

#### Lee Vining Hydroelectric Project FERC No. 1388 Note that this

Note that this meeting will be recorded

#### Welcome!

#### The meeting will begin at 9:05

Using the chat, please write your name, organization, and your favorite holiday side dish

#### Joint Agency & Public Meeting

November 16, 202

#### Welcome and Land Acknowledgment

SCE would like to take a moment and recognize that the Lee Vining Project is located on the Mono Lake Kutzadikaa Tribes' traditional lands which they have stewarded for generations.

#### Safety Moment S C - Positivity Nutrition Stay Safe liness Virtual Mind, Balance T Stay Connected useat $\mathcal{P}$ Prioritize

#### Welcome and Introductions: Lee Vining Relicensing Team

#### **SCE Team**

Matthew Woodhall Project Manager

Martin Ostendorf Senior Manager

Audry Williams Cultural Resources Manager

**Seth Carr** Operations Manager

**Lyle Laven** Production Manager **Finlay Anderson** Project Manager

**Consultant Team** 

Shannon Luoma Deputy PM

**Kelly Larimer** Project Director

**Carissa Shoemaker** TWG Coordinator

> Heather Neff Aquatics Lead

Allison Rudalevige and Steve Norton Terrestrial and Botanical Leads

Shelly Davis-King Tribal Lead

> **Lynn Compas** Cultural Lead

Matt Harper Recreation and Land Use Lead

### JAM Agenda

- Safety moment
- Welcome and Introductions
- Meeting objectives
- SCE and FERC relicensing process overviews
- Project overview
- Overview of existing information
  - Preliminary Application Document (PAD) summary of findings
- Proposed study plans
- Schedule, next steps, action items
- Final questions

### **Meeting Objectives**

- Provide a Project overview
- Discuss FERC relicensing process – Traditional Licensing Process (TLP)
- Provide overview of existing information
  Preliminary Application Document (PAD)
- Discuss potential environmental effects
- Discuss proposed studies to fill information gaps

## Meeting Tips and Guidelines

- Note that this meeting is being recorded
- Please wait to be called on and then unmute your line
  - Introduce yourself (name and affiliation) prior to speaking
- Listen and respect each other
- Stay on topic



 Ask a question by typing it into the chat box during the presentation or by using the raise your hand feature



#### Relicensing Materials Available on Website

#### Website: www.sce.com/leevining

- Preliminary Application Document, filed August 12, 2021
  - Including Draft Study Plans
- Site Visit materials
  - Project overview maps
  - Site Visit Booklet
  - Agenda
  - Site Visit Photos
- Process Plan and Schedule
- USFWS IPaC Report (April 2020)
- Project Flyover Video
- FERC Environmental Assessment
- Current FERC License (1997)
- Select Orders Amending the 1997 License
- Technical Working Group (TWG) materials
  - Meeting Agenda
  - Meeting Summaries
  - PowerPoint Presentations
  - TWG Charter Document
- October 2020 Public Meeting materials

# SCE RELICENSING PROCESS

#### **SCE Welcome**

#### SCE's Vision

To achieve excellence in Safety, Operations, and Innovation, delivering reliable, valuable and clean generation solutions for our customers and communities

Why is relicensing important? Why are we here? What role does the Federal Energy Regulatory Commission play?

## SCE's Relicensing Objectives

- Obtain project authorization for an additional license term of 30-50 years (18 CFR Part 5)
- Define and describe current operations, no anticipated changes in facilities or operations
- Protect generation assets while providing resource protection/enhancement
- Evaluate effects from ongoing Project operations and maintenance

- Seek collaborative solutions that achieve a sustainable balance for beneficial uses
- Provide safe, reliable, affordable, and clean energy to its customers and community



# FERC RELICENSING PROCESS

#### Federal Energy Regulatory Commission (FERC)

#### WHAT IS FERC?

A federal, independent agency (formally the Federal Power Commission) WHAT DOES FERC REGULATE? Electrical transmission, hydroelectric dam licensing and safety, natural gas and oil pipelines

#### HOW DOES FERC IMPACT YOU?

FERC manages the participation of the public, agencies, NGOs, and other interested stakeholders.

#### WHEN DOES RELICENSING START?

The relicensing process officially starts 5 to 5.5 years before license expiration

http://www.ferc.gov/industries/hydropower/gen-info/licensing

### What is FERC Relicensing?



- Complex, multiyear
- Involves multiple participant with public involvement opportunities
- Develops an evidentiary record
- Provides FERC with decision-making information
- Determines license term and requirements

### **Basic Steps of Relicensing**

- Step 1: Describe Project and file Notice of Intent (NOI)
- Preliminary Application Document (PAD) summarizes existing Projectrelated information, potential future operations, and identifies potential resource issues
- Identify Key Questions
  - Stakeholders ask questions and request studies for information that doesn't already exist <u>(Criteria for</u> <u>determining appropriate studies).</u>



### FERC Relicensing Process Approach

#### Step 2: Answer Questions and Develop License Application

- Conduct studies for 1-2 years to fill in data gaps
- Identify Protection, Mitigation, and Enhancement (PME) measures for the new license in coordination with stakeholders.
- Submit <u>license application</u> to FERC



#### Step 3: FERC Conducts a NEPA review and issues license with term and conditions

- Solicits comments from stakeholders
- Receives terms and conditions from agencies
- Issues License

### **Study Questions**

- Related information necessary to bring Project into compliance with current environmental regulations, standards
- Informed by need to evaluate projects consistent with comprehensive management plans Federal or state comprehensive plans
- Evaluate <u>changes</u> in Project facilities/operations against baseline, where baseline is the current condition

#### FERC has criteria for study identification

- 1. Goals and Objectives
- 2. Relevant Resource Management Goals and Public Interest considerations
- 3. Existing Information
- 4. Project Nexus
- 5. Proposed Methodology
- 6. Level of effort and Cost



#### A GUIDE TO UNDERSTANDING AND APPLYING THE INTEGRATED LICENSING PROCESS STUDY CRITERIA

Federal Energy Regulatory Commission Office of Energy Projects

March 2012

#### Traditional Licensing Process Stage 1 Schedule

Action	Date	Timeline
Filed Notice of Intent (NOI) and Preliminary Application Document (PAD)	8/12/2021	
FERC Approved Traditional Licensing Process (TLP)	10/8/2021	
Joint Agency Meeting (JAM)	11/16/2021	
Comments due to FERC on PAD and Study Plans	1/17/2022	within 60 days of JAM
SCE provide Study Plans to stakeholders and TWGs	2/14/2022	30 days after comments are due
Comments due to SCE on Study Plans	3/16/2022	<i>30 days after receiving study plans</i>
Study Plan Meetings with TWGs	March/April 2022	
Final Study Plans to TWGs	4/15/2022	

# Questions?

# LEE VINING HYDROELECTRIC PROJECT OVERVIEW



#### Energy for What's Ahead<sup>™</sup>

## Lee Vining Hydroelectric Project

- Federal Energy Regulatory Commission (FERC) License
  - FERC Project No. 1388
  - Issued February 1997
  - 30 year license term
  - Expires January 31, 2027
- Key Outcomes from Previous Relicensing



- Established minimum release flows with Project operations (i.e., generation) while protecting aquatic resources
- Conducted focused studies/evaluation on key resource topics
- Established resource protection measures

## Lee Vining Hydroelectric Project

- Located in the eastern slope of the Sierra Nevada primarily on Inyo National Forest lands about 9 miles upstream of Lee Vining, CA
- Situated on Lee Vining Creek, in Mono County
- The Project maintains 3 reservoirs and 4 dams:
  - Saddlebag Dam and Lake
  - Tioga Dam, Auxiliary Dam, and Lake
  - Rhinedollar Dam and Ellery Lake



Aerial Overview of Lee Vining Project Area

## **Project Facilities**

- Saddlebag Dam and Lake
  - Headwaters of Lee Vining Creek
  - 297-acre reservoir
- Tioga Dams and Lake
  - Headwaters of Glacier Canyon
  - 2 dams: Main and Auxiliary
  - 73-acre reservoir
- Rhinedollar Dam and Ellery Lake
  - Tioga and Saddlebag drain into here
  - 61-acre reservoir
- Poole powerhouse
  - 11.25 megawatts
- Flowline and penstock connect in Ellery Lake and Poole Powerhouse



#### Water Management

#### Water Management

- Minimum flows below each reservoir depend on type of hydrologic year (wet, dry, normal)
- Historic contract (sales agreement) dictates annual storage and release – SCE has no control over what happens to the water once it leaves the Project
- Water rights below the Project on Lee Vining Creek belong to LADWP and managed through a settlement agreement to allocate water between the Los Angeles Aqueduct System (beginning at LADWP diversion ~5 mi downstream of Poole Powerhouse)



### **Project Operations**

#### **Operations, Instream Flows**

- SCE provides minimum flow releases consistent with current FERC license
- Below Saddlebag Dam
  - Flows for Lee Vining Creek below Saddlebag Dam are determined biannually in consultation with the USFS
  - Typical:
  - 14 cubic feet per second (cfs) for wet years
  - 9 cfs for average years
  - 6 cfs for dry years
- Below Tioga Dam
  - From December to April: equal to the natural inflow
  - October and November: 2 cfs or natural inflow
  - May to September: depends on water year and inflow
  - License provides for spring-time cutting of "Ice dams" to prevent downstream property damage
- Below Poole Powerhouse Dam
  - August May: 27 cfs or the natural flow, whichever is less
  - June and July: 89 cfs or natural flow, whichever is less

### Project Operations (continued)

- Poole Powerhouse is used to respond to California Public Utility Commission (CPUC) and CAL ISO demands for power:
  - Demands can be market driven (i.e., energy and renewable load)
  - Can also be response to need for grid and electrical stability to Mono Basin when the source transmission line is de-energized (38 times in 2021 to date)
- When this happens, additional flows are released into Lee Vining Creek to respond to generation requirements

### Project Operations (continued)

- Data is not available to easily describe the frequency and magnitude of these
  - They generally last less than 8 hours.
  - Using available data from the downstream LADWP diversion, SCE has estimated that these events are influenced by time of year with higher frequency of events occurring in the winter and spring.
- SCE is proposing to continue Hydro-Resource Optimization in the new license term, and will be characterizing the frequency, magnitude, and duration of these events for the new license along with reviewing potential Project effects.

# Questions?

## **10-minute Break**

Overview of Existing Information (PAD findings), Potential Environmental Effects, and Study Plans

#### Resource Sections (PAD section 5.1-5.13)

Geology and Soils, Water, & Fish and Aquatics

Botanical, Upland Wildlife and Habitat, Floodplains and Wetlands, & Rare, Threatened, and Endangered (RTE) Species Recreation, Land Use, & Aesthetics

#### **Cultural & Tribal**

#### PAD Section 6 Overview

Section 6 of the PAD includes:

- A table that describes potential issues and how they may be addressed
- -A list of all proposed studies
- A table that describes potential issues that SCE doesn't think warrant a study, rationale as to why, and how some of these questions could be addressed
- -References to Appendix that has the draft studies

### Geology and Soils Summary

- Saddlebag Lake: within a glacially carved Ushaped valley, 1,200-foot ridges bound the lake on the east and west sides, and talus
- Tioga Lake: in a valley on glacial till with a scattering of rounded rock outcrops.
- Ellery Lake: rocky shoreline with several areas of talus slopes entering the lake from the steep terrain along southern margin.



- Soils: generally thin, limited by harsh environment and recent glaciation; generally coarse-textured, well-drained, and low in organic matter
- Landslides or other mass movements not mapped in Project vicinity; potential for mass wasting, but information limited
- Erosion Control Plan in place for ground-disturbing activities

### Water Quality

- Regional water board water quality standards for Project reservoirs and Lee Vining Creek, none for Glacier Creek
- Water quality is generally excellent, but information is limited
- Major nutrient concentrations typically very low
- Ammonium and orthophosphate occasionally elevated in and below dams in spring and fall, in conjunction with reduced DO in reservoirs
- Water quality downstream of Poole PH recorded by SWAMP surveys also good: high DO, low turbidity, low mineral concentrations
- Water temperatures low; DO high in fish surveys
- Fecal coliform bacteria concentrations measured below Poole PH were low, elevated upstream of LADWP diversion
- Dreissenid mussels not expected to invade due to low calcium concentrations and circumneutral pH



Tioga Lake
# Fish and Aquatics Summary

#### **Fish Overview**

- Project area dominated by non-native populations of brown, brook, and rainbow trout
  - Brown trout introduced in basin in 1919, planted regularly until 1942
  - Brook trout introduced in 1931
  - Unmarked, catchable rainbow trout planted annually beginning in 1942; currently planted annually in all three project reservoirs
- CDFW records available from 2015 2016 indicate ~47k lbs of trout stocked in Project waters



Rainbow trout

### Fish and Aquatics Summary (continued)



Lee Vining Creek below Saddlebag Dam

#### **Fish Population Monitoring**

- Multiple years of surveys conducted between Saddlebag Dam and Ellery Lake:
  - 1984, 1986, 1999, 2000, 2001, 2006, 2011, and 2016
  - No native species documented
  - Biomass highest below Saddlebag Dam (8.3 g/m<sup>2</sup>) and upstream of Ellery Lake (7.2 g/m<sup>2</sup>)
  - 2016 data indicate typical lengthfrequency and age-class distributions for brown and brook trout
  - Fish in good condition
- Trout biomass downstream of Poole Powerhouse (6.7 g/m<sup>2</sup>) documented in the 1980s
- Surveys not known to have occurred in Lee Vining Creek between Ellery Lake and Poole Powerhouse, Glacier Creek below Tioga Dam, or in Project Reservoirs.

#### Fish and Aquatics Summary (continued) Aquatic Habitat Monitoring



Lee Vining Creek Below Poole Powerhouse

- Instream flow study (1992) found trout habitat is maximized:
  - Saddlebag Dam to Slate Ck.: 15-25 cfs
  - Slate Ck. to Ellery Lake: 20-40 cfs
  - Below Poole PH: 30-40 cfs
- Aquatic habitat monitoring conducted between Saddlebag Dam and Slate Creek
  - Surveyed in 1999, 2000, 2001, 2006, 2011, and 2016
  - Recorded abundant spawning gravels, loosely compacted sediments in low gradient areas, occasional LWD
- Habitat mapping between Saddlebag Dam and Ellery Lake, conducted 1984 – 86, to be included in FLA
  - Begins as moderate-gradient riffle, transitions to low-gradient braided channel, then broad riffle/run
- Monitoring not known in Lee Vining Creek downstream of Rhinedollar Dam or in Glacier Creek below Tioga Dam.

### Fish and Aquatics Summary (continued)

#### **Benthic Macroinvertebrates**

- Data available in Lee Vining Creek
  - —Below Saddlebag and Ellery lakes
  - -Leakage zone below Saddlebag Dam
  - —Downstream of Poole PH
- Data available in Glacier Creek below Tioga Dam
- California Stream Condition Index (CSCI) Data
  - -Below Poole PH in two locations
  - Downstream of Warren Fork confluence (CSCI = 1.17); Moraine Camp (CSCI = 1.09)
- BMI communities downstream of Project reservoirs similar to nearby natural lakes
- Didymo reportedly observed in Lee Vining Creek downstream of Saddlebag Dam



**Glacier Creek** 

#### Geology, Soils, Water, Fish, and Aquatics – Potential Effects

- Potential to alter water quality in reservoirs and Project streams
- Potential to affect condition of recreational fisheries within Project reservoirs and streams
- Potential to affect quantity and quality of aquatic habitat for fish populations within Project streams
- Colonization of stream reaches by invasive aquatic species including Didymo have the potential to modify aquatic habitat
- Potential to affect fluvial processes and channel morphology downstream of Poole Powerhouse to the LADWP Diversion
- Potential to affect stream hydrology and resource conditions downstream of Poole Powerhouse

#### Geology, Soils, Water, Fish, and Aquatics -Proposed Studies

Aquatic TWG met four times and the following studies were developed to address the potential Project effects:

- Stream and Reservoir Water Quality
- Reservoir Fish Populations
- Stream Fish Populations
- Aquatic Habitat Mapping and Sediment Characterization
- Aquatic Invasive Plants
- Lower Lee Vining Creek Channel Morphology
- Operations Model

# Questions?

# **Terrestrial and Botanical Resources**



Belding's Ground Squirrel at Saddlebag Lake, 2018

#### **Existing Data**

- State and Federal Database Reviews
- SCE Biological Surveys and Riparian Monitoring Reports
- License Compliance
   Documents
- USFS Data and Publications
- Scientific Literature

## **Terrestrial and Botanical Resources**



Yosemite Toad at Saddlebag Lake, 2020

#### **Existing Environment**

- 14 Vegetation Types Remotely Mapped within Project Area
  - Ranging from wet meadows to scrub to forested areas with riparian and coniferdominated communities.
  - Provide a wide range of habitats for wildlife.
- Special Status Species Present
  - Yosemite toad
  - Whitebark pine
- Critical Habitat
  - Yosemite toad
  - Sierra Nevada yellow-legged frog
  - Sierra Nevada bighorn sheep





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### Critical Habitat

FERC Project Boundary (P-1388)
 Sierra Nevada Bighorn Critical Habitat
 Sierra Nevada Yellow-legged Frog Critical Habitat
 Yosemite Toad Critical Habitat

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#### Terrestrial, Botanical, Wetlands, and RTE Species – Potential Effects

- Project operation and maintenance activities could result in direct and/or indirect effects on sensitive natural communities (including riparian areas), listed plant or wildlife species, or other special status plant or wildlife species.
- Project operation and maintenance activities could result in the spread of introduction of invasive plants.

#### Terrestrial, Botanical, Wetlands, and RTE Species - Proposed Studies

- Botanical Surveys at Project Facilities
  - RTE species surveys
  - Non-listed special status plant species
  - Invasive species surveys
  - Ground-truth existing USFS vegetation map
- Wildlife
  - General wildlife surveys
  - Yosemite toad surveys
  - Willow flycatcher habitat assessment

# Questions?

# Recreational Resources Existing Environment

- No recreation sites or management plan included in current license.
- Indirect improvements in current license
  - Minimum instream flows (USFS 4e Condition No. 4; Articles 404 and 405)
  - Stable lake levels (USFS 4e Condition No. 6)
  - Annual funding for CDFW's fish stocking program at Ellery (Article 406)

Location	Recreation Site/Use	
Project Reservoirs (Saddlebag, Ellery, Tioga)	<ul> <li>Saddlebag Lake DUA, Campground, Trailhead</li> <li>Tioga Lake Overlook Info Site, Tioga Lake Campground, Glacier Canyon Trailhead</li> <li>Ellery Lake Campground</li> <li>Informal use around reservoirs (camping, pull-outs, user trails)</li> </ul>	
Facilities/Use along Lee Vining and Glacier Creeks; Saddlebag Lake and Poole Powerhouse Roads; and Highway 120	<ul> <li>Sawmill Walk-In Campground</li> <li>Carnegie Station Trailhead</li> <li>Junction Campground</li> <li>Bennettville Trailhead</li> <li>Gardisky Lake Trailhead</li> <li>Nunatak-Tioga Tarns Trailhead</li> <li>Nunatak Nature Trail</li> <li>Warren Fork Trailhead</li> </ul>	<ul> <li>Big Bend Campground</li> <li>Aspen Grove Campground</li> <li>Boulder Campground</li> <li>Moraine Campground</li> <li>Lower Lee Vining Campground</li> <li>Cattleguard Campground</li> <li>Informal use around creeks and other USFS facilities</li> </ul>



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### **Recreation – Potential Effects**

- Existing Project facilities and operations have the potential to promote incremental recreation use.
- Inyo National Forest owns and operates all recreation facilities in the upper Lee Vining Canyon
- Nexus to Project facilities will be assessed as part of proposed studies.



## **Recreation Proposed Studies**

- Recreation Use and Needs Assessment
- Recreation Facilities Condition Assessment



### Land Management and Use



#### Existing Environment

- Project boundary is currently 615.5 acres, tightly encompassing Project features (dams, reservoirs, flowlines, creeks):
  - USFS Lands: 96%
  - SCE Lands: 4%

#### Land Use & Aesthetics – Potential Effects

- FERC Project Boundary must encompass all lands, roads, and trails necessary for Project purposes, including the O&M of the Project over the term of the FERC license.
- Examples of Project land uses include:
  - Roads/trails providing exclusive access to Project facilities
  - Staging areas



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#### Land Use & Aesthetics Resources: Potential Studies

- Project Boundary, Lands, and Roads
- Visual Quality Assessment



# Questions?

# **Cultural and Tribal Resources**

- Cultural Resource
  - A cultural resource can be a building, structure, object, site, or district, usually more than 50 years of age
- Tribal Resource
  - A Tribal resource may include cultural resources, economic interests, water interests, recreation interests, and may also include plants, animals, geological/geographic features, and more

## Cultural Resources

- Proposed Area of Potential Effects (APE) is the FERC Boundary
- Study Area is a 0.5mile buffer around APE



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Cultural Resources

#### **Existing Environment**

- Data Sources California Historical Resources Information Center, USFS, Previous Studies, SCE Historical Documents
- 19 previous studies
- 25 previously recorded built environment resources

Triple Cottage National Register eligible

• 5 previously recorded archaeological resources

## Tribal Resources

- Proposed Area of Potential Effects (APE) is the FERC Boundary
- Study Area is a 5-mi buffer around APE



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#### **Existing Environment**

• Multiple Native American Groups have an interest in the Project Area

### Tribal Resources

- Northern Paiute, Owens Valley Paiute, Western Shoshone, Southern Miwok, Central Me-Wuk, Hungalelti Washo, Western Mono
- Mono Lake Kutzadikaa Tribe are the principal tribal group
- Data Sources-accessible libraries, online resources, Native American Heritage Commission.
- No federal trust tribal lands in Project

#### **Tribal Resources**

#### **Existing Environment**

- Important Trans-Sierran Corridor, connecting multiple tribal groups
- Numerous trails identified in proposed Study Area
- Gathering locale especially important from May-October
- Excellent 20<sup>th-</sup>century information on Native Americans due to interviews in the 1920s, detailed history in the 1960s, and proximity to Yosemite Valley and its 150-year documentation of Native peoples.

# **Cultural and Tribal Resources**

#### **Known Data Gaps**

- No recent archaeological survey of most of the Project area.
- No ethnographic study of the Project vicinity.
- No interviews to date with Tribal representatives.
- No study of how Project has affected tribal resources of interest.

# Cultural and Tribal – Potential Effects

- Project operation and maintenance activities could result in direct and/or indirect effects on:
  - NRHP eligible built-environment, archaeological resources, and tribal resources
  - Other Tribal resources (not historic properties)
- Recreational activities could result in direct and/or indirect effects on:
  - NRHP eligible resources or other tribal resources

# Cultural and Tribal - Proposed Studies

- Cultural Resources Study
  - Background Research
  - Pedestrian Survey
  - O Archaeological Site Recordation and Evaluations
     O Built Environment Recordation and Evaluations
- Tribal Resources study
  - Background Research
  - Field Investigation with Tribal representatives
  - o Interviews with Tribal representatives
  - Documentation and evaluation of Tribal resources

# Questions?

RELICENSING SCHEDULE OVERVIEW

# **Relicensing Process Schedule**

Date	Activity	
August 12, 2021	SCE Filed Notice of Intent/Pre-Application Document (NOI/PAD)	
September 2021	FERC initiates Tribal consultation	
October 8, 2021	FERC approved use of TLP	
November 16, 2021	Joint Agency Meeting to discuss PAD, Study Plans and Process	
January 17, 2022	Comments due to FERC on PAD and Study Plans	
February 14, 2022	SCE provide Updated Study Plans to stakeholders and TWGs	
March 16, 2022	Comments due to SCE on Study Plans	
March/April 2022	Study Plan Meetings with TWGs	
April 15, 2022	Final Study Plans to TWGs	
Spring/Summer 2022-2023	Conduct field studies	
January 2023	Interim Study Report meeting	
September 3, 2024	SCE Files Draft License Application	
January 31, 2025	SCE Files Final License Application	
## How to Stay Involved

- Check the Project website for updates/news at <u>www.sce.com/leevining</u>
- You can view other SCE relicensing Projects at <u>www.sce.com/regulatory/hydro-licensing</u>
- Sign-up to receive Project-related emails through the Contact Registration Form/Project Questionnaire on the Project website
- Sign up for FERC's for e-subscription (docket number "P-1388") at <u>www.ferc.gov</u>
- Email Carissa Shoemaker with questions <u>carissa.shoemaker@erm.com</u>

## Final Questions?

## Thank you!