



Welcome to the Scoping Meeting for the California Hydrogen Hub Environmental Impact Statement

We will begin the meeting shortly

January 28, 2025
4:30-7:30 pm

INTRODUCTION

MEETING FORMAT AND GROUND RULES

Note: The meeting is being recorded and will be included in the official Project Record.

Click “**More**” at the top of the screen and choose “**Language and speech**” from the dropdown menu if you would like to show live captions.

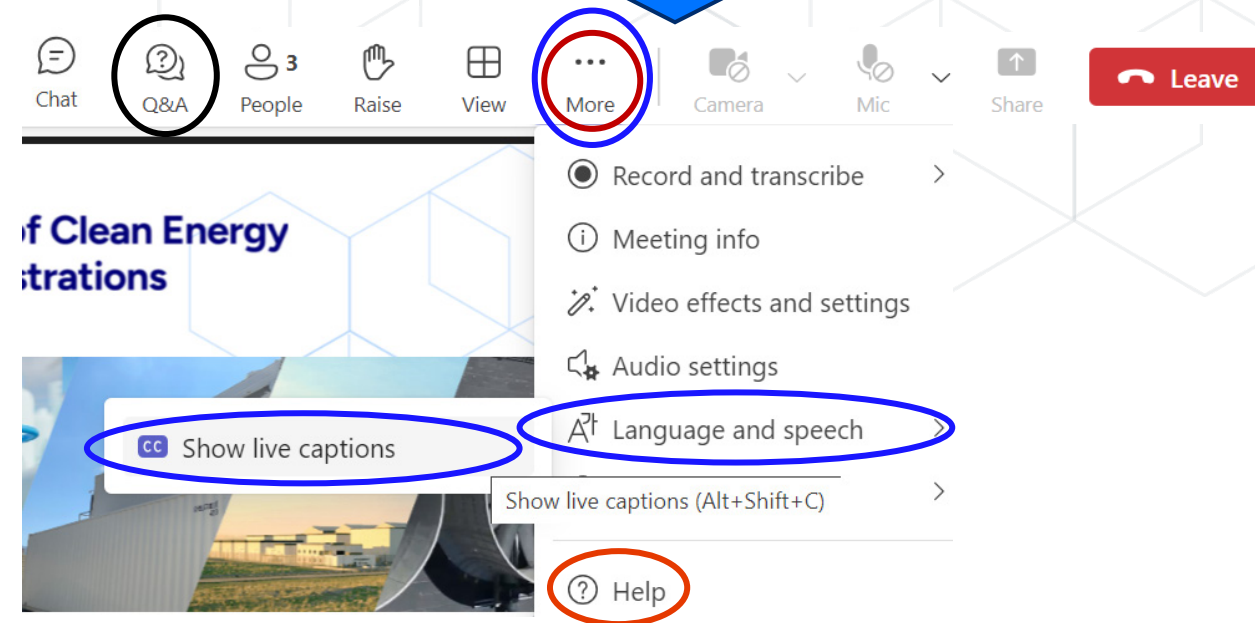
You may use the “Q&A” feature to send DOE a **written comment** at any time.

All virtual participants will remain muted during the **initial presentation**.

Participants will be invited to provide a **verbal comment** at the end of the presentation, at which point they will be asked to unmute.

DOE **will not be responding** to questions or comments during today’s meeting, but all comments will be documented.

Technical Support: If you are experiencing technical issues, please click “**More**” at the top of the screen and select “**Help**”.



INTRODUCTIONS

- Kristin Welch– DOE OCED – Project Manager
- SunTemple Helgren – DOE OCED – NEPA Specialist
- Carla Mykytiuk – Jacobs, Third-Party NEPA Contractor – NEPA Scoping Advisor

PRESENTATION OVERVIEW

1. Why are we here?
2. What is the Hydrogen Hubs (H2Hubs) Program?
3. What is the DOE Office of Clean Energy Demonstrations (OCED) proposing to fund?
4. What is the National Environmental Policy Act (NEPA) process?
5. What are the next steps? How can additional comments be provided?
6. What are your comments on the proposed Hub EIS?

WHY ARE WE HERE?

- Provide the public with information regarding:
 - ✓ Scope of the Proposed California Hydrogen Hub Environmental Impact Statement (EIS) and
 - ✓ Alternatives & resource areas DOE OCED anticipates evaluating in the EIS.
- Explain the NEPA process.
- Receive public input on the scope of the EIS, including:
 - ✓ Alternatives to be evaluated and
 - ✓ Potential environmental impacts to be analyzed.

WHAT IS THE HYDROGEN HUBS PROGRAM?

Through the Bipartisan Infrastructure Law (BIL), Congress established and funded the Regional Clean Hydrogen Hubs (H2Hubs) program to create regional networks of hydrogen producers, consumers, and local connective infrastructure to accelerate the use of hydrogen as a clean energy carrier.

DOE selected the California Hydrogen Hub based on the criteria listed in the Funding Opportunity Announcement (FOA-0002779): <https://www.energy.gov/oced/funding-notice-regional-clean-hydrogen-hubs>.

The Alliance for Renewable Clean Hydrogen Energy Systems (also referred to as ARCHES) is the direct recipient of the federal funds and facilitates the management of the California Hydrogen Hub.

WHAT WOULD THE HUB ACCOMPLISH?

- Invest in the production, processing, delivery, storage, and end-use of clean hydrogen from renewable energy sources.
- Contribute to the development of a national clean hydrogen network.
- Use clean hydrogen in electric power generation, industry, and transportation sectors.
- Create opportunities for skilled training and long-term employment.

WHAT IS THE PROPOSED CALIFORNIA HYDROGEN HUB?

The California Regional Hydrogen Hub as proposed:

- Would consist of a suite of demonstration projects involving clean hydrogen production, storage, transportation, and end uses
- Would be located within California
- Currently encompasses 35 proposed projects, including hydrogen production and facilities that could produce at least 450-500 metric tons per day of clean hydrogen and a range of end uses

DOE OCED'S PROPOSED ACTION

Provide funding to support the construction and operation of the California Hydrogen Hub, as proposed, which would include the production, storage, delivery, and end-use of clean hydrogen using a variety of technologies:

Production	Storage	Delivery	End Use
<ul style="list-style-type: none"> • Hydrogen from renewable energy sources • Electrolysis (the application of electrical energy to water to generate pure oxygen and hydrogen) • Hydrogen from biogenic sources (with possible carbon dioxide capture) 	<ul style="list-style-type: none"> • Above-ground tanks • Tube trailers 	<ul style="list-style-type: none"> • Pipelines • Refueling stations • Trucking • Hydrogen derivatives <ul style="list-style-type: none"> • Ammonia 	<ul style="list-style-type: none"> • Vehicles <ul style="list-style-type: none"> • Buses, medium- and heavy-duty trucks • Aviation, trains, other fuel-cell electric vehicles • A marine vessel • Cargo handling equipment • Power generation via turbines • Stationary fuel cells • Ammonia synthesis

THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS



NEPA is the national charter for protection of the environment



Requires the federal government to **evaluate** and **understand** potential environmental effects of a major federal action*



Results in **informed** decision making

*The funding of the Hydrogen Hub is a major federal action.

HUB-LEVEL ENVIRONMENTAL IMPACT STATEMENT

1. Hub-level EIS to decide whether to move forward with the California Hydrogen Hub
 - Evaluate non-site-specific effects from the types of hydrogen production, delivery, and end uses that are envisioned to occur within the hub region
 - Consistent with applicable regulations, DOE OCED may authorize interim actions
2. Site-specific NEPA analyses for individual projects (or groups of projects) within the Hub will be completed to inform DOE's decision whether to provide funding for those projects.
 - The hub-level EIS will inform the site-specific analyses
 - These NEPA documents will evaluate impacts at a site-specific level

We are here tonight to receive your input on the issues and potential impacts OCED should consider in the California Hydrogen Hub-level EIS.

ENVIRONMENTAL IMPACT STATEMENT (EIS)

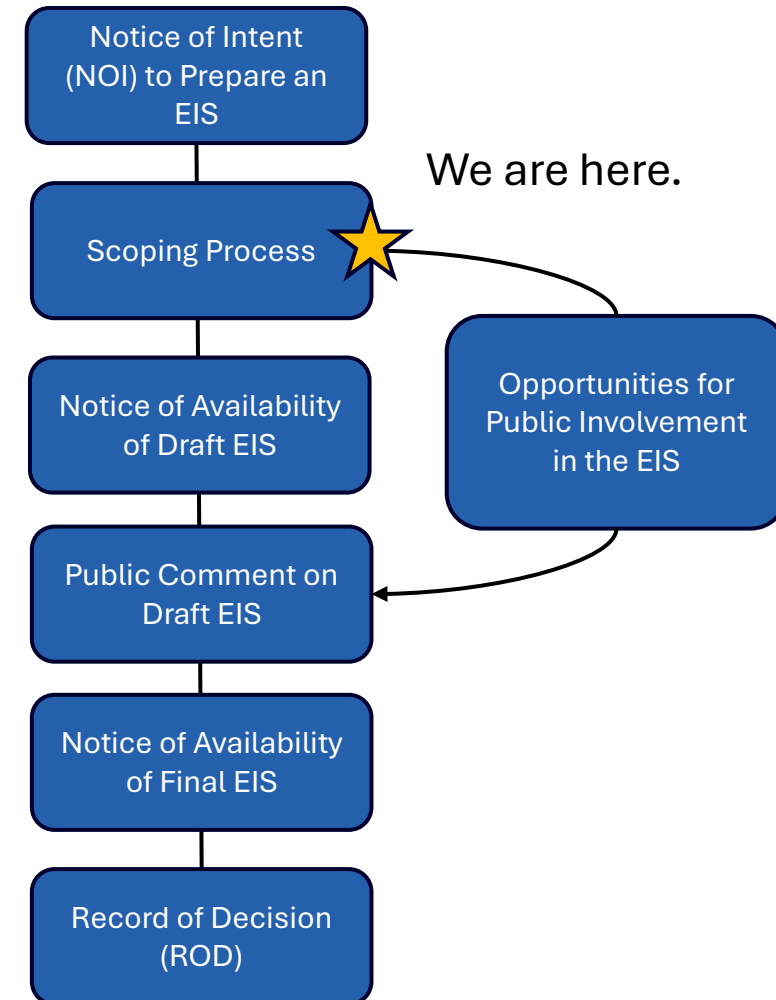
Informs DOE decision-makers and the public about the environmental effects of the proposed action and alternatives

Designed to obtain public input and provide multiple opportunities for comment

- Scoping meetings and public hearings
- Minimum 30-day comment period during scoping
- Minimum 45-day comment period on draft EIS

The EIS will evaluate the potential environmental effects associated with the proposed action of providing financial assistance in support of the California Hydrogen Hub.

DOE's selection of an alternative is announced in a Record of Decision (ROD).



PURPOSE OF THE EIS

The EIS will

- Evaluate the potential impacts associated with the types of hydrogen infrastructure and technologies proposed as part of the California Hydrogen Hub, such as impacts from electricity and water usage and rates of emissions, that are inherent to the technologies and infrastructure that are encompassed by the Hub.
- Inform DOE's decision as to whether to carry the California Hydrogen Hub forward for project-specific funding decisions.

The EIS will not

- Authorize funding for specific California Hydrogen Hub projects or analyze the potential site-specific environmental effects of individual proposed projects. Site-specific impacts analysis and project-specific funding would occur later in the process.

Consistent with applicable regulations DOE OCED may authorize some proposed Hub sub-projects as interim actions during the preparation of this EIS.

DRAFT EIS TIMELINE

75-day public scoping
period begins

We are here



75-day public scoping
period ends

December 18, 2024

January 28, 2025

March 3, 2025

Fall 2025

January 28: Virtual scoping meeting

Draft EIS issued for public review
and comment (anticipated)

FINAL EIS TIMELINE

Milestone	Anticipated Date
Public comment period for Draft EIS	Fall 2025
Issuance of Final EIS	Spring 2026
Issuance of Record of Decision	Late Spring 2026

PRELIMINARY RANGE OF ALTERNATIVES

The EIS will evaluate reasonable alternatives that are technically and economically feasible and meet the purpose and need for the proposed action.

Preliminarily, DOE has identified three alternatives that potentially address the purpose and need:

1. Proposed Action: DOE funding for the proposed California Hydrogen Hub
2. DOE funding for an expanded California Hydrogen Hub
3. DOE funding for a reduced California Hydrogen Hub

A No Action Alternative will also be evaluated, as required by NEPA.

HUB-LEVEL EIS EVALUATION

The Hub-level EIS will include analysis of potential impacts of the California Hydrogen Hub from:

Production	Storage	Delivery	End Use
<ul style="list-style-type: none"> • Hydrogen from Renewable Sources using Electrolysis (the application of electrical energy to water to generate pure oxygen and hydrogen) • Hydrogen from biogenic sources (with possible carbon dioxide capture) 	<ul style="list-style-type: none"> • Above-ground tanks • Tube trailers 	<ul style="list-style-type: none"> • Pipelines • Refueling stations • Trucking • Hydrogen derivatives • Ammonia 	<ul style="list-style-type: none"> • Vehicles • A marine vessel • Cargo handling equipment • Power generation • Stationary fuel cells • Ammonia synthesis

The analysis will address the non-site-specific effects of these technologies on potential resources including, but not limited to:

Land Use and Infrastructure

Atmospheric Conditions and Air Quality

Climate Change and Greenhouse Gasses

Hydrologic Conditions and Water Quality

Geology, Seismicity, and Soils

Socioeconomic Conditions

Environmental Justice

Energy Resources

Noise and Vibration

Transportation and Accidents

Intentional Destructive Acts

Human Health and Safety

RESOURCES

For more information, please refer to the following resources:

- DOE website: <https://www.energy.gov/oced/california-hydrogen-hub-arches>
- Project website: <https://archesh2.org/>
- DOE EIS website: <https://www.energy.gov/nepa/doeeis-0570-california-hydrogen-hub>
- Virtual Public Meeting Space: <https://ocedarcheseis.com>
(available in English and Spanish languages)
- Notice of Intent (Federal Register):
<https://www.federalregister.gov/documents/2024/12/18/2024-30020/notice-of-intent-to-prepare-an-environmental-impact-statement-for-the-california-hydrogen-hub-arches>
- The Citizen's Guide to NEPA: <https://ceq.doe.gov/docs/get-involved/citizens-guide-to-nepa-2021.pdf>

WE WANT TO HEAR FROM YOU!

- DOE invites input from federal agencies, tribal, state, and local governments, the public, and other stakeholders on the scope of the EIS.
- Specifically, DOE invites comment on:
 - identification of reasonable alternatives,
 - information and analyses relevant to the proposed action, and
 - environmental issues to be addressed.
- All scoping comments, verbal and written, will be part of the official project record and a summary of the scoping comments will be included in the draft EIS.
- All substantive comments (e.g., comments that inform the scope of the analysis, identify concerns, or provide new information) received during this scoping period will be considered in the development of the EIS.

HOW TO SUBMIT **WRITTEN** SCOPING COMMENTS

Provide comments **TODAY**:

- Verbal comments during the meeting
- Written comment via the Q&A button (top of your screen)

Submit written comments by **March 3, 2025**, to ensure consideration in the draft EIS:

- Online at www.regulations.gov; docket number: DOE-HQ-2024-0087 or
- Via U.S. Mail or Hand Delivery Service to:

DOE/EIS-0570

Jacobs

Attention: Rosa Esquivel

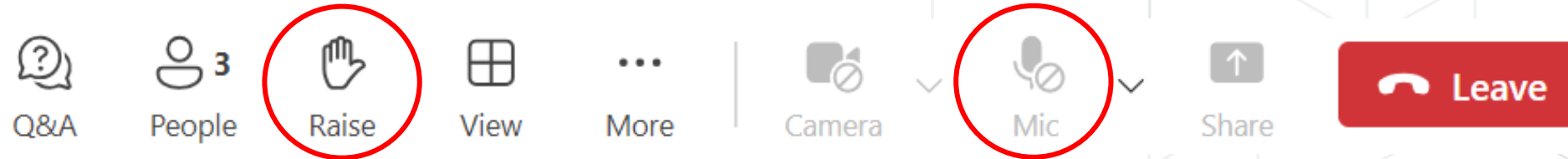
2600 Michelson Drive, Suite 500

Irvine, CA 92612–6506

COMMENTING ETIQUETTE

- This verbal public comment portion of the meeting is being recorded as part of the official record and your comments will be included in the Project Record.
- Be respectful to participants, presenters, and panelists
- Refrain from questions or comments that contain:
 - Vulgar or abusive language
 - Personal attacks of any kind
 - Offensive terms that target specific groups
- Please speak slowly and clearly
- Please be mindful of the length of your comment

VERBAL SCOPING COMMENTS: INSTRUCTIONS



- Verbal scoping comments will be accepted in order of registration.
- When it is your turn, the moderator will call out your name and display your name on the screen.
- Use the “raise hand” feature in Teams or, if you are calling in through the phone, press *5 to “raise your hand.”
- The moderator will then allow you to unmute yourself.
- Please spell out your full first and last name for the record before you provide your comment.



If you are calling in through the phone, press *5 to “raise” your hand.

When it is your turn, you'll hear an automated voice prompting you to unmute by pressing *6.



VERBAL SCOPING COMMENTS

If you are having issues with your computer microphone, please dial in to the meeting: Phone: 323-886-6924 US; Webinar ID: 722 613 670#

Commenter **#1**:

3:00

*If you are unable to offer or complete your verbal public comment during the meeting today, DOE encourages you to submit your comment in writing via the www.regulations.gov web portal:

Navigate to www.regulations.gov, search for Docket No. DOE-HQ-2024-0087, and follow the instructions for submitting comments.

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**We are here to accept your comments.
Please "raise your hand" to comment.**



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DOE/EIS-0570
Jacobs
Attention: Rosa Esquivel
2600 Michelson Drive, Suite 500
Irvine, CA 92612–6506

For additional information, view the Virtual Meeting Space (<https://ocedarcheseis.com>) and links in the virtual meeting Q&A.

THANK YOU!

For more information, please refer to the following resources:

- DOE website: <https://www.energy.gov/oced/california-hydrogen-hub-arches>
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