

POWERLINES

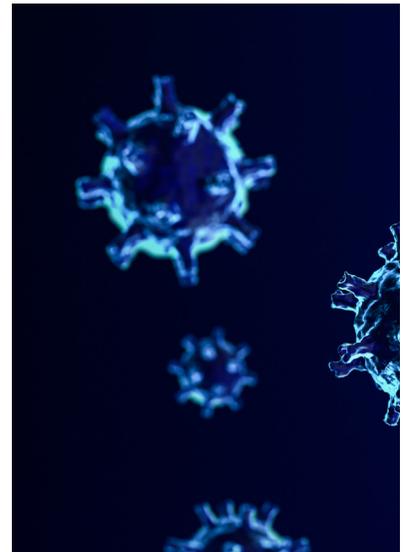
A Newsletter from Intermountain Power Agency



June 2020

COVID-19 Operations Update

Emergency preparation is baked into power plant operations DNA, so when the COVID-19 pandemic emerged, Intermountain Power Project was fully prepared to continue operations. The generating station's spring maintenance outage was canceled to prevent dozens of outside vendors from accessing the site. Outside visitors were prohibited, the plant workforce was carefully screened, and social distancing protocols were implemented on site along with enhanced cleaning. IPP's experienced workforce is extensively cross trained and able to operate with substantially reduced manpower levels, if necessary. Emergency supplies, including food, are also stockpiled at the power plant to allow continued operations under total quarantine if that ever became necessary. IPP's preparations featured prominently in a [Los Angeles Times story](#) about electric utility COVID-19 responses.



Turbine Contract Awarded

Intermountain Power Agency's "IPP Renewed" effort took a major step forward February 14, 2020, when IPA awarded Mitsubishi Hitachi Power Systems a contract for two M501JAC power trains for the Intermountain Generating Station. The 840-megawatt total capacity generating units are scheduled to come online in 2025 when coal-fueled electricity generation at the site ceases.



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Turbine Contract Awarded *continued*

The generating units are part of a comprehensive plan to sequentially transition from coal to natural gas and finally to renewable hydrogen fuel. The turbines will be commercially guaranteed capable of using a mix of 30 percent hydrogen and 70 percent natural gas fuel at start-up in 2025. This fuel mixture will reduce carbon emissions by more than 75 percent compared to the retiring coal-fueled technology. Between 2025 and 2045, IPP

plans to systematically increase the hydrogen capability to 100 percent renewable hydrogen utilization, enabling carbon-free utility-scale power generation.

The project announcement garnered worldwide attention from news media as diverse as [Bloomberg](#), [S&P Global](#), [Axios](#), and [POWER Magazine](#).

IPP Featured at Utah Hydrogen Summit

Development of hydrogen energy infrastructure at the Intermountain Power Project was front and center at the Utah Governor's Office of Energy Development's 3rd Annual Hydrogen Conference January 8, 2020, at the state Capitol.

Attracting approximately 150 participants including state and federal policymakers, technology experts, and project developers, the day-long session featured a keynote presentation on Utah's potential as a [leader in the production of "green hydrogen"](#) – using renewable energy to separate hydrogen from water using electrolysis. IPP Operating Agent Manager Greg Huynh also outlined the plans for development of grid-scale electricity generation using hydrogen [at the IPP site](#).

Other sessions at the conference included presentations on hydrogen [infrastructure development](#), [market opportunities](#), partnerships across the [western states](#), and a [global perspective](#) on hydrogen.



Hydrogen Corner

With the Intermountain Power Project attracting widespread attention for its plans to deploy grid-scale hydrogen storage and electricity generation, Powerlines is introducing a new feature to educate and inform its readers regarding the technology. "Hydrogen Corner" will feature links to stories about IPP's hydrogen plans and the rapidly developing world market for the resource.

- Los Angeles Department of Water & Power's internal magazine published: "[The Future of IPP is Green](#)." The IPP project was also the subject of major features in [Governing](#) magazine, [Forbes](#), [Mining Weekly](#), and [Public Power Today](#).
- The [Green Hydrogen Coalition](#) formed with a mission to support "green hydrogen projects that [leverage multi-sector opportunities](#) to simultaneously scale supply and demand." The group's first webinar prominently featured [IPP's hydrogen project](#).
- Mitsubishi Hitachi Power Systems outlined "[hydrogen's role](#) within a 100 percent renewables economy" and described its Advanced Clean Energy Storage (ACES) project adjacent to IPP. University of California Irvine's Advanced Power & Energy Program profiled the ACES site in a white paper entitled "Integrating Clean Energy Technologies with Existing Infrastructure: [Western Energy Hub](#) Site Benefits for Rapid Clean Regional Grid Transition."
- Reuters published "[Green hydrogen's time has come](#), say advocates eyeing post-pandemic world." [GreenBiz](#), [Utility Dive](#), and [POWER](#) all published similar articles prominently featuring the IPP project.
- Energy research firms are also taking notice. Wood Mackenzie [noted a surge](#) in large green hydrogen projects worldwide. A BloombergNEF study focused on [falling costs](#) of hydrogen production. DNV GL examined hydrogen's potential for [seasonal energy storage](#). Lux Research predicted a [global trade](#) in green hydrogen.
- Globally, hydrogen development was included as a key strategy in Europe's [economic stimulus plan](#). A European coalition launched a "[Choose Renewable Hydrogen](#)" campaign. A consortium in Japan continued construction of a [grid-scale green hydrogen project](#). A project proposed for Belgium would be powered completely by [excess offshore wind](#). Recharge reported a Canadian company has begun selling green hydrogen on the open market at a price around [80 percent higher](#) than conventional grey hydrogen. A United Arab Emirates minister predicted green hydrogen could become the cheapest form of hydrogen [within five years](#).

Energy Items of Interest

IPA Chairman Ted Olson was profiled in his [home town newspaper](#).

U.S. Energy Information Administration released its [Annual Energy Outlook](#) with projections to 2050. Among the conclusions: Overall energy consumption will [grow more slowly](#) than production, and renewables are expected to [surpass natural gas](#) in electricity generation toward the end of the forecast period.

EIA reported annual energy consumption from renewable sources (including hydroelectricity) [exceeded coal consumption](#) in 2019 for the first time since before 1885.

National Association of Regulatory Utility Commissioners published: "[Recent Changes to U.S. Coal Plant Operations](#) and Current Compensation Practices" – providing an overview of strategies for coal plant owners and operators to manage costs while providing flexible electricity.

Brookings Institution published: "The U.S. Coal Sector – [Recent and Continuing Challenges](#)."

Public opinion polling commissioned by environmental groups concluded most Utahns favor [transitioning away from coal-fueled electricity](#).

At least 24 Utah cities and counties opted in to a plan for [net-100 percent renewable energy](#) by 2030.

The Utah Coal Country Strike Team [awarded grants](#) to coal communities seeking new forms of economic development.

A northern California power plant announced plans to blend [hydrogen for fuel](#).

California Public Utilities Commission said the state's clean energy goals require major investment in [long-duration energy storage](#).

A California Independent System Operator official identified green hydrogen energy storage as part of the state's "[optimal path](#)" toward its clean energy goals.

A Lawrence Livermore National Laboratory study on California net-zero carbon options mentioned [energy hub development](#) at IPP.

Links

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Learn more about Intermountain Power Agency, please visit: www.ipautah.com

PowerLines is a publication of Intermountain Power Agency. The Intermountain Power Project includes a two-unit coal-fueled generating station located near Delta, Utah, two transmission systems, a microwave communication system and a railcar service center, all built as a joint undertaking by 35 utilities in Utah and California.

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