DOCKETED	
Docket Number:	19-ERDD-01
Project Title:	Research Idea Exchange
TN #:	248201
Document Title:	Presentation - Staff Workshop Research to Inform the Hydropower Relicensing Process
Description:	Request for Comments on Forthcoming Solicitation
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Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	12/21/2022 12:16:37 PM
Docketed Date:	12/21/2022

California Energy Commission

Research to Inform the Hydropower Relicensing Process

Request for Comments on Forthcoming Solicitation

Energy-Related Environmental Research
Energy Research & Development Division

December 21, 2022

Housekeeping

- All participants muted on Zoom (until Q&A)
- Zoom recording
- Comments and questions
  - *Please use "Q&A" feature for substantive comments and questions (not chat).*
  - *Please reserve the "Chat" feature for technical issues, etc.*

- Event Page:

  https://www.energy.ca.gov/event/workshop/2022-12/staff-workshop-research-inform-hydropower-relicensing-process

Why We Are Seeking Your Input?

- Forthcoming Grant Funding Opportunity: up to $1.5M to fund research that will provide decision makers better information and tools to balance environmental protection without the unnecessary curtailment of hydropower generation during the Federal Energy Regulatory Commission (FERC) hydropower relicensing process.

- To ensure high-impact research, seeking input to inform solicitation development.

Workshop Agenda

1. Background on **EPIC funding program**
2. Initial ideas regarding scope and focus of **anticipated solicitation**
3. Seek **input from stakeholders** on specific discussion questions regarding proposed research.

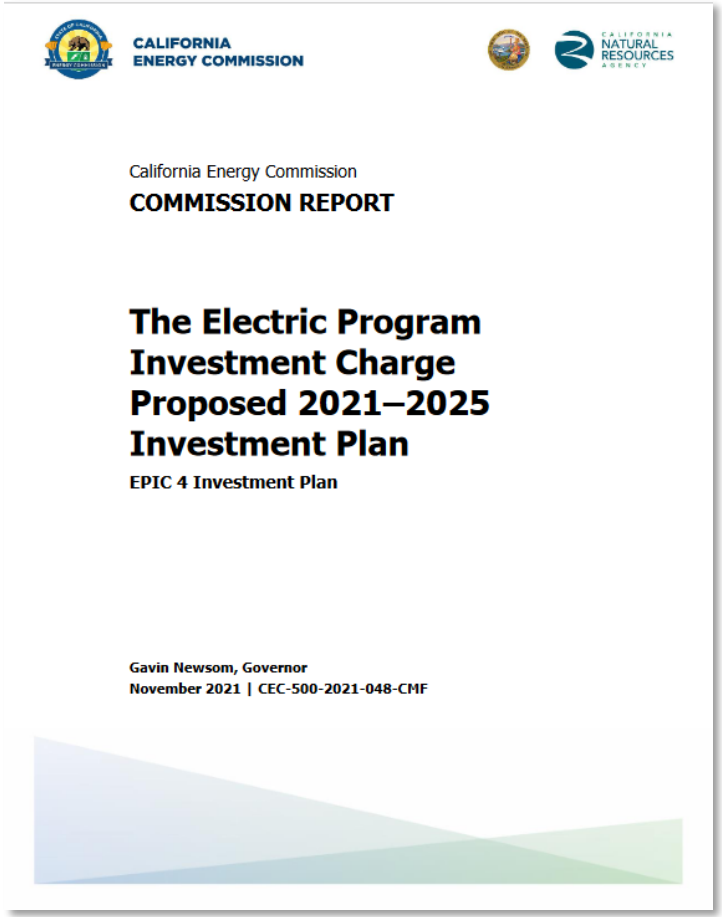
Input from today's workshop plus public comments (oral and/or written comments) will help shape the Grant Funding Opportunity.

EPIC Research and Development Program

Proposed research supports the CEC's *EPIC 4 Investment Plan:*

- Initiative 44. Integrating Climate Resilience in Electricity System Planning *(pp. 215-221)*
- Initiative 45. Advancing Environmental Sustainability of Energy Deployments *(pp. 221-225)*

To access report:
https://www.energy.ca.gov/publications/2021/electric-program-investment-charge-proposed-2021-2025-investment-plan-epic-4



Research Background

Hydropower is a critical element of the state's electricity system

- Provided 9% of the state's total electricity needs over the last 11 years
- Zero-carbon source of electricity, critical for achieving climate change goals
- Provides
  - Flexible generation source – peaking reserve, spinning reserve and load following capacity
  - Transmission support

Research Background

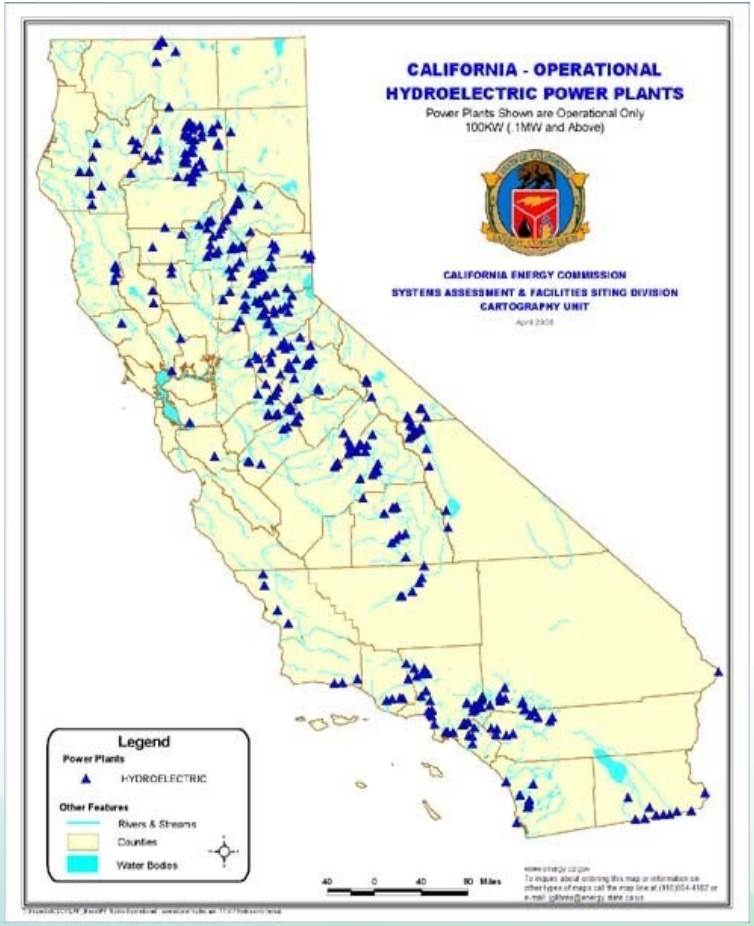
Hydropower is a substantial contributor to the decline of California's freshwater fish, amphibians and other species.

Research Background

- In California, all non-federal hydropower projects are subject to licensing by the Federal Energy Regulatory Commission (FERC).

- Relicensing process is complex:
  - Many parties involved
  - Often taking 5 years or more

- These licenses are for either 30 or 50 years.



Research Motivation

- Over 50 permitted facilities, representing 2,471 MW in aggregate, will begin the relicensing between now and 2036
- FERC requires best available science to be used in environmental assessments
- Need improved science to ensure adaptive, proactive management of hydropower

Research Focus

Inform the FERC relicensing process, providing best available science for environmental assessments of**:**

- Innovative approaches to instream flow determinations, including demonstration projects
- Ways to manage sedimentation
- Thermal tolerance of native fish and amphibian species
- The role water thermal refugia play, and how they respond with different instream flows levels
- Improved water year predictions

Discussion Questions

1. What would improve the scope and/or focus of the effort, given the total of $1.5 million available?
2. Is a funding level of $250,000 and $500,000 per research effort appropriate?
3. How can the effort outlined best complement, build on or leverage other relevant efforts (pilots, projects, data, research, etc.)?
4. How can the effort outlined best deliver high-impact, actionable results?
5. Are there other research gaps that are higher priority for reducing the environmental effects of hydropower operation through the FERC relicensing process in California than those identified here?
6. What other stakeholders would be important to include in ongoing efforts?

Thank You!

Please submit your written comments by 5:00 p.m. January 4th, 2023

- **Submit electronically** through the Energy Commission's "Research Idea Exchange" docket here: https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=19-ERDD-01

- **Or by email** to the Docket Unit at: docket@energy.ca.gov
  - Please include docket number 19-ERDD-01 and "Staff Workshop on Research to Inform Hydropower Relicensing Process" in the subject line

- Or by paper copy to the Docket Unit: California Energy Commission || Docket Unit, MS-4 || Re: Docket No. 19-ERDD-01 || 715 P Street || Sacramento, CA 95814

Visit: https://www.energy.ca.gov/event/workshop/2022-12/staff-workshop-research-inform-hydropower-relicensing-process to view the workshop notice, presentation, and recording (*forthcoming*).