



**NHA**

**GRID RELIABILITY AND HYDROPOWER**  
**2024 Energy Outlook**

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# STATE OF THE U.S. HYDROPOWER INDUSTRY IS STRONG

- **31% of U.S. renewable energy**
- **Over 6% of all electricity generated**
- **96% of current U.S. long duration energy storage**
- **80 GW of hydropower capacity**
- **22 GW of pumped storage hydropower capacity**



# CLEAN ENERGY GRID AT RISK DUE TO POTENTIAL WAVE OF RETIREMENTS

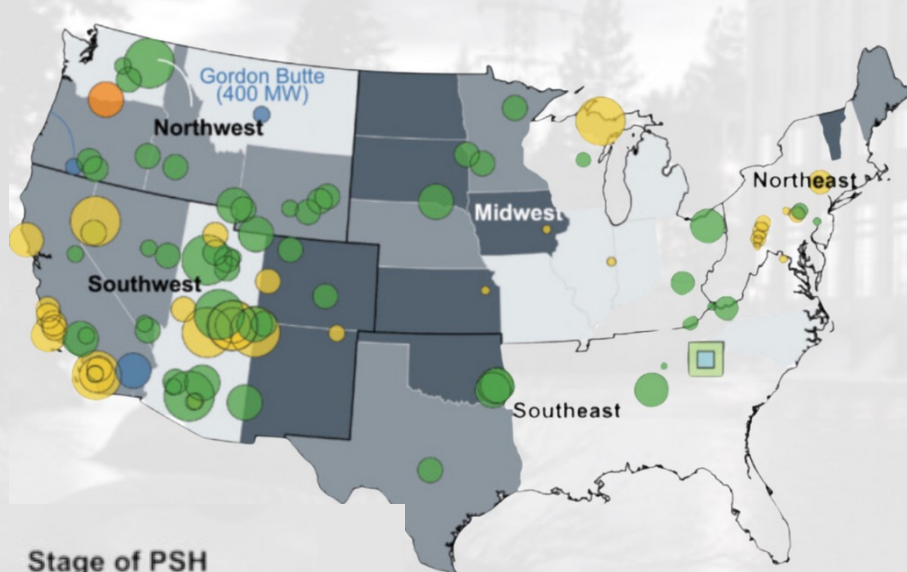
- Licenses for 459 hydropower facilities, representing 17 GWs, are set to expire by 2035.
- Relicensing takes, on average, 7.6 years to complete
- Projects of greater than 10 MW reporting licensing costs exceeding \$1M, and projects more than 100 MW reporting cost around \$10M or more
- Survey: 36.4% of hydropower industry asset owners said that they were "actively considering" decommissioning a facility

JEFFERIES HYDRO PLANT



# HYDROPOWER HAS POTENTIAL FOR GROWTH

## US Pumped Storage Development Pipeline 2023



### Stage of PSH Development

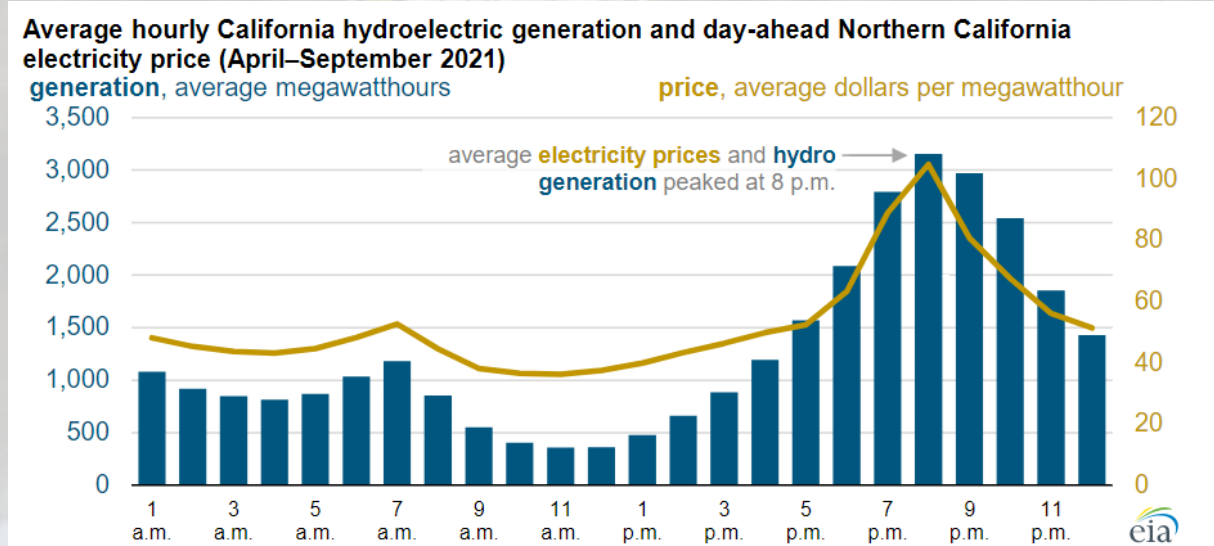
- Pending Preliminary Permit\*
- Issued Preliminary Permit\*
- Pending License\*\*
- Issued License\*\*
- Under Construction
- Planning

- 95+ pumped storage projects in FERC pipeline (over 50 GWs)
- Almost 1 GWs of new, carbon-free electricity from the existing fleet from DOE's recent \$72M investment
- DOE funded only 34% of requests so lots of additional growth from existing fleet possible

# HYDROPOWER & RELIABILITY

Even during drought, hydro is still there when we need it the most.

The overall western hydropower fleet sustains about four-fifths of the average power generation during severe droughts.





# **CURRENT CHALLENGES**

**Lack of Support for  
Existing Hydropower**

**Antiquated Licensing  
Process**

**Market Design  
Failures**



Dear Senator Daines and Senator Cantwell:

We, the [neighboring] labor unions, representing over five million skilled professionals in the various represented trades and industries write in strong support of S. 1521, the *Community and Hydropower Improvement Act*. The hydropower industry in the United States employs an estimated 73,000 people, according to the Department of Energy, and includes skilled professionals in diverse fields including carpenters, millwrights, operating engineers, electrical engineers, linesman, dam safety officials and energy industry professionals generally.





**NORTHWEST**  
PUBLIC BROADCASTING



## Environmental And Energy Industry Groups Commit To Working Together On (Some) Hydro Projects

By Courtney Fle...

The New York Times

## *Environmentalists and Dam Operators, at War for Years, Start Making Peace*

Facing a climate crisis, environmental groups and industry agree to work together to bolster hydropower while reducing harm from dams.

# UNCOMMON DIALOGUE

“U.S. **Hydropower**: Climate Solution and Conservation Challenge”



CLIMATE & ENVIRONMENT

Los Angeles Times

## Can hydropower help solve the climate crisis? This \$63-billion plan is banking on it



# ENERGYWIRE

THE T

RENEWABLE ENERGY

## DOE-backed hydro group launches to cut CO2

David Iaconangelo, E&E News reporter

Published: Wednesday, October 14, 2020

HYDROPOWER + RIVER + CLIMATE





**THANK YOU!**

