



Developing Maritime Vessels to Transport Hydrogen at Scale

Program Opportunity Notice (PON) 6021

Up to \$4.7 million Available

All, some, or none, of the available funds may be awarded.

NYSERDA reserves the right to extend and/or add funding to the solicitation should other program funding sources become available.

Proposals Due: October 1st, 2025, by 3:00 PM Eastern Time

The New York State Energy Research and Development Authority (NYSERDA) announces the availability of up to \$4.7M million for PON 6021 to develop maritime vessels for bulk hydrogen delivery without pipelines and support industrial scale hydrogen application in New York State. Specifically, this solicitation focuses on innovative maritime vessel solutions to cost effectively transport bulk clean hydrogen for short and medium distance. NYSERDA reserves the right to add funding to this solicitation.

Funding for this solicitation is limited to product development only. Estimated Technology Readiness Levels (TRLs) and cost share requirements are provided in the table below.

| Funding Category | Estimated Technology Readiness Level (TRL) | Minimum Cost Share (non-NYSERDA funding) ** | Anticipated Period of Performance (months) | Anticipated Number of Awards |
|-------------------------|---|--|---|-------------------------------------|
| Product Development* | 4-6 | 50% of total project cost | Within 36 months | 1~2 awards |

*Product Development projects will be subject to recoupment requirements.

**The cost share percentage is based on total project cost (NYSERDA share + proposer/external cost share), not solely NYSERDA's contribution.

Proposal Submission

Online submission is preferable. Proposers may submit Word, Excel, or PDF files (file formats include: csv, doc, docx, gif, jpeg, jpg, pdf, png, ppt, pptx, pps, ppsx, tif, txt, xls, xlsx, and zip). Individual files should be 100MB or less in file size. Proposal PDFs should be searchable and should be created by direct conversion from MS Word, or other conversion utility. Files should not be scanned. For ease of identification, all electronic files must be named using the proposer's entity name in the title of the document. NYSERDA will also accept proposals by mail or hand-delivery if online submission is not possible. For detailed instructions on how to submit a proposal (online or paper submission), click the link "[Application Instructions and Portal Training Guide](#) [PDF]" located in the "Current Opportunities" section of NYSERDA's website (<https://www.nyserda.ny.gov/Funding-Opportunities/Current-Funding-Opportunities.aspx>).

Questions? Potential responders are advised that under New York State Finance Law Section 139-j, communication on procurements can be made only to designated contact persons. The Designated Contacts for this Procurement are:

- Eliseo Curcio (Designated Contact) by e-mail at PON6021@nyserda.ny.gov (for technical questions).
- Nancy Marucci (Designated Contact) at (518) 862-1090, ext. 3335 or nancysolicitations@nyserda.ny.gov (for contractual questions).

All Proposers should be familiar with the legal prohibitions against certain types of contacts during government procurements set forth in State Finance Law section 139-j. In accordance with that law, contacting anyone other than the Designated Contacts (either directly by the proposer or indirectly through a lobbyist or other person acting on the proposer's behalf) in an attempt to influence the procurement: (1) may result in a proposer being deemed a non-responsible offerer, and (2) may result in the proposer not being awarded a contract.

*** All proposals must be received by 3 p.m. Eastern Time on the date noted above. Late, faxed, or emailed proposals will not be accepted.** Incomplete proposals may be subject to disqualification. It is the proposer's responsibility to ensure that all pages have been included in the proposal. Please note: for online submission, there are required questions that you will have to answer in addition to uploading attachments and you should allot at least 60 minutes to enter/submit proposals.

The online proposal system closes promptly at 3 p.m. Eastern Time, files in process or attempted edits or submission after 3 p.m. Eastern Time on the date above, will not be accepted.

If changes are made to this solicitation, notification will be posted on the "Current Opportunities" section of NYSERDA's website (<https://www.nyserda.ny.gov/Funding-Opportunities/Current-Funding-Opportunities.aspx>).

I. Introduction

A. Climate Act and Clean Hydrogen

As energy demand across New York State continues to grow, NYSERDA is prioritizing pragmatic solutions that strengthen energy infrastructure and economic resilience. The development of innovative maritime solutions for hydrogen transportation presents an opportunity to meet increasing energy needs efficiently, cost-effectively, and reliably. By promoting economically viable technologies and leveraging public-private partnerships, New York aims to enhance energy security, support industrial and community growth, and strategically position itself to manage future energy demand challenges. This initiative aligns with state goals for a just energy transition, emphasizing tangible benefits for communities, including those historically underserved.

B. NYSERDA Clean Hydrogen Efforts

New York has undertaken several key efforts to assess potential roles for clean hydrogen. In April 2025, NYSERDA released its [New York State Hydrogen Assessment \[1\]](#), a comprehensive analysis of hydrogen's potential role to decarbonize hard-to-electrify sectors and includes analysis to evaluate the feasibility, costs, and deployment opportunities for hydrogen, employing techno-economic optimization modeling and total cost of ownership analysis.

NYSERDA has also convened a series of meetings, listening sessions, and direct discussions with individuals and groups across the stakeholder landscape to better understand diverse perspectives on clean hydrogen in New York and to prioritize investment focus areas. Through its solicitation efforts in clean hydrogen, NYSERDA has awarded up to \$11.3 million for fifteen clean hydrogen innovation projects to date. More information about NYSERDA's efforts in clean hydrogen can be found at <https://www.nyserderda.ny.gov/hydrogen>.

C. Hydrogen Transportation

Current methods for transporting hydrogen within New York State primarily rely on compressed hydrogen gas trucks, which face significant limitations, including limited volumetric capacity per trip, high transportation costs, and logistical complexities [2]. Pipeline infrastructure, while effective for large-scale hydrogen distribution, remains economically prohibitive before broad adoption of hydrogen and faces substantial permitting and geographical barriers, especially in short- to medium-distance (at least 100 miles) transport scenarios within the state [3]. Alternative scalable and cost-effective methods, such as barge-based or maritime vessel solutions, are critical to addressing these logistical and economic challenges, offering the potential for significant cost reductions and operational efficiencies in hydrogen distribution without pipelines.

Globally, maritime transport of liquid hydrogen (LH₂) has demonstrated significant potential, exemplified by the successful operation of the Suiso Frontier vessel, which transported approximately 75,000 kg of LH₂ between Australia and Japan [4]. European demonstration projects, including LH2CRAFT and NAVHYS, have validated maritime LH₂ transport technologies at scales ranging from 10,000 to 18,000 kg per vessel, showcasing practical capacities suitable for bulk hydrogen transport [5, 6]. However, existing maritime hydrogen transport solutions typically focus on long-haul international shipping, whereas shorter-haul, intrastate transport scenarios, such as those required in New York, remain underdeveloped.

Clean hydrogen transportation via maritime vessels poses unique technical and operational challenges, including managing boil-off losses, ensuring rapid loading and unloading operations, and meeting rigorous safety standards related to hydrogen's wide flammability range, high flame speed, and embrittlement of storage and containment materials [7]. Consequently, there is a clear need for tailored innovative solutions optimized specifically for short- to medium-distance maritime hydrogen transport applications.

Several waterways suitable for barge transport of hydrogen within New York State can be considered. Potential routes include the Erie Canal connecting Buffalo and Upstate regions to the Hudson River at Albany, providing direct access to New York Harbor; the St. Lawrence Seaway and Lake Ontario, linking Canadian production sites to Oswego and onward through the canal system to Albany and NYC; the Champlain Canal connecting Lake Champlain to the Hudson River, facilitating access from Northern NY or Canada; and the Delaware River offering an alternate route from neighboring states such as Pennsylvania directly to New York Harbor.

D. Hydrogen Partners List

Proposers wishing to find hydrogen partners may use the Advanced Fuels and Thermal Energy Innovation program's partnering platform, [the Hydrogen Partners List](#).

The platform is intended to help potential proposers find other teams with complementary capabilities when submitting proposals to NYSERDA Program Opportunity Notices issued by the Hydrogen and Clean Fuels Program. Submitting teaming information is completely optional, and not required. By enabling and publishing the teaming partner list, NYSERDA is not endorsing, sponsoring, or otherwise evaluating the qualifications of the individuals and organizations.

II. Program Requirements

A. Teaming requirement

At a minimum, a project team should consist of the following:

- Naval architect and/or shipyard ,
- Maritime vessel operator in New York State and
- Hydrogen fuel supplier

Proposers should succinctly describe the role, qualifications, experience, and capabilities of the proposed project team to execute the project successfully. Strong preference will be given to proposing teams with experience designing, building and operating hydrogen or alternative fuel vessels, or teams familiar with New York State waterways and maritime ports. The lead proposing entity does not need to be based in or operating in New York, but the proposal team must include a Maritime vessel operator in New York State. An entity is only allowed to submit one Proposal.

B. Technical requirements

NYSERDA seeks proposals specifically aimed at developing innovative maritime vessel solutions for efficiently transporting bulk hydrogen over short to medium distance. Proposals must meet the technical requirements specified below:

- Safe, efficient, scalable hydrogen transport methods specifically optimized for short to medium distance of at least 100 nautical miles maritime routes.
- Capable of delivering at least 20,000 kilograms of hydrogen per shipment.
- Logistically feasible for inland waterway and coastal hydrogen transport within New York State waterways or from adjacent states.
- Compliance with relevant maritime and hydrogen safety standards and regulations.
- The maritime vessel developed under this solicitation can be powered by hydrogen, other low-carbon fuels, or conventional maritime fuels compliant with ISO 8217:2024. Proposers are encouraged but not required to utilize low-carbon fuels.
- Vessel design should include provisions to accommodate potential future upgrades or transitions to alternative low-carbon or zero-carbon maritime fuels in response to evolving market conditions and regulations.

C. Expected Project Scope of Work

All proposals must include tasks and deliverables to design and build the maritime vessel to meet technical requirements specified above, which should include but not be limited to system and subsystem diagrams, process design basis, equipment specifications and lists, general arrangement drawings, detailed piping and instrumentation diagrams, electrical single line diagrams, vessel construction and factory test. In addition, proposers should include the following tasks and deliverables:

- 1) Safety and regulations
 - Outline applicable safety codes, standards (e.g., IMO codes including MARPOL Annex VI Emission Control Area (ECA) requirements, NFPA 2), and regulations requirements for the maritime vessel from USCG, port authorities, etc.
 - Specify timeline to engage relevant authorities for required reviews and approvals.
- 2) Market analysis:
 - Project the applicable end-use cases that the proposed maritime vessel will serve (e.g., hydrogen fueling station, industrial heating processes, backup power, etc.).
 - Estimate the annual hydrogen demand of the intended end-users in New York and confirm that the proposed barge or maritime hydrogen vessel will meet the projected demand scenarios and operational requirements.
 - Based on the projected hydrogen end users, assess compatibility of the proposed maritime vessels with relevant ports, docks, or terminals in NYS for berthing, loading/unloading, and support services. Identify any modifications necessary for infrastructure to support the proposed maritime vessels.
- 3) Planning for future demonstration:
 - Identify sites most suitable for future demonstration of the proposed maritime vessel.
 - Secure letters of support from the port or terminal operators, and hydrogen end user(s).
 - Identify areas where the selected sites do not meet relevant safety codes, regulations, and permitting requirements to enable future demonstration

- Develop initial community and stakeholder engagement plan. Identify potential local community acceptance issues and possible mitigation plan.
- 4) Cost analysis:
- Estimate CAPital EXpenditure (CAPEX) and OPERational EXpenditure (OPEX) for the entire system, including maritime vessel construction or retrofit, onboard hydrogen storage solution, transfer systems, and safety systems, etc.
 - Compare the estimated cost of transporting hydrogen using the proposed maritime vessel versus using commercially available trucking. The cost should consider transporting hydrogen from potential hydrogen producers to hydrogen user sites analyzed in 2) above. If hydrogen can't be delivered directly to the site via the maritime vessel, costs for truck or alternative 'last-mile' delivery should be considered. All assumptions, methodologies, logistical coordination, and sources of cost estimates must be clearly documented and articulated.

A demonstration of the maritime vessel is not required under this solicitation.

D. Examples of eligible and noneligible proposals

Eligible proposals may include, but are not limited to:

- Barge designed using a retrofitted articulated tug barge (ATB) with integrated cryogenic LH₂ tanks, or flat-deck barges equipped with modular cryogenic ISO tanks optimized for efficient loading, unloading, flexible transport operations and enhanced volumetric storage efficiency [5].
- A maritime vessel incorporating modular containerized LH₂ storage and dispensing systems with rapid, standardized loading/unloading interfaces optimized for short turnaround times and scalable capacities [6].
- Application of commercially available cryogenic insulation systems for LH₂ storage to maritime applications, focusing on thermal stability during hydrogen transport to reduce operational energy costs [7].
- A maritime vessel incorporating commercially validated materials or coatings with known resistance to hydrogen embrittlement to enhance durability and operational longevity of LH₂ maritime storage and transfer systems [8].
- A maritime vessel incorporating rapid, safe, and standardized cryogenic transfer connectors and coupling systems specifically optimized to minimize operational risks, enhance transfer efficiency, and significantly reduce loading/unloading times for maritime LH₂ transport operations. [9]
- Develop modular boil-off gas (BOG) management systems specifically integrated into the maritime vessel design, including vent capture or pressure relief routing, to support efficient and safe maritime hydrogen transport.

Noneligible proposals may include, but are not limited to:

- Projects unrelated to barge or maritime hydrogen transportation, such as
 - Hydrogen pipeline infrastructure development
 - Hydrogen transportation methods using chemical carriers (e.g. ammonia, methanol).
 - Solid-state storage methods (metal hydrides, adsorption-based systems).
 - Transporting hydrogen by trucks or rail.

- Projects focused on early-stage research and feasibility study (TRL 1-3).

III. Proposal Requirements

A. Required Proposal Attachments

To submit a Proposal, the proposer must submit all attachments listed below. The goal should be to concisely present the information needed to fully address the proposal evaluation criteria (in Section IV).

Required Attachments for the Proposal:

- Attachment A – Proposal Narrative Template
- Attachment B – Statement of Work Template
- Attachment C – TRL/CRL Calculator
- Attachment D1 – Milestone Payment Schedule
- Attachment D2 – Budget Form
- Attachment E – Executive Summary Slide Template
- Project List – A list of relevant projects that the proposal team has completed in the past.
- Letter(s) of Commitment from the Proposer, all teaming entities, and all cost share providers
- References
- Resumes/CVs
- Indirect Cost Rate Supporting Documentation

For reference only, does not need to be filled:

- Attachment F – Metrics Form
- Attachment G – Sample Agreement

As part of the proposal package, **Proposers must provide a separate tab in Attachment D2 for each Subrecipient that is expected to perform work estimated to be more than \$250,000.** If the total project cost for a vendor is over \$250,000, a budgetary quote from the vendor will be required upon selection for contract negotiation by NYSERDA.

Proposers must carefully review the required attachments to ensure that all required sections are completed. Failure to do so may result in the proposal being rejected as non-responsive. It is the proposer's responsibility to ensure that all pages have been included in the proposal and that they have been timely submitted before the proposal due date.

Proposals that exceed the page limits or fail to follow the format guidelines will be rejected as non-responsive. Proposals deemed non-responsive will not be eligible for awards. If you believe proprietary information must be submitted to provide an adequate proposal, you must comply with the Section V – General Conditions for submitting proprietary material. Each page of the proposal should state the name of the proposer, the PON number (PON 6021), and the page number.

Proposals determined to be compliant with proposal requirements and responsive to the solicitation will be subject to review by a scoring committee comprised of internal and external technical experts in

accordance with Section IV - Proposal Evaluation. Only the most technically meritorious proposals will be awarded an invitation from NYSERDA to enter into an agreement. Proposals not meriting an award for contracting may be debriefed as requested.

Please state in your proposal if you intend to use artificial intelligence ("AI") for this work. Approval for any Vendor to use any AI Systems must be expressly granted by NYSERDA for any purpose whatsoever related to the Vendor's work for NYSERDA. See [Doing Business with NYSERDA](#) on NYSERDA's website for more information on the use of AI at NYSERDA.

B. Compliance with New York State Finance Law

In compliance with §139-j and §139-k of the State Finance Law (see Section VI, General Conditions below for additional information), proposers will be required to answer questions during proposal submission, which will include making required certification under the State Finance Law and to disclose any Prior Findings of Non-Responsibility.

C. Cost Sharing

The proposal must show non-NYSERDA cost share funding of at least 50% of the total cost of the project. Scoring preference will be given to proposals that best leverage NYSERDA funding by providing greater amounts of non-NYSERDA cost share funding (see Section IV - Proposal Evaluation). Cost sharing can be from the proposer, other team members, and other government or private sources. Contributions of direct labor (for which the laborer is paid as an employee) and purchased materials may be considered "cash" contributions. Unpaid labor, indirect labor, or other general overhead may be considered "in-kind" contributions. Total non-NYSERDA cost share is the sum of cash and in-kind contributions from non-NYSERDA sources. NYSERDA will not pay for efforts which have already been undertaken. The proposer or proposing team cannot claim as cost-share any expenses that have already been incurred.

Cost share must be verifiable upon submission of the Proposal. Proposers are required to provide written assurance of their proposed cost share contributions in their Proposals. Upon selection for award negotiations, Proposers may be required to provide additional information and documentation regarding their cost share contributions. Cost share contributions must be specified in the Attachment D1 – Milestone Payment Schedule and the Attachment D2 – Budget Form.

Cost share commitments cannot be dependent on some future event, such as receiving a grant, obtaining a loan, monetizing tax incentives, or securing an investor. If funds from a federal source are being proposed as cost share, the Proposer must provide a commitment letter from the federal agency as part of the Proposal that specifically commits those funds and identifies the statutory authority that allows those funds to be used for the project scope being proposed.

The Proposer is ultimately and legally responsible for providing the entire amount of cost share required, if an award is made, even if the cost share is being provided by a Subcontractor or Subrecipient. The Lead Proposer is solely responsible for managing cost share contributions by the Project Team and enforcing cost share obligations assumed by Project Team members in subawards or related agreements. If the funding agreement is terminated prior to the end of the project period, the Lead Proposer is required to contribute at least the cost share percentage of total expenditures incurred through the date of termination.

The Proposer must submit Letters of Commitment from the Proposer, all teaming entities, and all cost share providers. If applicable, the letter must state that the party is committed to providing a specific dollar amount or value of in-kind contributions allocated to cost sharing. The following information for each party contributing to cost sharing should be identified: (1) the name of the organization; (2) the proposed dollar amount to be provided; and (3) the proposed cost.

NYSERDA reserves the right to negotiate the funding category, scope of work, budget, and funding levels on all awarded projects. Efforts requesting more than \$250,000 from NYSERDA may be funded in phases separated by go/no-go milestones.

A payment based on the final deliverable or final report will be reserved until project completion. If awarded, NYSERDA may choose to negotiate the amount of such payment.

D. Recoupment

For any new projects exceeding \$100,000 in total NYSERDA funding that involve **product development, including business development**, NYSERDA will require a royalty based on sales and/or licensing of the new product developed. NYSERDA's standard royalty terms are 1% of sales and of all license revenue accruing to the Contractor for products produced, for a period of fifteen years or until the Contractor pays NYSERDA an amount equal to the total amount of funds paid by NYSERDA to the Contractor, whichever comes first. Please see Attachment G, Sample Agreement, for specific recoupment obligations. Please see the definitions below to determine if your project will be subject to recoupment. Please note that NYSERDA will make final determinations as to whether proposals fit within the demonstration or product development categories.

Product Development: efforts to bring a new or improved product to market including business case development, product design, scale, and field testing, but not including earlier stage technical feasibility or proof of concept development. Technologies with a Technology Readiness Level (TRL) exceeding 3 are to be considered Product Development (see Attachment C: TRL/CRL Calculator for additional guidance on TRLs). Field testing or pilot deployments of a non-commercial, non-warranted technology are considered Product Development.

Please note: NYSERDA may decline to contract with awardees that are delinquent with respect to recoupment payments or sales reporting for any previous NYSERDA agreement.

E. Annual Metrics Reports

If awarded, the proposer will be required to submit to NYSERDA's Project Manager on an annual basis, a prepared analysis and summary of metrics addressing the anticipated energy, environmental and economic benefits that are realized by the project. All estimates shall reference credible sources and estimating procedures, and all assumptions shall be documented. Reporting shall commence the first calendar year after the contract is executed. Reports shall be submitted by January 31st for the previous calendar years' activities (i.e., reporting period). Please see Attachment F: Metrics Form for the metrics that you will be expected to provide and the reporting duration. The Contractor shall provide metrics in accordance with a web-based form, which will be distributed by NYSERDA. NYSERDA may decline to contract with awardees that are delinquent with respect to metrics reporting for any previous or active NYSERDA agreement.

IV. Proposal Evaluation

A. Proposal Evaluation Criteria

Proposals that meet solicitation requirements will be reviewed by a Scoring Committee using the Evaluation Criteria below **listed in order of importance**. At NYSERDA's discretion, proposers may be requested to interview with all or part of the Scoring Committee to address any potential questions or clarifications outlined in the proposal. Proposers will be notified if they are requested to attend an interview.

Innovation, State of the Art, and Technical Merit

- The proposer has demonstrated a thorough understanding of fundamental scientific principles and current state-of-the-art maritime vessel technologies specifically related to hydrogen transport.
- The proposed project specifically and convincingly demonstrates how the Proposer will successfully complete the proposed scope of work and move the technology to future commercial deployment.
- The proposal identifies buy-in from needed stakeholders to ensure success of the project.
- The proposed project technologies are technically sound, feasible, innovative, and will make significant progress toward solving the identified problem.

Team Experience and Capabilities

- The proposed team structure includes the minimum required team partners: a naval architect and/or shipyard a maritime vessel operator based in New York State, and a hydrogen fuel supplier.
- The proposed team demonstrates experience in designing, constructing, and operating maritime vessels utilizing hydrogen or alternative fuels, and managing projects of similar size, scope, and complexity. A list of relevant projects previously completed by the team is included in the proposal. The proposed team has the necessary expertise and resources to carry out the proposed work, including members with industry and business experience as well as technical skill.
- The proposal provides letters of commitment from the Proposer, all teaming entities, and all cost share providers that the team will need to provide data, equipment, support, facilities, or cost share.
- The proposed team structure includes additional team partners beyond the minimum required to support the project such as financial partner(s), environmental consultant(s), community engagement consultant(s), etc.
- The proposal clearly demonstrates the team structure and staff roles and responsibilities.
- The proposal includes resumes of key individuals.

Project Benefits and Value

- The proposed project will evaluate innovative maritime vessel solutions specifically optimized for efficient bulk hydrogen transport over short- to medium-distance maritime routes to and within New York State.
- Learnings from the proposed project have significant potential for replication, supporting wider adoption of efficient, cost-effective maritime hydrogen transport solutions in New York State.
- The degree to which the proposal introduces innovative maritime vessel technologies or approaches to enhance efficient hydrogen transportation within New York State waterways.
- The proposed project has potential to greatly benefit low-income or historically disadvantaged communities.

- The proposer provides private and/or other sources of cost share funding for the project (with letters of commitment), with greater amounts of non-NYSERDA cost share considered more favorably.
- Cost share included in the proposal is verifiable.
- The project cost is justified and reasonable with respect to the level of effort proposed, the expected benefits, and the potential market or deployment opportunity.

Project Plan, Scope, Risks, and Challenges

- Technical and programmatic risks are clearly understood and fully disclosed, with well-considered mitigation plans that have a high probability of ensuring project success.
- The proposal includes sufficient details in Attachment B – Statement of Work. The tasks are clearly defined, with fully developed tasks, subtasks, milestones, and deliverables that will enable effective project execution.
- The proposal demonstrates adequacy, reasonableness, and soundness of the project schedule as detailed in the proposed Statement of Work and Milestone Payment Schedule.
- The proposal demonstrates reasonableness of budget and spend plan as detailed in the submitted Milestone Payment Schedule (Attachment D1) and Budget Form (Attachment D2).
- The proposal demonstrates adequacy of proposed project management systems including the ability to track scope, cost, and schedule progress and changes.

B. Program Policy Factors

NYSERDA reserves the right to accept or reject proposals based on the following program policy factor(s):

- The consideration of the impact on, and benefits to, a diversity of communities/locations, including low-income and rural communities, partnerships with minority serving and/or owned businesses.
- Whether the proposed project will accelerate technology advances in areas that industry is not likely to undertake.
- The degree to which the proposal expands the portfolio of technical areas and project types both within this program and within NYSERDA's portfolio.
- The degree to which the proposal aligns with the latest NYSERDA strategy and policy in clean hydrogen.

V. General Conditions

Proprietary Information - Careful consideration should be given before confidential information is submitted to NYSERDA as part of your proposal. Review should include whether it is critical for evaluating a proposal, and whether general, non-confidential information, may be adequate for review purposes. The NYS Freedom of Information Law, Public Officers law, Article 6, provides for public access to information NYSERDA possesses. Public Officers Law, Section 87(2)(d) provides for exceptions to disclosure for records or portions thereof that "are trade secrets or are submitted to an agency by a commercial enterprise or derived from information obtained from a commercial enterprise and which if disclosed would cause substantial injury to the competitive position of the subject enterprise." Information submitted to NYSERDA that the proposer wishes to have treated as proprietary, and confidential trade secret information, should be identified and labeled "Confidential" or "Proprietary" on each page at the time of disclosure. This

information should include a written request to except it from disclosure, including a written statement of the reasons why the information should be excepted. See Public Officers Law, Section 89(5) and the procedures set forth in 21 NYCRR Part 501 <https://www.nyserda.ny.gov/About/-/media/Files/About/Contact/NYSERDA-Regulations.ashx>. However, NYSERDA cannot guarantee the confidentiality of any information submitted.

Omnibus Procurement Act of 1992 - It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority- and women-owned business enterprises, as bidders, subcontractors, and suppliers on its procurement Agreements.

Information on the availability of New York subcontractors and suppliers is available from:

Empire State Development
Division for Small Business
625 Broadway
Albany, NY 12207

A directory of certified minority- and women-owned business enterprises is available from:

Empire State Development
Minority and Women's Business Development Division
625 Broadway
Albany, NY 12207

State Finance Law Sections 139-j and 139-k - NYSERDA is required to comply with State Finance Law Sections 139-j and 139-k. These provisions contain procurement lobbying requirements which can be found at <https://online.ogs.ny.gov/legal/lobbyinglawfaq/default.aspx>. Proposers are required to answer questions during proposal submission, which will include making required certification under the State Finance Law and to disclose any Prior Findings of Non-Responsibility (this includes a disclosure statement regarding whether the proposer has been found non-responsible under Section 139-j of the State Finance Law within the previous four years).

Tax Law Section 5-a - NYSERDA is required to comply with the provisions of Tax Law Section 5-a, which requires a prospective contractor, prior to entering an agreement with NYSERDA having a value in excess of \$100,000, to certify to the Department of Taxation and Finance (the "Department") whether the contractor, its affiliates, its subcontractors and the affiliates of its subcontractors have registered with the Department to collect New York State and local sales and compensating use taxes. The Department has created a form to allow a prospective contractor to readily make such certification. See, ST-220-TD (available at http://www.tax.ny.gov/pdf/current_forms/st/st220td_fill_in.pdf). Prior to contracting with NYSERDA, the prospective contractor must also certify to NYSERDA whether it has filed such certification with the Department.

The Department has created a second form that must be completed by a prospective contractor prior to contracting and filed with NYSERDA. See, ST-220-CA (available at http://www.tax.ny.gov/pdf/current_forms/st/st220ca_fill_in.pdf). The Department has developed guidance for contractors which is available at <http://www.tax.ny.gov/pdf/publications/sales/pub223.pdf> .

Contract Award - NYSERDA anticipates making multiple awards under this solicitation. NYSERDA anticipates a contract duration of up to three years, unless NYSERDA management determines a different

structure is more efficient based upon proposals received. A contract may be awarded based on initial Proposals without discussion or following limited discussion or negotiations pertaining to the Statement of Work. Each proposal should be submitted using the most favorable cost and technical terms. NYSERDA may request additional data or material to support Proposals. NYSERDA will use Attachment F, Sample Agreement, to contract successful proposals. NYSERDA may at its discretion elect to extend and/or add funds to any project funded through this solicitation. NYSERDA reserves the right to limit any negotiations to exceptions to standard terms and conditions in the Sample Agreement to those specifically identified in the checklist questions. Proposers should keep in mind that acceptance of all standard terms and conditions will generally result in a more expedited contracting process. NYSERDA expects to notify proposers in approximately twelve weeks from the proposal due date whether your proposal has been selected to receive an award. NYSERDA may decline to contract with awardees that are delinquent with respect to any obligation under any previous or active NYSERDA agreement.

Recoupment - For any new product research and/or development, NYSERDA will generally require a royalty based on sales of the new product developed. NYSERDA's standard royalty terms are 1% of sales and of all license revenue accruing to the Contractor for products produced, for a period of fifteen years or until the Contractor pays NYSERDA an amount equal to the amount of funds paid by NYSERDA to the Contractor, whichever comes first.

Accessibility Requirements - NYSERDA requires contractors producing content intended to be posted to the Web to adhere to New York State's Accessibility Policy. This includes, but is not limited to, deliverables such as: documents (PDF, Microsoft Word, Microsoft Excel, etc.), audio (.mp3, .wav, etc.), video (.mp4, .mpg, .avi, etc.), graphics (.jpg, .png, etc.), web pages (.html, .aspx, etc.), and other multimedia and streaming media content. For more information, see [NYSERDA's Accessibility Requirements](#).

Limitation - This solicitation does not commit NYSERDA to award a contract, pay any costs incurred in preparing a proposal, or to procure or contract for services or supplies. NYSERDA reserves the right to accept or reject any or all proposals received, to negotiate with all qualified sources, or to cancel in part or in its entirety the solicitation when it is in NYSERDA's best interest. NYSERDA reserves the right to reject proposals based on the nature and number of any exceptions taken to the standard terms and conditions of Attachment F, Sample Agreement. NYSERDA reserves the right to disqualify proposers based upon the results of a background check into publicly available information or the presence of a material possibility of any reputational or legal risk in making of the award.

Disclosure Requirement - The proposer shall disclose any indictment for any alleged felony, or any conviction for a felony within the past five years, under the laws of the United States or any state or territory of the United States and shall describe circumstances for each. When a proposer is an association, partnership, corporation, or other organization, this disclosure requirement includes the organization and its officers, partners, and directors or members of any similarly governing body. If an indictment or conviction should come to the attention of NYSERDA after the award of a contract, NYSERDA may exercise its stop-work right pending further investigation or terminate the agreement; the contractor may be subject to penalties for violation of any law which may apply in the particular circumstances. Proposers must also disclose if they have ever been debarred or suspended by any agency of the U.S. Government or the New York State Department of Labor.

Vendor Assurance of No Conflict of Interest or Detrimental Effect - The proposer shall disclose any existing or contemplated relationship with any other person or entity, including any known relationships with

any member, shareholders of 5% or more, parent, subsidiary, or affiliated firm, which would constitute an actual or potential conflict of interest or appearance of impropriety, relating to other clients/customers of the proposer or former officers and employees of NYSERDA, in connection with proposer's rendering services as proposed. If a conflict does or might exist, please describe how your company would eliminate or prevent it. Indicate what procedures will be followed to detect, notify NYSERDA of, and resolve any such conflicts.

The proposer must disclose whether it, or any of its members, or, to the best of its knowledge, shareholders of 5% or more, parents, affiliates, or subsidiaries, have been the subject of any investigation or disciplinary action by the New York State Commission on Public Integrity or its predecessor State entities (collectively, "Commission"), and if so, a brief description must be included indicating how any matter before the Commission was resolved or whether it remains unresolved.

Public Officers Law – For any resulting awards, the Contractor and its subcontractors shall not engage any person who is, or has been at any time, in the employ of the State to perform services in violation of the provisions of the New York Public Officers Law, other laws applicable to the service of State employees, and the rules, regulations, opinions, guidelines or policies promulgated or issued by the New York State Joint Commission on Public Ethics, or its predecessors (collectively, the "Ethics Requirements"). Proposers are reminded of the following Public Officers Law provision: contractors, consultants, vendors, and subcontractors may hire former NYSERDA employees. However, as a general rule and in accordance with New York Public Officers Law, former employees of NYSERDA may neither appear nor practice before NYSERDA, nor receive compensation for services rendered on a matter before NYSERDA, for a period of two years following their separation from NYSERDA service. In addition, former NYSERDA employees are subject to a "lifetime bar" from appearing before any state agency or authority or receiving compensation for services regarding any transaction in which they personally participated, or which was under their active consideration during their tenure with NYSERDA.

Any awardee will be required to certify that all of its employees, as well as employees of any subcontractor, whose subcontract is valued at \$100,000 or more who are former employees of the State and who are assigned to perform services under the resulting contract, shall be assigned in accordance with all Ethics Requirements. During the term of any agreement, no person who is employed by the contractor or its subcontractors and who is disqualified from providing services under the contract pursuant to any Ethics Requirements may share in any net revenues of the contractor or its subcontractors derived from the contract. NYSERDA may request that contractors provide it with whatever information the State deems appropriate about each such person's engagement, work cooperatively with the State to solicit advice from the New York State Joint Commission on Public Ethics, and, if deemed appropriate by the State, instruct any such person to seek the opinion of the New York State Joint Commission on Public Ethics. NYSERDA shall have the right to withdraw or withhold approval of any subcontractor if utilizing such subcontractor for any work performed would be in conflict with any of the Ethics Requirements. NYSERDA shall have the right to terminate any contract at any time if any work performed is in conflict with any of the Ethics Requirements.

Due Diligence – NYSERDA, at its discretion, may conduct broad due diligence to validate any or all elements of a Proposal and to assess Proposers' prospects of success, including gathering information to assess a proposal relative to any of the topics listed in evaluation criteria, whether or not such topic is explicitly addressed in a proposal. NYSERDA may conduct due diligence on some or all proposals based on NYSERDA's current guidelines at the time of a review. NYSERDA staff may follow up with proposers to

request additional information or clarification regarding Proposer’s proposal, including questions regarding Proposer’s business prospects and resources, whether or not those questions are specifically related to the elements of the proposal. Additionally, customized due diligence may be conducted by internal or external staff or contractors based on questions on any proposal raised by NYSERDA staff and/or the Scoring Committee. Due diligence may include (but is not limited to): interviews of independent references and background checks of team members; assessment of prior business experience of any team member associated with a proposal; research on intellectual property claims; customer and partner reference checks; market research on the Proposers’ target market and any other related or possibly competitive technology or market area; research to validate any assumptions on current or future revenues, costs, capital needs, and financing prospects for proposers’ business, including similar (or unrelated) technologies, processes, or competitive solutions; or any other research that could reasonably inform the evaluation of a proposal, or the prospects for commercial success of the proposers’ business (whether directly related to, or unrelated to the specific elements in a proposal). Due diligence may include discussions with proposers’ former and current business partners, employees, investors, customers, and competitors. Due diligence may be conducted by NYSERDA personnel or contractors including members of the scoring committee, before, during, or after a scoring process, and prior to finalization of a contract award, any information gleaned in diligence may be used to score or re-score a proposal or apply a program policy factor.

EO 16 Protocols – Pursuant to Executive Order No. 16 issued on March 17, 2022, all vendors responding to bids or contracting with New York State must certify, using the form provided as part of this solicitation, their status with regard to conducting business operations in Russia, and that any such business operations in Russia conducted on behalf of the vendor are determined to be permitted under any of the allowable exemptions. The term vendor is intended to encompass bidders prior to contract award, contractors who have received a contract award, contract assignees, or contractors for whom an extension to an existing contract is being pursued. Exemption decisions are in NYSERDA’s sole discretion and are final decisions. NYSERDA reserves the right to solicit additional materials or information regarding the responses or materials provided by a vendor.

Pursuant to Executive Order No. 16, all vendors will be vetted to ensure that they are not on the federal sanctions list at <https://sanctionsearch.ofac.treas.gov/>. There is no waiver or exemption process for vendors appearing on the federal sanctions list.

The Executive Order remains in effect while sanctions imposed by the federal government are in effect. Accordingly, vendors who may be excluded from award because of current business operations in Russia are nevertheless encouraged to respond to solicitations to preserve their contracting opportunities in case sanctions are lifted during a solicitation, or after award in the case of some solicitations.

VI. Attachments

Required Attachments for the Proposal:

- Attachment A – Proposal Narrative Template
- Attachment B – Statement of Work Template
- Attachment C – TRL/CRL Calculator
- Attachment D1 – Milestone Payment Schedule
- Attachment D2 – Budget Form

- Attachment E – Executive Summary Slide Template
- Project List – A list of relevant projects that the proposal team has completed in the past.
- Letter(s) of Commitment from the Proposer, all teaming entities, and all cost share providers
- Resumes/CVs
- Indirect Cost Rate Supporting Documentation

For Reference Only (Does not need to be Submitted):

- Attachment F – Metrics Form
- Attachment G – Sample Agreement

References:

- [1] <https://prod-cm.nyserda.ny.gov/-/media/Project/Nyserda/Files/Publications/Energy-Analysis/NY-Hydrogen-Assessment-complete-acc.pdf>
- [2] Duncan Seddon, "Hydrogen Economy: The Fundamentals, Technology, Economics," 2022.
- [3] Joseph Hammond, Manou Rosenberg, Solomon Brown, "Understanding costs in hydrogen infrastructure networks: A multi-stage approach for spatially-aware pipeline design," *International Journal of Hydrogen Energy*, vol. 102, pp. 430–443, 2025.
- [4] "Toward a new era of hydrogen energy: Suiso Frontier built by Japan's Kawasaki Heavy Industries," Hydrogen Council, 2022.
- [5] LH2CRAFT Project, "Safe and efficient transportation of liquid hydrogen," EU Project Overview, 2023.
- [6] NAVHYS Project, "Development of liquid hydrogen-fueled service operation vessels," Marine Offshore Bureau Veritas, 2023.
- [7] Mohammad Reza Rahimpour, "Hydrogen Transportation and Storage: Safety and Efficiency Challenges," CRC Press, 2025.
- [8] "Hydrogen Microgrid Project Operational Using GKN Hydrogen's Metal Hydride Storage," Fuel Cells Works, 2024.
- [9] d'Amore-Domenech, R., Leo, T. J., & Bisch, A. (2023). "On the bulk transport of green hydrogen at sea: Comparison between submarine pipeline and compressed and liquefied transport by ship." *Energy*, 267, 126621.