

How Hydro Projects are Regulated: United States

Ryan Hansen

Federal Energy Regulatory Commission

July 16, 2024

AGENDA

- Overview of Federal and Non-Federal Hydropower
- Pertinent Laws and Regulations
- Non-Federal Hydropower Projects – Federal Energy Regulatory Commission (FERC)
- Federal Hydropower Projects – Army Corps of Engineers (Corps), Bureau of Reclamation (Reclamation), and Tennessee Valley Authority (TVA)

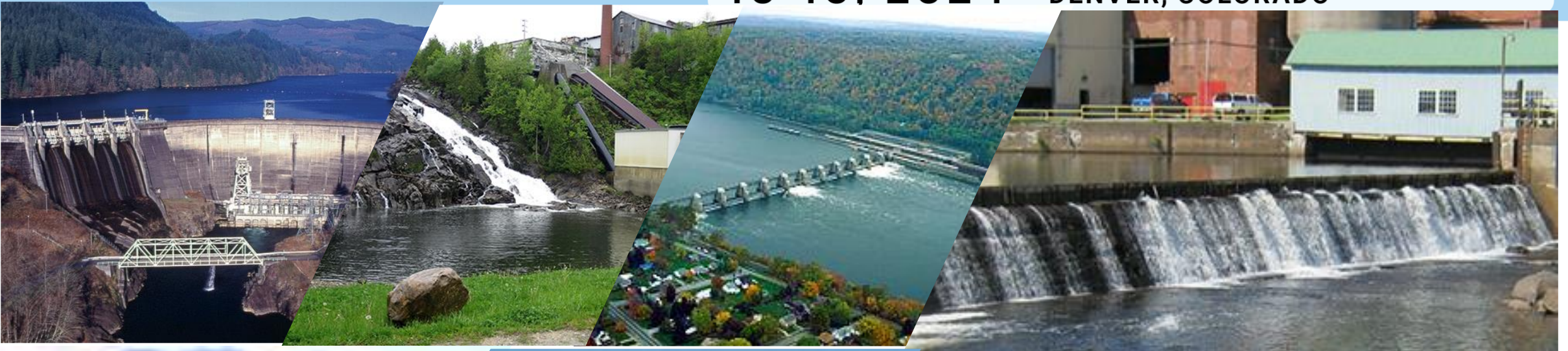


WATERPOWER
HYDRO BASICS

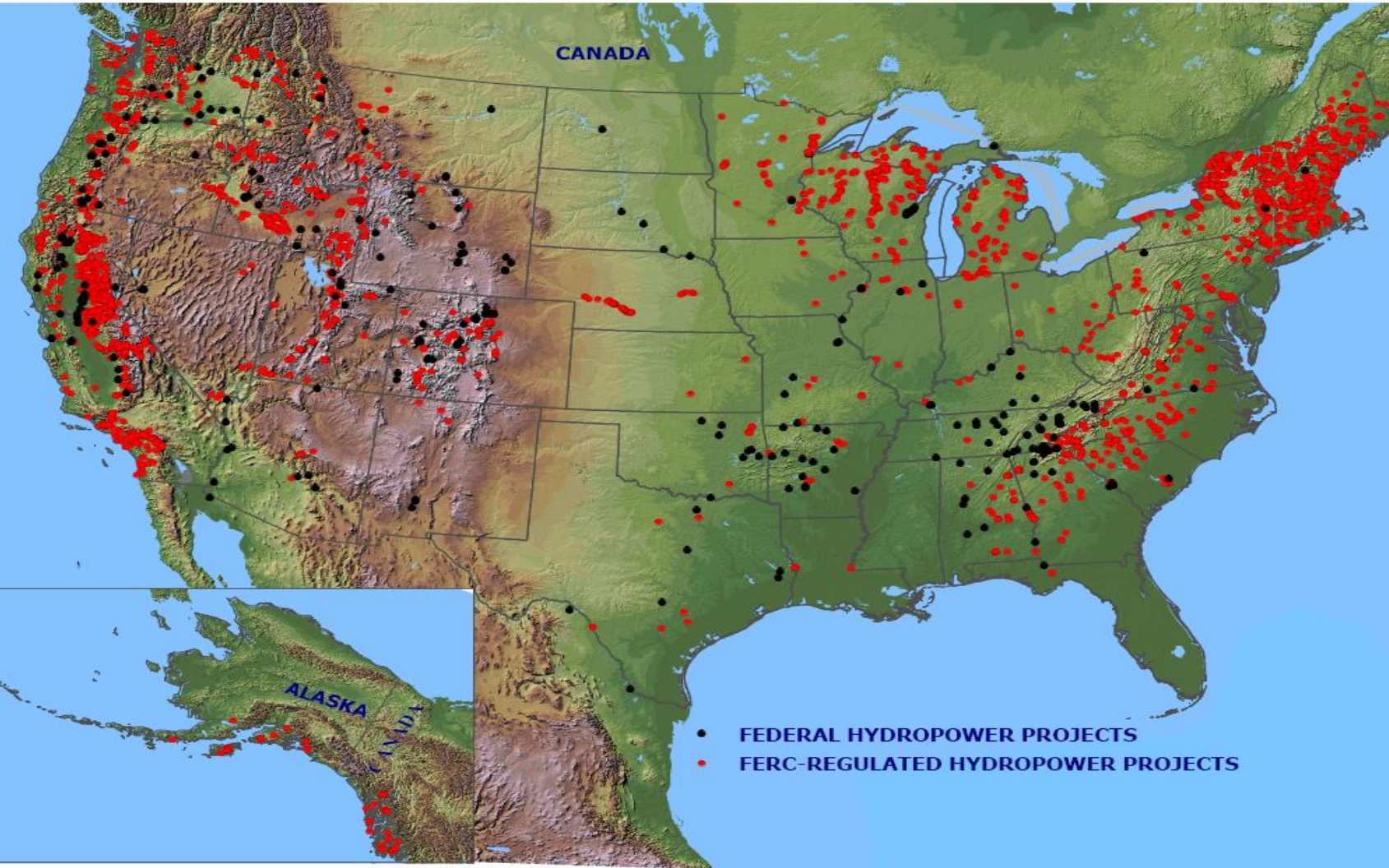
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**Hydropower in
the U.S.**



U.S. Hydropower: Federal and Non-Federal

- U.S. Hydropower Generation:
~101,000 MW (8% of U.S.
Generating Capacity)
- FERC-Regulated Capacity:
~57,430 MW



FERC's Hydropower Program

Federal Energy Regulatory Commission



Chairman
Willie L. Phillips



Commissioner
Mark Christie



Commissioner
David Rosner



Commissioner
Lindsay See



Vacant

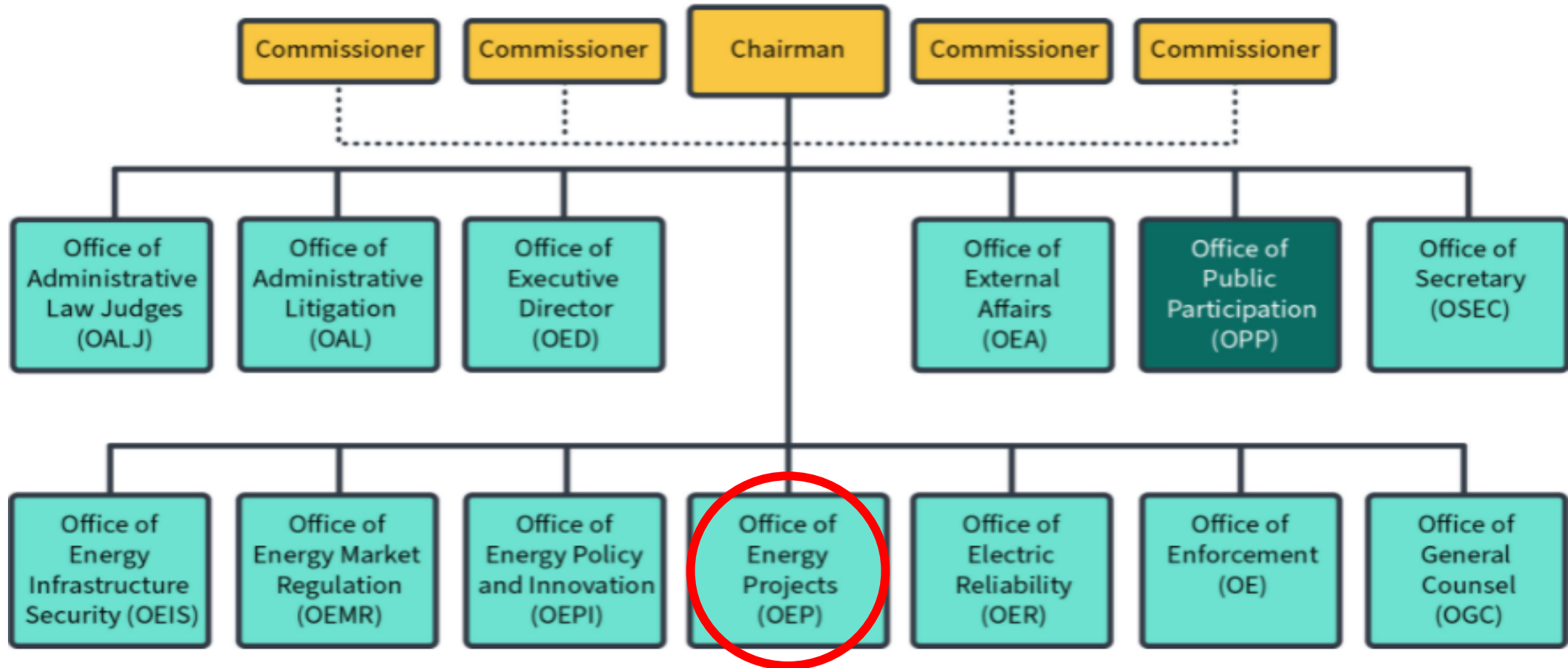
- Independent Regulatory Commission
- Five members appointed by President, confirmed by Senate
 - Supported by 13 offices

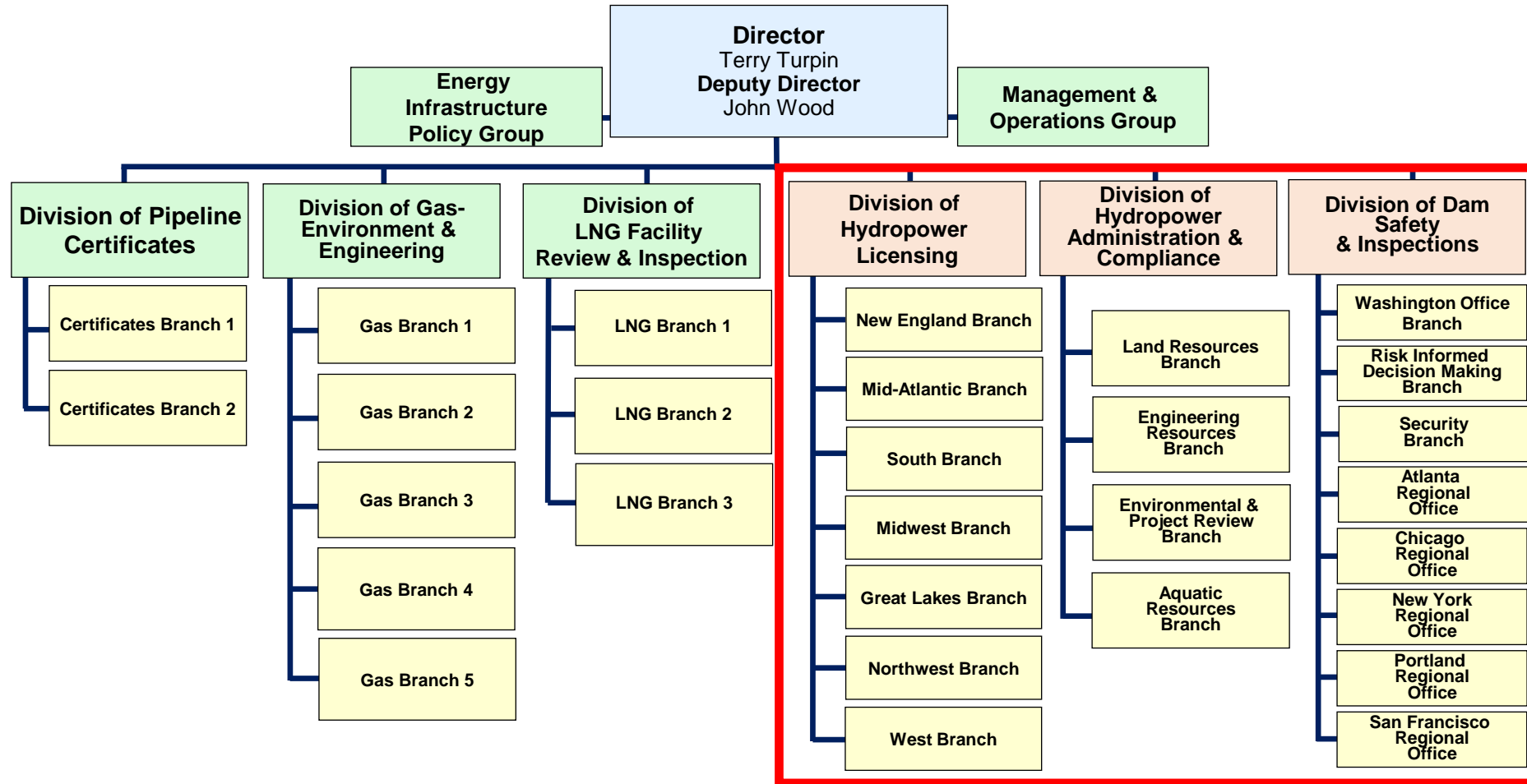
What FERC Regulates

- Hydropower
- Natural Gas/LNG
- Oil Pipeline Rates/Tariffs
- Electric Rates
- Electric Transmission



FERC Organization





Division of Hydropower Licensing (DHL)

Nick Jayjack – Director

Vacant – Deputy Director

Branch Chiefs:

New England Branch: Emily Carter, (202) 502-6512

Mid-Atlantic Branch: John Smith, (202) 502-8972

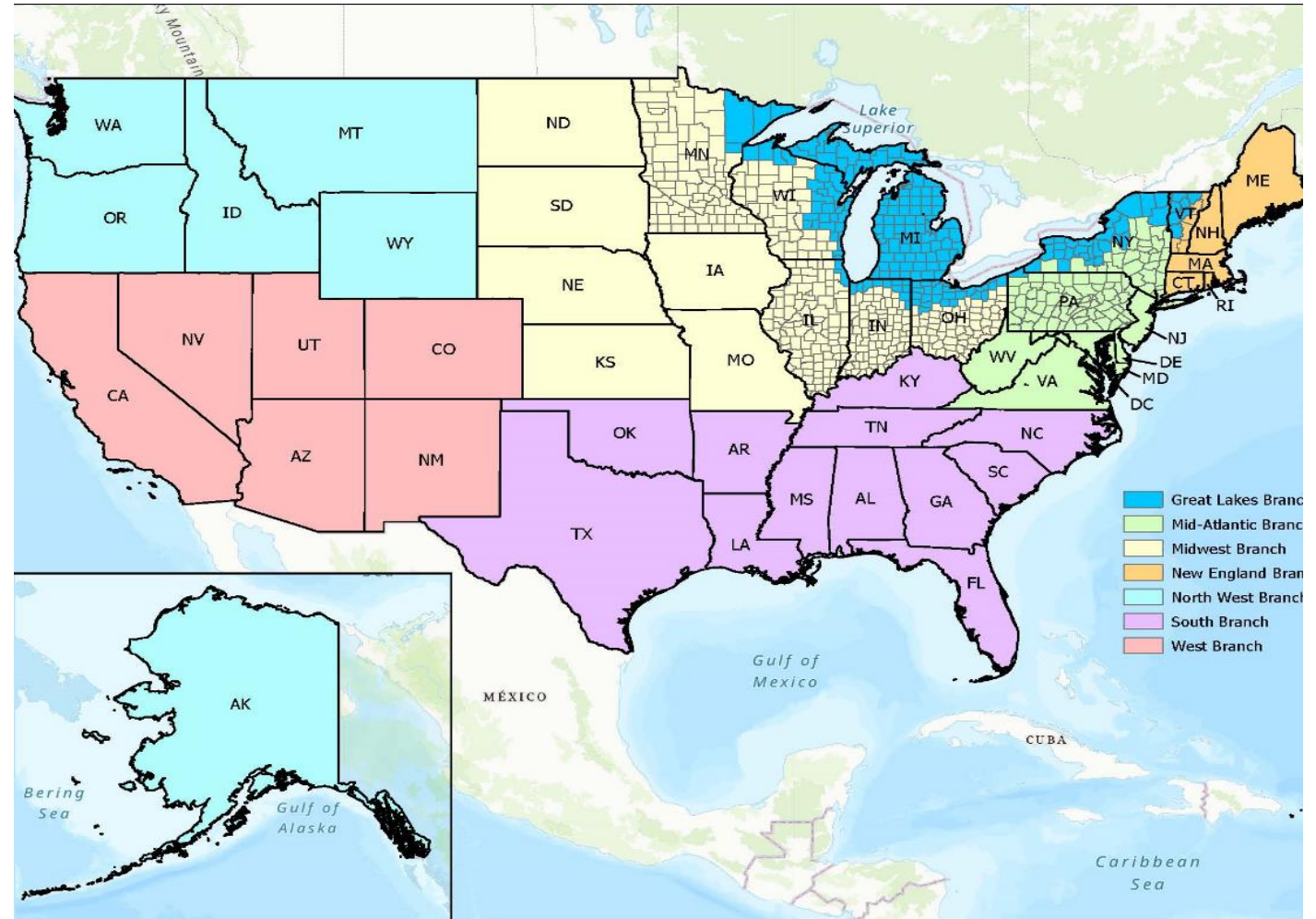
Great Lakes Branch: Nicholas Tackett, (202) 502-6783

Midwest Branch: Janet Hutzel, (202) 502-8675

South Branch: Stephen Bowler, (202) 502-6861

Northwest Branch: David Turner, (202) 502-6091

West Branch: Timothy Konnert, (202) 502-6359



Who are the players?



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Laws and Regulations



Federal Power Act (FPA) *Jurisdiction*

- Commission authorization is required for *non-federal* hydropower projects:
 - located on navigable waters;
 - located on federal lands;
 - using surplus water from a federal dam; OR
 - located on non-navigable waters over which Congress has Commerce Clause jurisdiction, were constructed or modified after 1935, and affect interstate or foreign commerce.

FERC's Hydropower Role

- Evaluate non-federal hydropower projects giving equal consideration to environmental, recreational, cultural, and developmental resources
- Provide assistance to, and foster coordination among, applicants and stakeholders
- Prepare and issue NEPA documents
- Ensure compliance with terms of Commission licenses and exemptions during construction and operation
- Ensure safety of non-federal hydropower dams

What FERC Does NOT Do

- Build anything
- Operate hydropower projects
- Conduct studies to support project licensing
- Advocate for or against any specific hydropower project or proposal

National Environmental Policy Act (NEPA)

Primary NEPA Steps

- Scoping
- Preparation of Environmental Documents [Environmental Assessment (EA) or Environmental Impact Statement (EIS)]
- Public comments on EA/EIS
- Responding to comments



NEPA Document Components

- Purpose and Need
- Affected Environment
- Alternatives Considered
- Environmental Effects
 - Applicant's Proposal
 - Stakeholders' Recommendations
 - Staff's analysis



Balancing



Environmental Concerns



Developmental Concerns

vs.

Typical Environmental Issues Analyzed in NEPA Documents



Water quality



Aesthetics



Fisheries



Wildlife

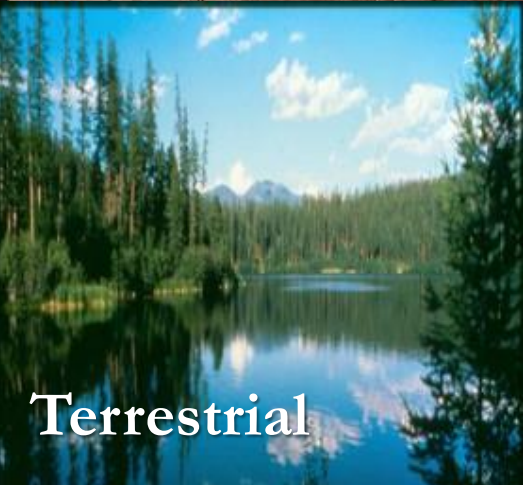


Tribal

Cultural

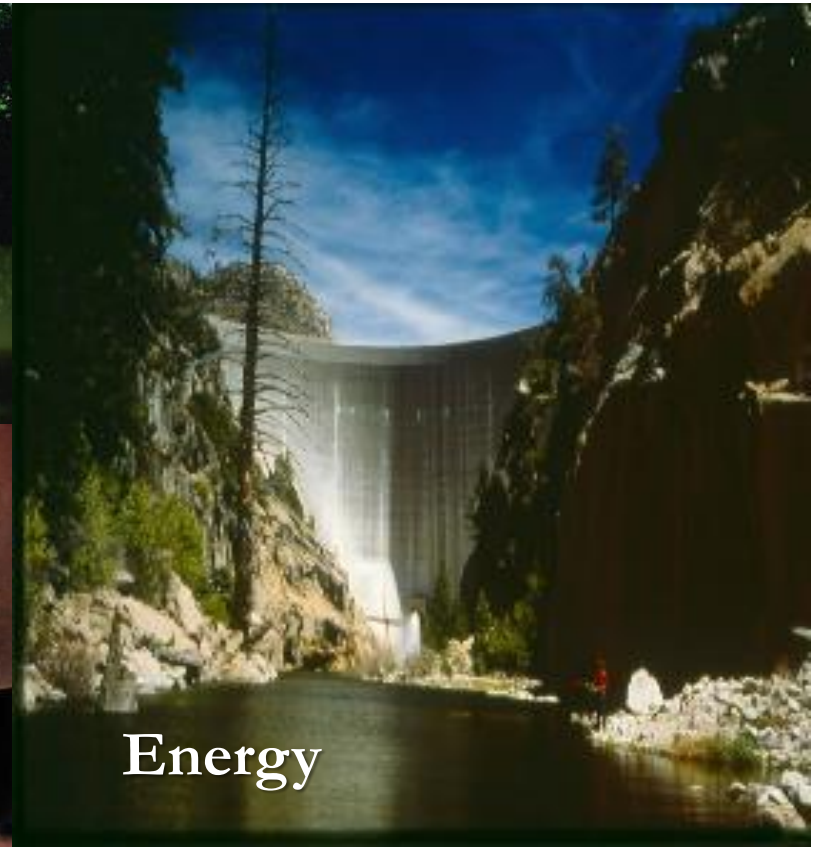


Recreation



Terrestrial

Typical Developmental Resources



Licensing Standard and Other Licensing Considerations under the FPA

- Equal Consideration – section 4(e)
- Comprehensive Development – section 10(a)
- State and federal fish and wildlife agency recommendations [section 10(j)]
- Mandatory Conditions
 - Fishway Prescriptions – section 18
 - Reservations – section 4(e)

Other Federal Statutes

- Clean Water Act
- Endangered Species Act
- National Historic Preservation Act
- Fish and Wildlife Coordination Act
- Magnuson-Stevens Fishery Conservation and Management Act
- Coastal Zone Management Act
- Wild and Scenic Rivers Act



Preliminary Permit

- Maintains priority of application for 4 years with option to extend an additional 4 years
- Requires feasibility studies and pre-filing activities
- Does not authorize construction or operation

License: Original or Relicense, or Pilot

- Authorizes construction and operation
- Issued for 30-50 years, Default is 40 years
- *Exception:* Pilot licenses are issued for 8-10 years

Exemptions: Conduit and 10 MW

- Authorizes construction and operation
- Issued in perpetuity

Basic Licensing Steps

Pre-filing

Notice of Intent/ Pre-Application Document

Consultation

Stakeholder
Input
Opportunity

Issue
Identification

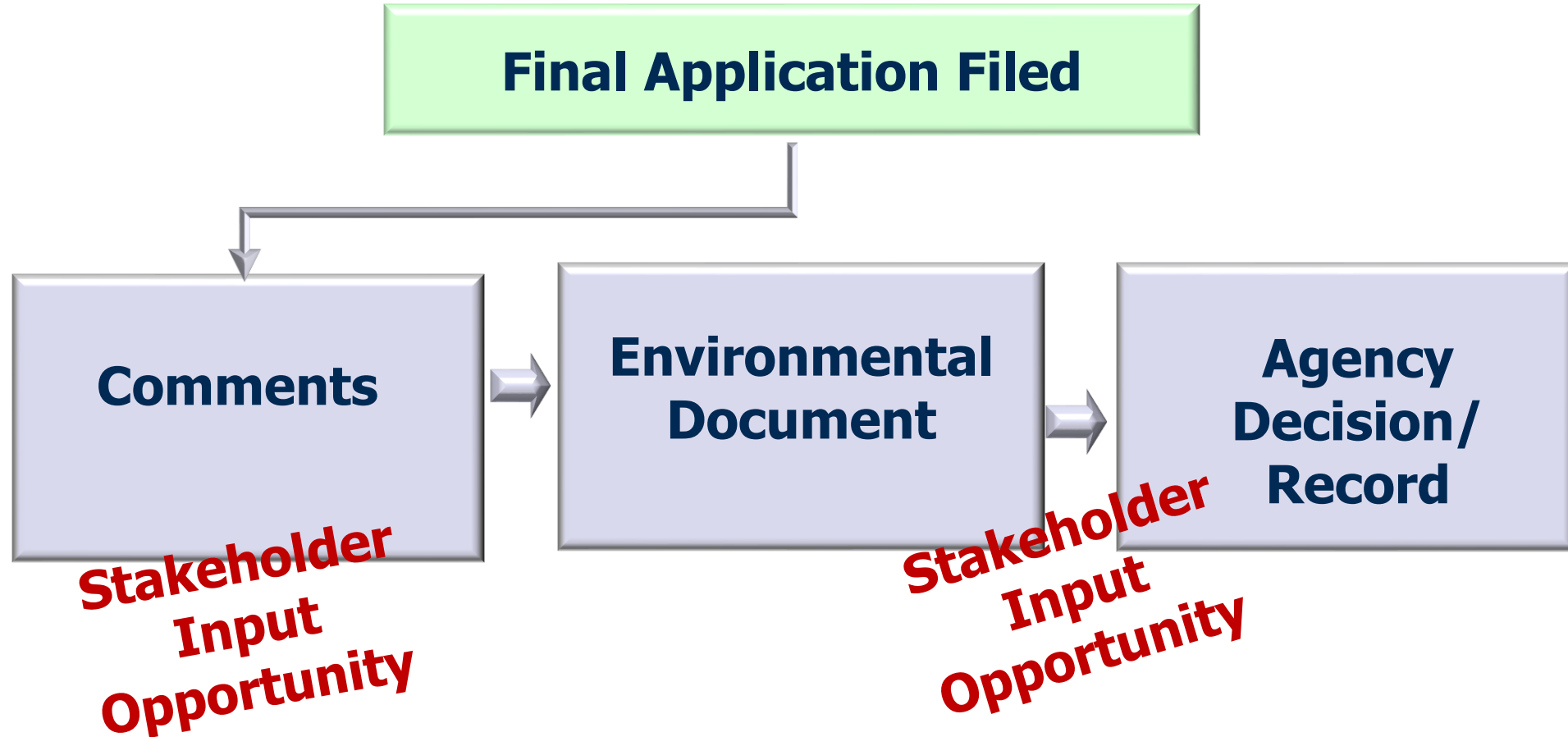
Stakeholder
Input
Opportunity

Information
Gathering

Stakeholder
Input
Opportunity

Basic Licensing Steps

Post-filing

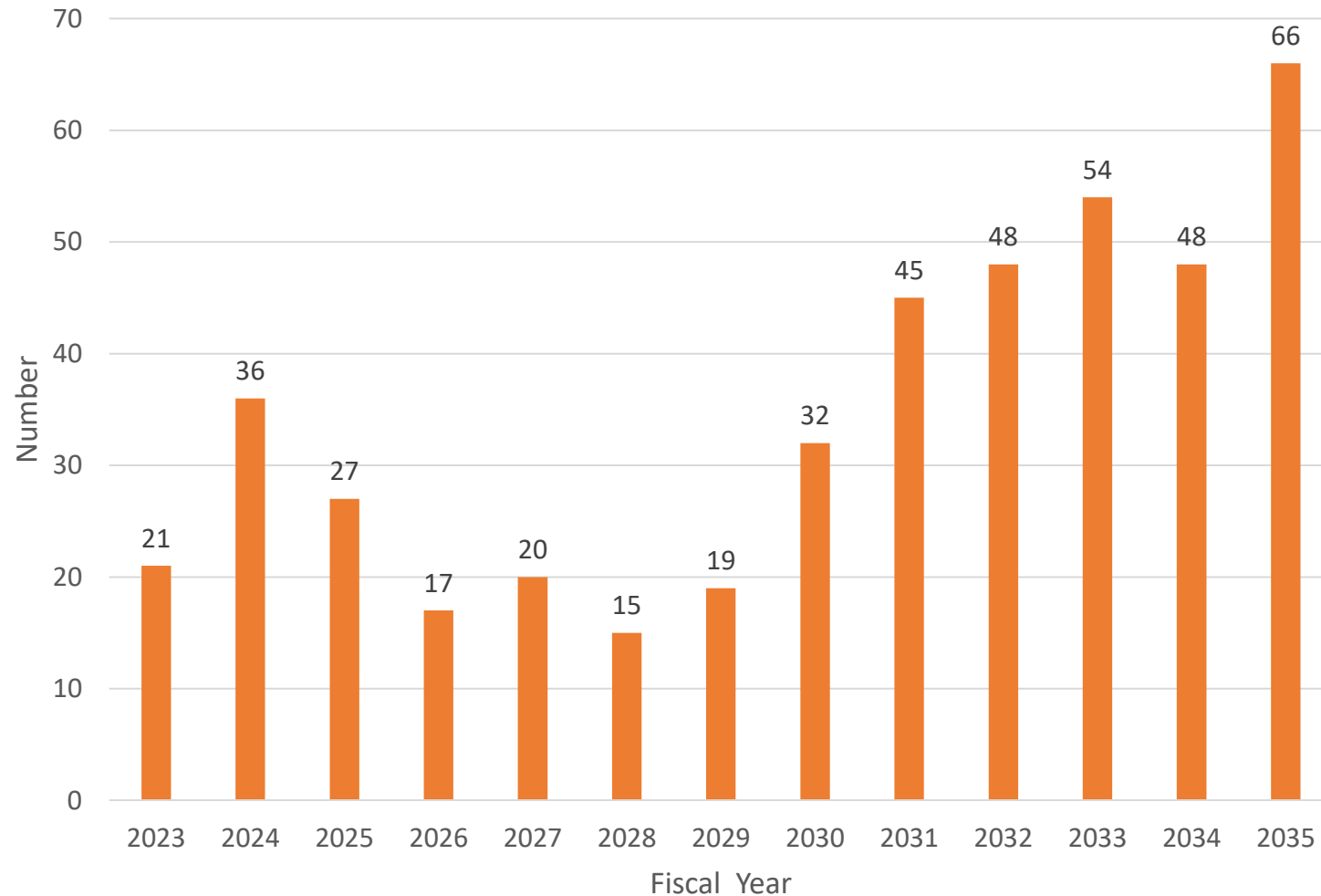


Where FERC Authorized Hydropower Stands Today

We are currently administering:

- 1,017 licenses
- 613 exemptions
- 81 preliminary permits (29 conventional, 47 pumped storage, 4 tidal hydrokinetic, and 1 inland current hydrokinetic)

Upcoming Relicense Applications





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Administration and Compliance (DHAC)

- Ensures compliance with license/exemption order
- Investigates non-compliance allegations
- Tracks license requirements
- Approves plans and reports
- Processes amendments to licenses
- Processes surrenders applications
- Makes jurisdictional determinations

DHAC Branches

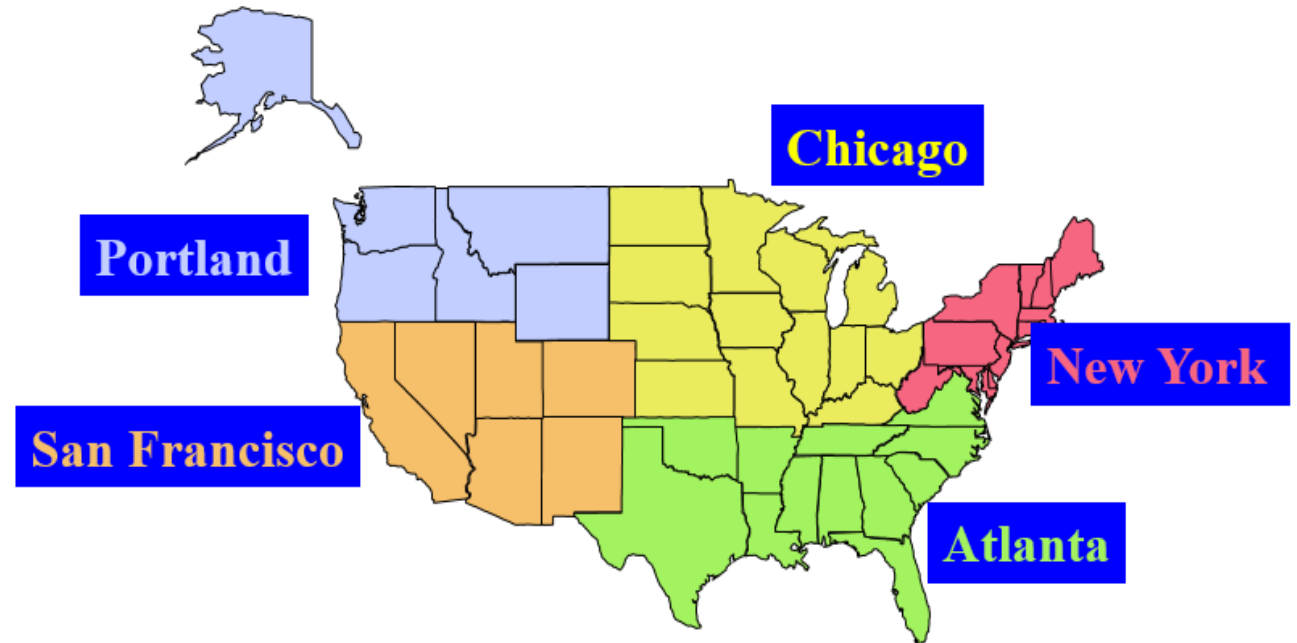
Director: CarLisa Linton
Deputy: Hillary Berlin

Lands Resources	Engineering Resources	Environmental and Project Review	Aquatic Resources
Bob Fletcher	Kelly Houff	Jot Splenda	Andrea Claros
<ul style="list-style-type: none"> • Historical/cultural • Non-project use • Recreation • Shoreline mgmt. • Encroachments • Property rights • Article 5 • Wildlife 	<ul style="list-style-type: none"> • Capacity amend. • Ramping rates • Exhibits A, F, G • Conduit exemptions • Erosion • Flooding • Project operations • Annual charges • Mining/federal land 	<ul style="list-style-type: none"> • Jurisdiction • Navigation studies • EA/EIS • Part 12 support • Noxious weeds • Invasive species • Surrenders • Non-operating projects • Historical/cultural 	<ul style="list-style-type: none"> • Aquatic habitat • Dredging/ sedimentation • Fish passage • Water withdrawal • Wetlands • Water quality • Barrier nets • Dissolved oxygen • Water temperature

Dam Safety & Inspections (D2SI)

Mission Summary:

Inspect and analyze FERC dams to keep the public, its property, and the environment safe.



Headquarters: Washington, DC

Dam Safety & Inspections

Responsibilities:

- Implement dam and public safety programs
- Ensure protection of life, property, and the environment
- Develop policies, programs, and guidelines for assessing dam safety
- Assess physical and cyber security measures at hydroelectric facilities



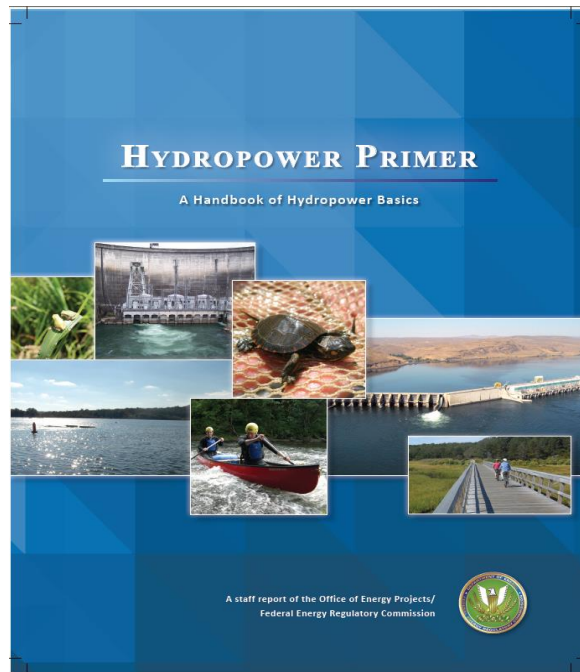
Web Resources

www.FERC.gov

Hydropower Page

(<https://www.ferc.gov/industries-data/hydropower>)

Overview of licensing, compliance, and dam safety programs.



Office of Public Participation (OPP)

Overview

- How to Participate
- Contact FERC
- Intervene
- File a Comment
- Request a Rehearing
- Frequently Asked Questions (FAQs)

About OPP

Pursuant to [Section 319](#) of the Federal Power Act, as amended on November 15, 2021, in [Public Act 117-58](#) the Infrastructure Investment and Jobs Act the Commission has established the Office of Public Participation (OPP) to assist the public with Commission proceedings. The Commission has produced a [public report](#) to guide the development of the office based on [stakeholder feedback](#) during listening sessions, a full-day workshop, and a written comment period.

The public can contact OPP now for assistance navigating Commission proceedings of all types. Examples include questions on when and how to intervene, comment, file motions, or seek rehearing. OPP will not assist in the actual drafting of pleadings and other submissions.

OPP is beginning operations with limited staff, so we appreciate the public's understanding and patience if OPP cannot immediately respond. Ongoing and additional support will be further determined and established by the incoming OPP Director.

Office of Public Participation
(<https://www.ferc.gov/OPP>)

FERC's Electronic Systems

- eLibrary
- eRegister
- eFiling
- eSubscription
- eService
- eComment

The screenshot displays the FERC Online website interface. On the left is a navigation menu with items: Overview, Filing Fees, Filing Forms, Notice Formats, How To Guides, Company Registration, Frequently Asked Questions (FAQs), and Comment Policy. The main content area features the title 'FERC Online' with social media icons for Twitter, Facebook, LinkedIn, and Print. Below this are sections for 'Login' (with a note to login or create an account) and 'eComment' (with a list of eligible proceedings: Hydroelectric License/Re-license Proceedings, Pre-filing Activity for Planned Natural Gas Projects, Applications for Authorization to Construct a Natural Gas Pipeline, Liquefied Natural Gas (LNG) or Other Facility, Pre-filing Activity for Permits to Site Interstate Electric Transmission Lines, and Applications for a Permit to Site Interstate Electric Transmission Lines). It also includes a 'TIP' about email blocking and another 'TIP' about a 35-minute inactivity timeout. A 'Note for eComment' specifies that eRegistering is not required. The 'eFiling' section states that a full eRegistration account is required. A 'Quick Links' sidebar on the right lists various guides and reports, including 'Labelling Guidance for Documents filed with Commission', 'Order No. 769 (Privileged Materials and Answers to Motions)', 'Filing Guide and Qualified Documents List', 'Quick Reference Guide to FERC Filing Procedures', 'eRegister User Guide', 'eService User Guide', 'eFiling User Guide', 'FY 2010 e-Government Act Report', 'Your Guide to Electronic Information at FERC', 'Hydropower Filing Guide', 'FAQs: Forms', 'Requirements Relating to Filings & Comments', 'Document-less Intervention Guide', 'Address List for Staff Copies of Certain eFiled Documents', and 'Search New Dockets (to determine a new docket/project no. or sub-docket)'.

All services are free and available via any internet connection
(no installation required)

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Federal Hydropower

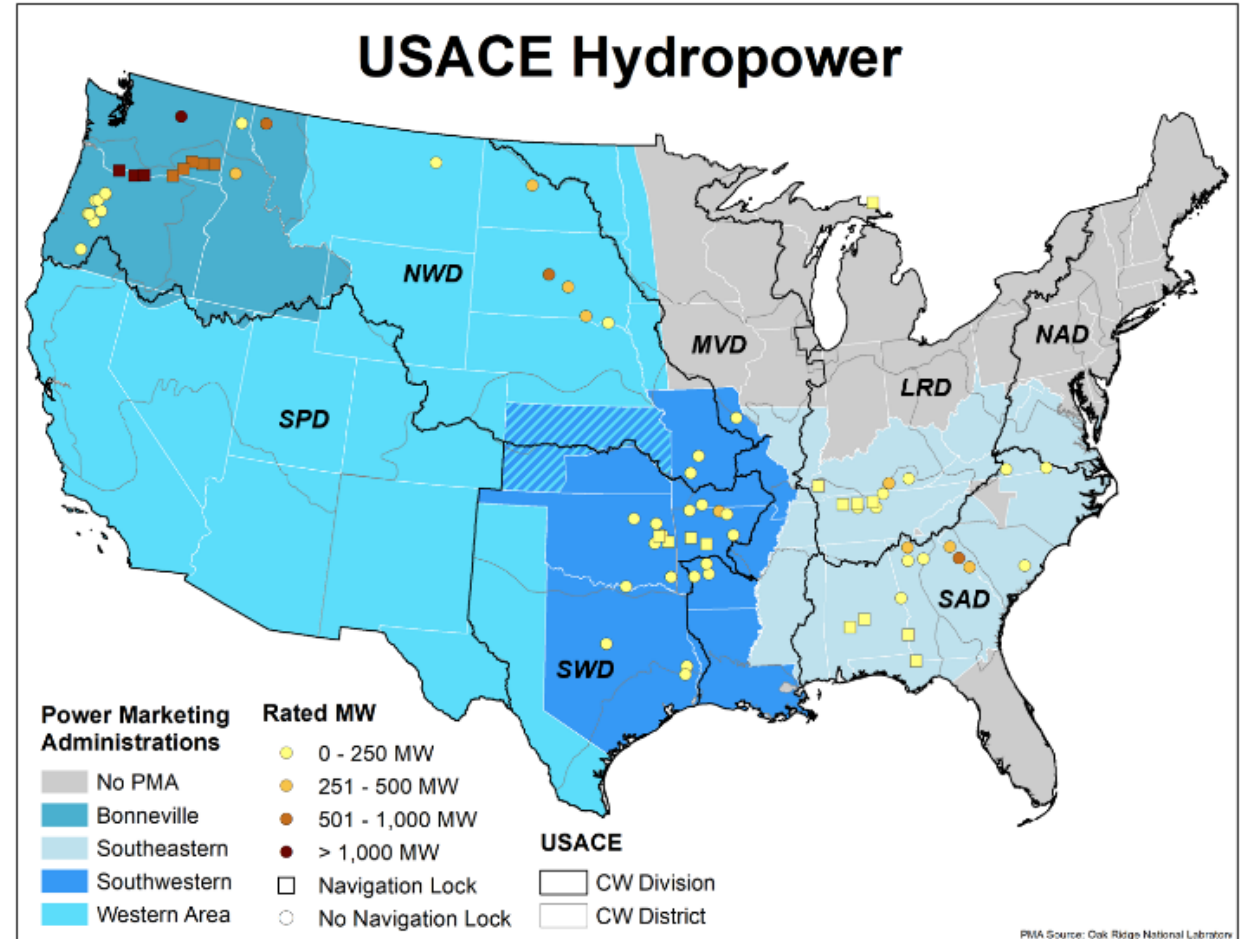




U.S. Army Corps of Engineers Department of Defense

- Own 75 power plants nation-wide
- Approximately 21 GW of capacity
- Produces approximately 74 TWh annually
- Avoids about 50 million tons of CO₂ emissions
- Large, multipurpose storage reservoirs across the U.S.

U.S. Army Corps of Engineers Hydropower



Bureau of Reclamation, Department of the Interior

- Own 78 plants
- Operate 53 of the 78 plants
- Over 14.7 GW of capacity
- Second largest producer of hydroelectric power in the United States
- Largest wholesaler of water in the United States



Grand Coulee Dam

Tennessee Valley Authority

- Own 30 hydropower plants
- About 5.5 GW of hydro capacity
- Multi-purpose storage and run-of-river projects in the Tennessee River Basin



**Raccoon Mountain
Pumped Storage Project**



Watts Bar Project

Questions?

Ryan Hansen

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Federal Energy Regulatory Commission

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www.FERC.gov