



Request for Information: Hydrogen-Dedicated Open-Access Pipelines

June 25, 2025

Pipelines are critical midstream technologies for cost-effective hydrogen distribution, whether small pipelines connecting neighboring projects, pipelines needed to supply large demand, pipelines enabling aggregation, or pipelines for long-range distribution. ARCHES is interested in hearing about visions for both novel and traditional hydrogen pipeline networks and technologies.

Section 1: RFI Overview

The Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) and its partners are uniquely positioned to capitalize on a range of federal, state, local, and private funding opportunities to accelerate the adoption of hydrogen in various industries. ARCHES is in the process of structuring an end-to-end hydrogen ecosystem and marketplace. Critical to the efficient distribution of hydrogen throughout the region is the use of open-access or common-carrier pipelines. Such pipelines are not only one of the most economical ways to move large amounts of hydrogen, but also an opportunity to provide demand aggregation across a number of different producers to central liquefaction or distribution locations. Opportunities to link to large-scale geologic storage possibilities both in and out of state will also be integrated into the ARCHES planning process.

The overall objective of the ARCHES pipeline deployment is to design and build out an integrated network of 100% hydrogen-capable pipelines, similar to that of the current natural-gas transmission system. ARCHES will analyze all potential pipeline opportunities from a comprehensive ecosystem point of view, ensuring safe operation with minimal leakage and monitoring and open access to the network. While there are obvious advantages to a hydrogen pipeline network, such an endeavor is not trivial due to various economic, geographic, regulatory, land use, and related constraints. ARCHES is seeking input related to hydrogen pipeline proposals, potential project concepts,

locations, possibilities, strategies, unique opportunities, and challenges. This effort stems from a foundational premise of enabling a robust, resilient, and long-lasting hydrogen ecosystem that will achieve market liftoff today and meet the demands for hydrogen tomorrow.

This RFI is divided into 4 main categories: hydrogen pipeline development, organization-specific pipeline concept or opportunity, the ARCHES pipeline strategy, and hydrogen pipeline operation.

RFI Timeline

RFI Released:	June 25, 2025
RFI Info Session:	July 7, 2025, from 1:30 to 2:30 pm PDT
Responses Due:	August 15, 2025 at 5:00 pm PST

Information Session

ARCHES will host an online informational session to provide more details on the RFI and answer RFI questions on July 7, 2025, from 1:30 to 2:30 pm PDT. Please [register here](#) for the information session.

RFI Contact

Please contact ARCHES at strategy@arches.org with any questions.

Section 2: Information Requested

ARCHES is especially interested in hearing feedback from pipeline developers and potential users. Respondents are invited to answer the following questions:

1. General Respondent Information

- What company/organization are you representing?
- What hydrogen ecosystem segment do you represent (upstream, midstream, downstream)?
- What is your company's experience with pipeline development?
- Where does your company currently operate (i.e., what jurisdictions), and are there opportunities to expand operations in other locations?

2. Pipeline Development

- What is the validated typical per-mile cost of a pipeline in CA, and how is it impacted by different regions in CA? What is your cost projection for hydrogen pipeline infrastructure?

- b. What capacity commitment (e.g., %) is needed to reach FID?
- c. What are the dominant local and environmental impacts to consider in pipeline placement, fabrication, and use?
- d. What are the highest priority standards and pipeline connectivity and purity concerns?
- e. Are you aware of opportunities to integrate or couple to any existing efforts for pipeline placement and development?

3. Your Organization Specific Hydrogen Pipeline Concept

- a. What is your technology and concept?
- b. What technology readiness level (TRL) is it? Has it been deployed and, if so, where?
- c. What is your timeframe for deployment?
- d. Are you proposing new, existing, or retrofit of pipelines and/or rights of way?
- e. Do you have legal rights of way already obtained? If so, what routes?
- f. How would you finance the project pipelines?
- g. What is your expected project pipeline lifetime?
- h. How do you ensure overall pipeline safety?
- i. What is your pathway towards 100% H₂ open-access pipelines if starting with any kind of blending?
- j. What are your concepts for improved hydrogen leak detection and pipeline health analysis?
- k. Have you already engaged with others (communities, hydrogen ecosystem partners, utilities, etc.) and what is the state of those discussions?

4. Help us inform the ARCHES Pipeline Strategy

- a. Should ARCHES focus on transmission pipelines that aggregate demand and/or supply versus pipelines for specific end uses?
- b. What should be the timeframe that ARCHES is considering for pipeline development and operation initiation?
- c. How much should ARCHES prioritize pipelines, knowing that this will incur different production designs and modalities including gaseous versus liquid, pressure, etc.
- d. What are the critical regions/segments to focus on?
- e. What should be the ARCHES pipeline standards (minimum diameter, operating pressure, etc.)?

- f. Is blending with natural gas a viable strategy, and up to what percentage, and what types of pipelines for what timeframe before pipelines reach 100% hydrogen carrying capability?
- g. ARCHES is considering aggregating pipeline segments from different companies to ensure complete pathways with existing rights of way. What concerns should ARCHES be aware of?
- h. ARCHES is envisioning having transmission pipelines that provide a dedicated supply to liquefaction facilities and then on to certain end uses such as refueling stations. Is this a viable strategy? Why or why not?
- i. How much should ARCHES consider regional (e.g., out-of-state) connections and interconnectivity?
- j. Should additional pipeline concepts, such as moving ammonia, methanol, formate, or other hydrogen carriers, be considered?

5. Pipeline Operation

- a. What actions could ARCHES, the State of California, or other entities take to help decrease the cost of building pipelines?
- b. What new regulatory frameworks are potentially needed for H2 pipelines?
- c. How should pipelines be financed?
- d. Who should be the ultimate owner(s) or operator(s) of the open-access pipelines?

6. Anything else the ARCHES team should be aware of or consider?

How to Submit a Response

Responses for this RFI must be submitted via the [Box link](#) by **August 15, 2025, at 5:00 pm (PDT)**. To be considered, responses must be received prior to the closing date and time. Questions about this RFI should be directed to strategy@arches.org.

Format

Responses must be provided as a Microsoft Word (.docx) or Adobe PDF (.pdf) and no more than 15 pages in length, 12-point font, 1-inch margins. The organization or respondent's name, full address, and the point of contact's email, phone number, and affiliation are required on the first page of the response document.

Note that respondents may answer as many or as few questions as they wish. However, respondents should correctly label which Section, subsection, and question number that each answer corresponds to.

Important Notes

This RFI is not at this time a request for proposals or funding opportunity although pipeline concepts might initiate follow up conversations. Responding to this RFI will help inform ARCHES' Hydrogen Pipeline Development Strategy and possibilities of projects going forward. A response does not provide any advantage or disadvantage to potential applicants for current or future ARCHES funding opportunities regarding this or a related subject matter.

Any information obtained as a result of this RFI is intended to be used by ARCHES on an *aggregated or non-attribution* basis for planning and strategy development, and potentially to inform future funding allocations; this RFI does not constitute a formal solicitation for proposals. Your response to this notice will be treated as information only. ARCHES will review and consider all responses in its formulation of strategies for the identified subject matters of interest that are the subject of this request.

ARCHES will not provide reimbursement for costs incurred in responding to this RFI.

Respondents are advised that ARCHES is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted under this RFI.

Responses to this RFI do not bind ARCHES to any further actions related to this topic.

California Public Records Act

ARCHES is a public-private partnership, with founding members that include the California Governor's Office of Business and Economic Development (GO-Biz) and the University of California (UC). To the extent that staff of public entities such as Go-Biz and UC may be involved in processing information submitted pursuant to this RFI, those responses to this RFI may be subject to a California Public Records Act request. (Cal. Gov. Code § 7920.000 et seq.)

ARCHES understands that responses may contain business sensitive, proprietary, or otherwise confidential information that is exempt from disclosure under the California Public Records Act. **If respondents choose to include business sensitive, proprietary, or otherwise confidential information, respondents should clearly and conspicuously mark such information in the response.**

If a California Public Records Act request for the respondent's information is received by GO-Biz or UC, respondents will be notified, as soon as practicable, but not less than five

(5) business days prior to the release of the requested information to allow the respondent time to confirm and redact confidential information or otherwise seek an injunction. GO-Biz and/or UC will work in good faith with the respondent to protect confidential information to the extent a disclosure exemption is provided by law, including but not limited to proprietary information, financial information, and trade secret information.