. With 2 C of warming, 50-year extreme temperature events over land would be nearly 14 times more likely, it says.

Haaland Highlights Infrastructure Funds for Tribes

Interior Secretary Deb Haaland highlighted funding for tribal climate resilience in the bipartisan infrastructure package during an Aug. 9 visit to the Quinault Indian Nation, where she met with leaders of a dozen Washington state tribes.

The infrastructure package, which the Senate passed Aug. 10, includes $466 million for the Bureau of Indian Affairs, including $216 million for tribal climate resilience, adaptation and community relocation planning. The package also includes $250 million for construction, repair, and maintenance work on irrigation and power systems, dams and water facilities.

"As coastal communities face the increasing threat of rising seas, coastal erosion and storm surges, our focus must be on bolstering climate resilience," Haaland said.

Haaland and tribal officials toured the Village of Taholoah on the Pacific coast, which the Quinaults are relocating to higher ground.

Other tribal representatives with whom Haaland and Rep. Derek Kilmer (D-Wash.) met included leaders of the Quileute, Hoh, Makah, Lower Elwha Klallam, Jamestown S'Klallam, Port Gamble S'Klallam, Suquamish, Skokomish, Squaxin Island, Chehalis and Puyallup tribes.

Haaland Talks Up Offshore Wind in California Visit

Interior Secretary Deb Haaland on Aug. 10 visited the Port of Humboldt Bay to spotlight wind energy development potential in Pacific coastal waters.

The port, adjacent to an area the Interior Department is evaluating for future offshore wind leasing, is planning upgrades to support wind tower fabrication. Humboldt Bay is the largest deep-water port between San Francisco and Coos Bay, Ore.

In July, Interior's Bureau of Ocean Energy Management designated the nearly 132,369-acre Humboldt Wind Energy Area as a potential site for future leasing. BOEM has estimated the area could support 1.6 GW of offshore wind capacity.

Haaland and Brenda Mallory, who chairs the White House Council on Environmental Quality, met with Rep. Jared Huffman (D-Calif.), California Energy

Commission member Karen Douglas, tribal leaders and local officials.

Interior Advances California Solar Projects

The Interior Department released a draft environmental assessment on Aug. 12 for the 500 MW Oberon solar-photovoltaic project, proposed on federal land southeast of Joshua Tree National Park.

The project was proposed by IP Oberon, a subsidiary of Intersect Power.

Interior on Aug. 5 released a draft environmental impact statement for the nearby proposed Arica and Victory Pass PV projects, with a combined total of 465 MW and up to 400 MW of battery storage. The projects, proposed by Clearway Energy Group, are planned for 2,722 acres of federal lands.

All three projects would tie into Southern California Edison's Red Bluff Substation.

White House Prods OPEC on Production

A White House official on Aug. 11 called on the Organization of Petroleum Exporting Countries to boost oil production to help lower gasoline prices.

A 400,000-barrel-per-day production increase the cartel agreed to in July "is simply not enough" to support economic recovery, White House national security adviser Jake Sullivan said in a statement.

The White House National Economic Council also urged the Federal Trade Commission "to consider using all of its available tools to monitor the U.S. gasoline markets," White House press secretary Jen Psaki said Aug. 11.

Congressional Republicans criticized Biden and urged the administration to boost domestic oil production. "Begging the Saudis to increase production while the White House ties one hand behind the backs of American energy companies is pathetic and embarrassing," Sen. John Cornyn (R-Texas) said.

Senate Panel Advances Energy Money Bill

The Senate Appropriations Committee on Aug. 4 reported out a $53.6-billion energy and water appropriations bill for fiscal year 2022, giving a 7.3-percent boost to DOE.

The committee advanced the bill on a 25-5 vote.

The bill would provide nearly $3.9 billion for energy efficiency and renewables research, up almost 37 percent from the 2021 level.

Nuclear and fossil energy research also would receive increases. The committee approved nearly $1.6 billion for nuclear, up $83.2 million from 2021, while fossil energy would receive $850 million, a $100-million boost.

The Advanced Research Projects Agency-Energy's funding was set at $500 million, a 17-percent increase.

The Senate bill is $400 million higher than the energy and water appropriations bill the House passed July 29 as part of a seven-part fiscal year 2022 funding package. Like the Senate bill, the House legislation would provide a significant boost to efficiency and renewables research and development, increasing the 2022 total to nearly $3.8 billion.

DOE Proposes No Change in Microwave Standards

DOE proposed a determination on Aug. 12 that efficiency standards for microwave ovens do not need to be changed.

The agency said revising standards for standby power would not save significant amounts of energy under the efficiency standards process rule currently in effect. Under current standards for microwaves, adopted in 2013, standby power consumption of microwave-only ovens and countertop convection ovens is capped at 1 watt. For built-in and over-the-range convection microwave ovens, the standard is 2.2 watts.

DOE said modeling of tighter standards showed savings would total at most 8 percent over 30 years.

DOE Reviewing Pump Standards

DOE opened an information request on Aug. 9 as part of a review of efficiency standards for commercial and industrial pumps.

Standards for pumps were last updated in 2016 and took effect Jan. 27, 2020. The standards in effect will save an estimated 0.1 quad of energy over 30 years. In a revised estimate, DOE said a "max-tech" standard would save 0.25 quad.

DOE is seeking information on five pump equipment classes. ***[Jim DiPeso]***