NYSERDA PON 4854

Renewable Optimization and Energy Storage Innovation Program

**Form Fillable Proposal Narrative for:**

**The National Offshore Wind Research and Development Consortium – Innovations in Offshore Wind Solicitation 2.0**

**REQUIRED FOR FULL SUBMISSIONS ONLY**

Funding Category: Click here

**PROPOSAL TITLE: Click or tap here to enter text.**

Date of Submission: Click or tap to enter a date.

Submitted with all required attachments to:

New York State Energy Research & Development Authority

17 Columbia Circle

Albany, NY 12203

Attn: Jillina Baxter

Submitted by:

COMPANY NAME

Company Principal Investigator

Principal Investigator Phone #

Principal Investigator Email

The instructions below are intended to guide the proposer through the full proposal submission, addressing pertinent information for a successful submission. The format provided is structured to query project information pertaining to the relevance and importance of the problem targeted and the probability that the project will meet its technical and commercialization objectives to ultimately solve the stated problem. **All final evaluations will be solely based on the project’s anticipated performance, as supported in this Proposal Narrative and other Proposal Documents, against the Proposal Evaluation Criteria outlined in Section IV of the Opportunity Notice document.** All questions should be completed, unless they are indicated for a specific project type. Provide concise, clear, detailed, and direct responses to assist in the review of the proposal.

Images, charts and tables may be inserted where necessary and appropriate to support the text narrative. Embedded images may not be used to circumvent word count limits. Extraneous or excessive included materials may be disregarded or may result in a lower score.

For each funding category, the following sections (denoted by roman numerals) are REQUIRED. Multi-phase proposals must include all the sections required for every funding category included in the proposed project scope. For example, a multi-phase project including a Product Development (Category B) phase followed by a Demonstration (Category C) phase would require every section to be completed except Section VII.

|  |  |
| --- | --- |
| **Funding Category** | **Section** |
| **I** | **II** | **III** | **IV** | **V** | **VI** | **VII** | **VIII** | **IX** | **X** | **XI** | **XII** | **XIII** | **XIV** |
| **Category A** | ü | ü | ü |  |  |  | ü | ü | ü | ü | ü | ü | ü | ü |
| **Category B** | ü | ü | ü | ü |  |  |  | ü | ü | ü | ü | ü | ü | ü |
| **Category C** | ü | ü | ü | ü | ü | ü |  | ü | ü | ü | ü | ü | ü | ü |

I. EXECUTIVE SUMMARY

Provide a non-proprietary summary of your proposal including:

 **1.** **Round(s), Challenge Area(s):** Identify the Round(s) and Challenge Area(s) under which this proposal is being submitted, as defined in the Opportunity Notice. [Do not exceed 100 words]

Click or tap here to enter text.

**2.** **Team Members**: Identify all significant participants and their primary relevant qualifications. [Do not exceed 250 words]

Click or tap here to enter text.

**3.** **Background**: Describe the problem or opportunity being addressed, and its significance to the U.S. offshore wind industry. [Do not exceed 100 words]

Click or tap here to enter text.

**4.** **Objective**: Describe the technical concept and how it will address the identified problem or opportunity. Tell how the concept will address and overcome barriers to offshore wind development in the United States. [Do not exceed 100 words]

Click or tap here to enter text.

**5.** **Scope**: Outline the technical and commercialization (if applicable) tasks that will be performed within the proposed Statement of Work. [Do not exceed 100 words]

Click or tap here to enter text.

**6.** **Benefits**: Provide an estimate of the ultimate impact the product or service resulting from this work may have in terms of reductions in the levelized cost of electricity (LCOE) of offshore wind, increased U.S. offshore wind supply chain opportunities, and other benefits sought by this solicitation. [Do not exceed 100 words]

Click or tap here to enter text.

II. PROBLEM STATEMENT & PROPOSED SOLUTION

**1. What is the problem and who is the customer?** Describe the area of offshore wind technology that your project focuses on and the current state of the art. What opportunities exist for improvement and what is the significance to the U.S. offshore wind industry? Describe the customers for your technology in as specific terms as possible. Describe, in detail, your interactions with these customers so far. Describe your understanding of the customers’ pain point, problem, or barrier that your solution will solve and indicate whether or how you have validated these needs. How is the industry addressing (or failing to address) the problem now?

[Do not exceed 600 words]

Click or tap here to enter text.

**2. What is your solution?** Describe your proposed solution (*i.e.* the product or service to be developed and the technology behind it) and how it addresses the problem or opportunity. Describe the solution in sufficient detail to support performance, cost, other claims, and include any innovative characteristics inherent to the proposed product or service. [Do not exceed 600 words]

Click or tap here to enter text.

**3. How well does your solution solve the customer's problem?**

1. Describe how successful implementation of your solution would improve offshore wind technology and produce benefits for the U.S. offshore wind industry, ratepayers, and supply chain. Describe the value proposition you would make to a customer of your technology solution. [Do not exceed 200 words]

Click or tap here to enter text.

1. Describe alternative products or services to your proposed solution and describe your solution’s market superiority in terms of advantages/disadvantages over these competitors. When you do this, consider similar solutions, solutions that can be substituted, alternative methods of solving the problem, and the “do nothing” option. [Do not exceed 400 words]

Click or tap here to enter text.

1. If similar ideas or technologies have failed to become commercially successful, explain why your solution is likely to be more successful. [Do not exceed 200 words]

Click or tap here to enter text.

**4. Business Model Canvas (Funding Categories B and C ONLY)**: The Business Model Canvas is a strategic management and entrepreneurial tool. It will help you to describe, design, challenge, improve, and pivot your business model for the proposed product or supporting solution, regardless of whether you are in the feasibility/concept stage or ready to demonstrate it. Complete the Business Model Canvas found under “Associated Documents” on the webpage for this PON at NYSERDA’s website. Once it is fully completed, please save a copy of the Business Model Canvas in PDF format and include it as Attachment B2 to this submission.

Has Business Model Canvas Template been attached (as req’d)? Yes/No

III. STATE OF RESEARCH AND TECHNOLOGY TARGETS

1. **Technology and Commercialization Readiness Level** **Calculator**: Access the Technology Readiness Level (TRL) and Commercialization Readiness Level (CRL) Calculator found under “Associated Documents” on the webpage for this PON at NYSERDA’s website. Complete the “Instructions & Calculator” worksheet. Once this worksheet is fully completed, please save a copy of the entire workbook in PDF format to include as Attachment B3 to your submission, and indicate the resulting TRL and CRL values below.
2. Based on the “Summary & Results” worksheet from the link above, indicate the technology’s current TRL: Start TRL
	1. Based on the “Summary & Results” worksheet from the link above, indicate the technology’s expected TRL at the end of the project: End TRL
	2. Based on the “Summary & Results” worksheet from the link above, indicate the technology’s current CRL: Start CRL
	3. Based on the “Summary & Results” worksheet from the link above, indicate the technology’s expected CRL at the end of the project: End CRL
	4. The TRL/CRL Calculator workbooks for both current and end-of-project calculations should be attached. Is it? Yes/No

**2.** Describe the **current state of research** and development of the technology as it relates to your proposal and how your proposal will enable follow-on from this existing research knowledge and the expected change in the technology readiness level because of the project. Include test data and other information that supports the technology’s current performance, cost, and other claims (include any graphics, images, or data needed for support after the text).Indicate whether the data, performance, cost, and other claims have been independently tested/validated. [Do not exceed 400words]

Click or tap here to enter text.

**3. Provide the estimated goals (technical, performance, and cost) of the proposed solution:** 1) at the end of this project (or at the prototype stage if there will be no prototype by project conclusion) and 2) when fully commercialized. Provide support for your estimates. Note that end-of-project goals should match those in your proposed Statement of Work**.** [Do not exceed 400 words]

Click or tap here to enter text.

**4. Intellectual Property:** Describe any relevant intellectual property (IP), patents or licenses involved with your proposed solution. If appropriate, address patents (pending, filed or granted), patent searches performed, freedom to operate, ownership of the IP, reliance on other IP or agreements, the status of licensing your technology to others or your need to license others' technology, etc. If your solution would require access to platform IP or an enabling technology in the private domain, describe your plans for securing access. [Do not exceed 300 words]

Click or tap here to enter text.

***this section should be completed for FUNDING CATEGORY B & C projects only***

IV. COMMERCIALIZATION POTENTIAL OF PROPOSED PRODUCT

**1. Past and Future Efforts:**

1. Indicate how much time and funding have been spent to bring the Offshore Wind technology to the current state of development. Indicate the amount and source of funding to bring this technology to its current state of development (e.g. self-funded, investor-funded, any previous publicly funded projects, etc.). Indicate whether you have participated in publicly sponsored market acceleration program such as a technology incubator or entrepreneur-in-residence program. Also, indicate when significant milestones were achieved. [Do not exceed 300 words]

Click or tap here to enter text.

1. Indicate how much time and funding will be needed to commercialize the Offshore Wind product or supporting solution and bring it to market **after completion of the proposed project**. Indicate anticipated sources of funding (i.e. private capital, federal funding, other research organizations, corporate partners, etc.) methods to acquire this funding. Identify any potential target strategic partners that could reduce the time to market of your product or service by providing access to marketing/sales channels, manufacturing facilities or other resources. Indicate when you expect to achieve significant milestones. You are encouraged to provide this information using a multi-year timeline graphic, starting at project commencement and going through product commercialization. This graphic may be embedded into his Proposal Narrative as an image. As an example, please refer to the sample Gantt chart provided below. [Do not exceed 300 words]



Click or tap here to enter text.

**2. Marketing and Sales:**

* 1. Identify target markets and their relative characteristics, including size, competition, regulatory constraints, and technological trends. (A bottom-up market description of your specific target markets is preferred, where you demonstrate an understanding of who your customers are and their needs, as opposed to a “generic” top-down approach. This should be directly tied to your Business Model Canvas.) [Do not exceed 350 words]

Click or tap here to enter text.

* 1. Describe your proposed marketing strategies and why they will be successful. Describe how you will reach, engage, and distribute your product or supporting solution to the target market(s). Provide realistic sales/revenue estimates. Describe market entry barriers you will encounter and how you would expect to overcome them. [Do not exceed 350 words]

Click or tap here to enter text.

* 1. Does the success of the proposed activity rely on a specific environment to achieve scale and function (i.e. it requires a certain brand of equipment or a particular setting or location)? [Do not exceed 350 words]

Click or tap here to enter text.

* 1. Describe any partnerships and/or licensing agreements you have secured or will need to secure to undertake the project work that you propose. Describe the relationships and critical partnerships that will be required for the deployment and commercial success of your product or supporting solution. You should include letters of commitment from key partners that reinforce these relationships. [Do not exceed 350 words]

Click or tap here to enter text.

**3. Financial Projections:** Provide a three-year, high-level financial forecast for the product or supporting solution starting in the first year that it is commercially available. Include expected revenue, costs, and profits. The Three-Year Financial Projections template can be found under “Associated Documents” on the webpage for this PON at NYSERDA’s website. Once this worksheet is fully completed, please save a copy of it in PDF format and include the worksheet as an Attachment B4 to this submission. In preparing projections, please allocate corporate-wide costs, such as Depreciation or G&A to the specific product/solution that is the subject of the proposal, and indicate your assumptions or methods for that allocation

The Three-Year Financial Projections worksheet (Attachment B4) should be attached. Is it? Yes/No

**4. Manufacturing Plan:** Discuss your product manufacturing plan, including whether one of the team members will manufacture the product, if there will be a manufacturing partner, if a license will be sold for the technology, or if you have another strategy in mind. If you plan on manufacturing the product, describe your plans for initiating setup and expanding existing facilities. Discuss any key issues that will need to be addressed (i.e. any specialized equipment, strategic alliances, long lead time buying decisions, cost/volume issues, and plans for any service support functions to enhance the production). If you plan on licensing the technology, describe your licensing strategy, including your strategy to find licensing partners. [Do not exceed 500 words]

**5. Replication Potential (for projects that include pilot or validation testing ONLY):** How is the demonstration testing site(s) representative of and applicable to other types of locations, U.S. offshore wind areas and/or supply chains that could potentially benefit from using this product or service? What is the current market penetration in the United States? Describe the potential U.S. market (including market size) for the product or supporting solution that you expect to open by overcoming the barriers addressed in this proposal. [Do not exceed 500 words]

Click or tap here to enter text.

6. **Field Testing Site (for projects that include pilot or validation testing ONLY):** Provide information about the demonstration testing site(s) that will host the product or supporting solution. This information should include the site contact, physical address, facility type, primary use, and other relevant information. Include an explanation of why the demonstration site is a good candidate for the technology or supporting solution to be tested. [Do not exceed 250 words]

Click or tap here to enter text.

***this section should be completed for FUNDING CATEGORY C projects only***

V. DEMONSTRATION TESTING SITE AND PRODUCT

**1. Field Testing Site:** Provide information about the demonstration testing site(s) that will host the product or supporting solution. This information should include the site contact, physical address, facility type, primary use, and other relevant information. Include an explanation of why the demonstration site is a good candidate for the technology or supporting solution to be tested. [Do not exceed 250 words]

Click or tap here to enter text.

**2. Letter of Commitment:** Have you secured a commitment of interest from the proposed product or supporting solution demonstration testing site(s) or decision makers? If so, include the letter of interest for each as an attachment. If not, describe the plan for identifying and securing commitments. [Do not exceed 250 words]

Click or tap here to enter text.

Letter(s) of site commitment should be attached. Complete? Yes/No

**3. Description of Product or Supporting Solution Being Tested**: Describe the specific product or supporting solution that will be demonstrated. Include information on any system components, key specifications, and a description of any site- or hardware-specific design issues. [Do not exceed 250 words]

Click or tap here to enter text.

**4. Provide the estimated cost and goals (technical, performance, cost, and other goals) of the specific product or supporting solution that you will be testing.** Describe technical and performance goals for the proposed demonstration testing project and provide support as to why they are achievable. Provide an economic analysis of the proposed technology, including an estimated cost/benefit ratio. [Do not exceed 250 words]

Click or tap here to enter text.

***this section should be completed for FUNDING CATEGORY C projects only***

VI. REPLICATION POTENTIAL OF PROPOSED DEMONSTRATION

**1. Replication Potential:** How is the demonstration testing site(s) representative of and applicable to other types of locations, U.S. offshore wind areas and/or supply chains that could potentially benefit from using this product or service? What is the current market penetration in the United States? Describe the potential U.S. market (including market size) for the product or supporting solution that you expect to open by overcoming the barriers addressed in this proposal. [Do not exceed 500 words]

Click or tap here to enter text.

**2. Replication Strategy:** What is your strategy (both during the proposed project and after the project is complete) to promote market acceptance and replication in the U.S., and to stimulate more U.S. installations of the demonstrated product or supporting solution? Identify stakeholders that will be influential in accelerating adoption and describe plans for engaging with these stakeholders? Describe how the results from the demonstration project will be made public to a wider audience. [Do not exceed 400 words]

Click or tap here to enter text.

**34. Evaluation of Results:** Describe the evaluation plan for validating the observations conducted during project demonstration testing. You must include the following in describing the plan:

* Statement of the equipment installation, completion/implementation, and system commissioning.
* Adherence to all applicable local, state, and federal, fire, electrical, interconnection, environmental impact, and other relevant codes and standards.
* Describe in detail: the data acquisition system, its sampling schedule, supporting instrumentation, remote monitoring and report generating capabilities.
* Identify who will be responsible for all data collection, operator and maintenance interfacing, and tracking system performance.
* Identify how you will track system performance, pre- and post-installation/implementation of the proposed product or supporting solution at the demonstration site or fleet, and how these relate to the performance goals that you specified.
* Describe your plan to measure and validate this actual cost/benefit ratio during the demonstration testing.

[Do not exceed 500 words]

Click or tap here to enter text.

***this section should Be COMPLETED for FUNDING CATEGORY A PROJECTS ONLY***

VII. Technical Feasibility Study Project Information

**1.** Provide statistics or other data for quantifying how significant the described problem you are seeking to solve is to the U.S. offshore wind industry. Quantify the problem’s impact in terms of LCOE, a component of LCOE, or benefits to US. -based offshore wind manufacturing and supply chain, as appropriate. [Do not exceed 300 words]

Click or tap here to enter text.

**2.** Describe in detail the current or pending circumstance preventing the technology or service from being used in the described situation.

Examples of such circumstance include, but are not limited to, lack of technical development, insufficient U.S. manufacturing base or supply chain, real or perceived risks inhibiting project financing, outdated codes or standards, lack of information to form effective government regulations or policies, and unintended market disincentives. [Do not exceed 300 words]

Click or tap here to enter text.

**3.** Describe the strategies for removing barriers that prevent or limit wider use of the proposed technology or supporting solution. [Do not exceed 300 words]

Click or tap here to enter text.

**4.** Describe the technology transfer strategies that would be performed to educate relevant partners and stakeholders that the proposed technology's barriers have been removed. [Do not exceed 300 words]

Click or tap here to enter text.

VIII. STATEMENT OF WORK & SCHEDULE

**1. Statement of Work:** The Statement of Work (SOW) is the primary contractual document that outlines work activities and quantifies deliverables. Complete the Statement of Work template in **Attachment B1**, found under “Associated Documents” on the webpage for this PON at NYSERDA’s website, and include it in your proposal. The award Form of Agreement is also contained within this attachment, but it is provided for reference only and does not need to be included in your full proposal submission.

Your Statement of Work should be attached. Is it? Yes/No

**2. Schedule:** Provide an overall schedule of the project and timing of major tasks and deliverables. Note that project tasks in the schedule should match the project tasks in the Statement of Work. The schedule should be in a bar chart starting with “Month 1”, Month 2”, etc.

Click or tap here to enter text.

IX. Additional Project benefits

Click or tap here to enter text.

**1.** Quantify any additional project benefits to the extent possible: resiliency & reliability benefits, congestion, etc., environmental benefits (e.g., emission reductions, minimizing hazardous materials, etc.), economic benefits (e.g., jobs created or retained, reduced life-cycle costs, enhanced economic viability, etc.), safety and security benefits (e.g., reduction in deaths, injuries and real property losses, etc.), and other benefits (e.g., cost of compliance with State or Federal regulations, enhanced quality of life issues, etc.). [Do not exceed 300 words]

Click or tap here to enter text.

2. Describe the methodology that will be used to collect the necessary data and quantify additional project benefits. [Do not exceed 300 words]

Click or tap here to enter text.

X. budget

**1.** **Complete a proposed Milestone Payment Schedule** per the template given as **Attachment C1,** found under “Associated Documents” on the webpage for this PON at NYSERDA’s website. Indicate requested funding in the column labeled "Project Funding." Include budget for both technical and commercialization tasks, as appropriate. Note that contracts will be funded on a “milestone payment” basis; payments will be made to the Contractor upon successful completion of each identified Milestone, as determined by delivery of all associated Deliverables. If additional cost share is being provided, identify the source and allocate cost share funding in the columns provided. Multi-phase projects should make the division of the project into phases clear, and include subtotals for each phase as well as the overall project total.

**2. Complete the Input to DOE Sub-Recipient Budget Justification Form, Attachment C2,** found under “Associated Documents” on the webpage for this PON at NYSERDA’s website. List proposed NYSERDA and cost-share funding, if any, in the columns provided for each Budget Period. Budget Periods are defined according to the schedule agreed between NYSERDA and U.S. DOE, and are fixed as follows:

**Budget Period 1: from October 1 2018 to December 31 2019**

**Budget Period 2: from January 1 2020 to December 31 2020**

**Budget Period 3: from January 1 2021 to December 31 2021**

**Budget Period 4: from January 1 2022 to September 30 2025**

It is anticipated that all project costs associated with awards under this solicitation would occur within Budget Period 4 as defined above.

Total budget amounts for each Budget Period given in the DOE Sub-Recipient Budget Justification Form must be consistent with the Milestone Payment Schedule (Attachment C1).

**3. Cost Sharing:** Project proposals do not require a minimum cost share. However, cost sharing that enables additional project scope and benefits will be favorably considered (refer to evaluation criteria).

* 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. The proposal should clearly show all such additional funding in both the Milestone Payment Schedule and the DOE Sub-Recipient Budget Justification.
* NYSERDA and U.S. DOE will not fund efforts that have already been undertaken. The proposing team cannot claim as cost-share any expenses that have already been incurred.

The proposed Milestone Payment Schedule (Attachment C1) should be attached. Is it? Yes/No

The DOE Sub-Recipient Budget Justification (Attachment C2) should be attached. Is it? Yes/No

XI. PROPOSER QUALIFICATIONS

**In this section, you will describe your team, organization’s strengths, key individuals and past performances.**

**1. Proposing Organization(s), Organizational Chart, and Location of Personnel:** Briefly describe your organization and the section/department/group proposing to carry out the work. Include date founded, the total number of employees, product portfolio, any previous examples of successful product commercialization, and geographic location. Include any sub-contractors and other sponsors with significant involvement. **Note that** if any sub-contractor not named in the proposal is to be paid more than $50,000, a competitive bidding process must be used. (see the Sample Agreement, Attachment D). [Do not exceed 400 words]

Click or tap here to enter text.

**2. Qualifications of Key Individuals:** Identify key individuals that will be involved in the project and its success. Provide one- to two-paragraph summaries of relevant technical and business expertise of these individuals and provide their physical location. Submit resumes (as appendices) of all key project team members. [Do not exceed 400 words]

Click or tap here to enter text.

Resumes of key individuals should be attached. Are they? Yes/No

**3. Prior Experience:** List NYSERDA, DOE, or other Consortium member contracts awarded, if any, in the past five years. [Do not exceed 300 words]

Click or tap here to enter text.

XII. Letters of Support

If other organizations or businesses are doing some of the work, providing services or equipment, or providing cost share, include a signed letter on that organization’s letterhead describing their commitment and cash/in-kind dollar commitment. Include any letters of interest from potential customers for the product to be developed and/or to support claims made in your proposal.

Have letters of support been provided? Yes/No

XIII. Applicant assumption of risk form

Applicants under National Offshore Wind Research and Development Consortium are required to complete the Att. 2: Assumption of Risk Form found under “Associated Documents” on the webpage for this PON at NYSERDA’s website.

Has the Applicant Assumption of Risk Form been completed and attached? Yes/No

XIV. Attachments

Please check the box to indicate which additional, attachments are included in your proposal submission. Appendices should be limited to documents directly supporting the narrative such as resumes, letters of support, calculations, business literature, and detailed schedules. Unless given their own upload field in the solicitation web portal, each supporting attachment should be appended to the end of this Att. A Proposal Narrative Template document. All files should be submitted in a searchable .pdf format.

[ ]  Att. B1: Statement of Work (required)

[ ]  Att. B2 Business Model Canvas Template (required for funding category B and C)

[ ]  Att. B3 TRL/CRL Calculation Worksheet (required)

[ ]  Att. B4 Three-year Financial Projection Worksheet (required for funding categories B and C)

[ ]  Att. C1 Milestone Payment Schedule (required)

[ ]  Att. C2 Input to DOE Sub-Recipient Budget Justification (required)

[ ]  Att. 2 Applicant Assumption of Risk Form (required)

[ ]  Letters of Site Commitment (required for projects with demonstration/testing component)

[ ]  Letters of Support

[ ]  Resumes

[ ]  References