



POWERING THE BLUE ECONOMY™:
POWER AT SEA PRIZE

**CONCEPT
Rules**

November 2023



Preface

This is the Official Rules Document that establishes the rules and requirements for the U.S. Department of Energy (DOE) Powering the Blue Economy: Power at Sea Prize, CONCEPT Phase by which the competition will be governed and adjudicated. The Prize Administrator and DOE reserve the right to modify this Official Rules Document if necessary and will publicly post any such notifications as well as notify registered Prize competitors.

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1. Executive Summary

The U.S. Department of Energy’s (DOE) Water Power Technologies Office (WPTO), in partnership with the National Oceanic and Atmospheric Administration (NOAA)-led U.S. Integrated Ocean Observing System (IOOS), NOAA National Sea Grant (NSG), NOAA Ocean Acidification Program (OAP), and NOAA Fisheries Office of Aquaculture announced a \$1.7 million Powering the Blue Economy™: Power at Sea Prize. Through this prize, WPTO seeks to:

- Engage and cultivate a community of new and existing participants in marine energy to introduce new, creative minds to Powering the Blue Economy and the marine energy field, fostering the development of new concepts and lessons learned.
- Identify new, innovative, and feasible marine energy concepts that have a high likelihood of providing power at sea in the near term to accelerate the commercialization of the nascent marine energy industry.
- Introduce competitors to WPTO and government funding mechanisms and prepare them to compete technically and financially for future funding opportunities both within and beyond DOE.

Through two phases, CONCEPT and DEVELOP, the Power at Sea Prize will provide winners with access to direct support, including trainings, testing assets, and new connections that aim to accelerate the advancement of concepts into real prototypes. In the CONCEPT Phase, competitors will select a blue economy application that their proposed system, subsystem, or component will support and an integration challenge their solution intends to resolve.

The Power at Sea Prize will award a total cash prize pool of \$1.7 million.

Table 1. Anticipated cash prize distributions for the Power at Sea Prize.

Phase	Cash Prize Pool	Per Team
CONCEPT	Up to \$200,000	Up to \$10,000 for up to 20 teams
DEVELOP	Up to \$1,500,000	Up to \$75,000 for up to 20 teams

1.1 Key Dates

- CONCEPT Phase Submission Open: November 13, 2023
- CONCEPT Phase Submission Close: July 26, 2024, at 5 p.m. ET
- CONCEPT Phase Winner Announcement: August 2024
- DEVELOP Phase Open: August 2024
- DEVELOP Phase Submission Close: May 2025
- DEVELOP Phase Winner Announcement: June 2025

1.2 Applications of Interest

The Power at Sea Prize encourages competitors to submit unique ideas and novel concepts. Submissions must meet the following characteristics:

- A tangible system, subsystem, or component that receives 50% or more of its energy needs from one of the following marine energy resources to power systems at sea: wave, tidal, ocean current, river, salinity gradients, or thermal gradients
- The proposed solution is based on sound technical principles.
- The proposal either directly addresses a Power at Sea blue economy application and challenge area, selected from Table 2 and the list in Section 2.3.1, respectively, or provides a clear description and justification for pursuing an alternative application and/or challenge.
- The proposed solution does **not** involve the lobbying of any federal, state, or local government.
- The proposed solution **cannot** primarily consist of software, a regulatory toolkit, or methodology for improving systems that are already commercial.

WPTO strongly discourages the duplication of prior submissions of any kind that have received an award via any phase of any other WPTO-funded programs.

2. Background

2.1 The Blue Economy and Energy

Our oceans are a crucial asset: a precious habitat to millions of species, a vital carbon sink, and a key determinant of environmental and human health. The oceans also provide an essential source of food and act as an enabler of global trade—the blue economy. The World Bank defines the blue economy as “the sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystems.”

Society’s growing need for ocean-derived food, materials, energy, and knowledge is fueling growth in next-generation maritime or “blue” technologies. Industries such as ocean observation, for example, are moving further offshore to take advantage of and capture data across the vast scale of the ocean. This effort requires access to consistent, renewable power untethered to land-based power grids.

The WPTO’s Powering the Blue Economy initiative is a meaningful first step toward protecting, understanding, and leveraging the immense power and promise of the oceans to help us achieve our collective economic, social, and environmental goals. Collaboration and engagement are central to efforts supporting communities and marine life while sustainably providing power to the blue economy.

In 2017, WPTO began investigating the potential for blue economy activities to serve as markets for marine energy technologies. The potential markets were found to align with two themes:

1. Providing power at sea to support offshore industries, science, and security activities.
2. Meeting the energy and water needs of coastal and rural island stakeholders in support of resilient coastal communities.

The [Powering the Blue Economy report](#) detailed possible energy solutions that could be applied to these two themes. Technologies that address these non-grid energy demands may prove to be economically viable opportunities in the near term for the marine energy industry. By pursuing such opportunities, a spill-over effect is expected that leads to advances in marine energy technology readiness for more traditional utility-scale electrical grid markets and potentially other unforeseen opportunities.

With reliable and cost-effective renewable power at sea, we could realize a greater understanding of the world’s oceans for sustainable and responsible use of ocean resources and better prediction and tracking of tropical storms; aquaculture could be better supported and poised for industry growth to ensure food security for coastal communities; and the ocean’s role in climate change mitigation could be realized by using renewable energy to power carbon dioxide removal and account for the amount of carbon removed.

2.2 Blue Economy Applications

The Power at Sea Prize aims to support the development of concepts that could provide power at sea to applications defined in the following table, or other applications that could benefit from a source of renewable energy away from shore. Prize competitors must consider which applications could benefit from their marine energy concept as a part of their submission and identify how their solution will provide power to this application. The following table identifies applications in the blue economy, including their order of magnitude of power needs:

Table 2: Example at-sea end uses in the blue economy, including the order of magnitude of power needs.

Estimated Power at Sea Device Power Usage (order of magnitude)					
	Milliwatts (mW)	Watts (W)	Kilowatts (kW)	Megawatts (MW)	Gigawatts (GW)
mCDR (including monitoring)	•	•	•	•	•
Ocean observation and navigation	•	•	•	•	
Marine aquaculture (including monitoring)	•	•	•	•	
Underwater vehicle charging		•	•		
Subsea communications		•	•	•	•
Mining seawater minerals and gasses			•	•	•
Data centers			•	•	•
Hydrogen electrolysis			•	•	•
Marine restoration			•	•	•
Pollution remediation			•	•	•
Offshore fuels production				•	•

2.3 The Challenge for Power at Sea

Significant scientific, engineering, and financial challenges exist for applications requiring power while at sea. Addressing these challenges, particularly concurrently, has the potential to unlock advances in a variety of applications, as described in Section 2.2. This prize seeks innovative solutions to one or more of the following key challenges to provide power at sea for one of those applications, and competitors will be required to identify the challenge their solution aims to solve as a part of their submission:

2.3.1 Challenge Areas

Competitors will be required to choose one challenge area to address from the following list of specific blue economy integration challenges (listed in alphabetical order) that can be addressed in the marine energy concepts submitted to this prize:

- **Access:** How does your marine energy solution help to reduce the high cost or limited opportunities for service, maintenance, and/or intervention for at-sea blue economy applications?
- **Deployment duration:** How does your marine energy solution improve the deployment duration of at-sea blue economy applications?
- **Energy storage:** How does your marine energy solution improve the capabilities and duty cycles currently limited by battery capacity, especially considering that batteries may account for most of sensor volume and weight?
- **Environmental/ecological impact:** How does your marine energy solution minimize the negative effects of interactions with local flora and fauna at the deployment site?
- **Harsh operational conditions:** How does your marine energy solution minimize or otherwise address operations in challenging conditions like violent storms, strong currents, strong pressure (i.e., for subsea applications), corrosive media, and unwanted growth of marine organisms?
- **Hybridization with other renewable energy resources:** How does your hybrid solution utilize marine energy to address power gaps caused by intermittency of other non-marine renewable energy resources like solar and wind due to seasonality and changing weather patterns?
- **Suitability of power:** Sensors, instrumentation, and automation require specific power at specific times. How does your marine energy solution match power generation to power needs to maximize efficiency?

2.4 Prize Structure

The Power at Sea Prize is structured to support competitors through the early stages of developing a new system, subsystem, or component from original conception, to teaming, to a testable stage of initial development. The prize aims to provide a proving ground for ideas that have not yet had the opportunity to flourish and is structured so competitors end the prize with concepts, materials, and media collateral to better position them for future technology development.

2.4.1 CONCEPT Phase

The Power at Sea CONCEPT Phase is focused on forming a cohort of participants, ensuring innovators are engaged with the competitor support mechanisms, and preparing teams for the challenges in the DEVELOP Phase. Concepts in early stages of development are welcome—from a system, subsystem, or component that has not yet been developed to those that have had some previous work completed up to the prototype stage.

As a part of their submission, competitors will need to identify the challenge area they intend to resolve from the list included in Section 2.3.1 and identify the end use they intend to support from Table 2 in Section 2.2. Specific submission requirements for the overall package are identified in Section 4.

Up to 20 CONCEPT Phase winners will be awarded from a cash prize pool of up to \$200,000.

2.4.2 DEVELOP Phase

The Power at Sea DEVELOP Phase will be focused on continued concept development. Competitor support will be tailored to meet competitor needs, depending on what stage of development their concept is in. Support will include prototyping support, access to makerspaces, and/or commercialization training. The DEVELOP Phase aims to better position competitors for continued technology development following the prize.

Specific submission requirements for the DEVELOP Phase will be defined in a future rules document. Up to 20 DEVELOP Phase winners will be awarded from a cash prize pool of up to \$1,500,000.

2.4.3 Post-Prize Opportunities

The intent of the prize is to provide support for competitors developing systems, subsystems, or components new to WPTO from concept to ideation during the prize and better prepare competitors for continued technology development after the prize.

As a part of the prize structure, WPTO and other partnering organizations will share potential future funding opportunities to introduce competitors to mechanisms for continued technology development. These mechanisms include but are not limited to the [Small Business Innovation Research \(SBIR\)](#) program, the [NOAA Ocean-Based Climate Resilience Accelerators](#), and other green technology incubators or accelerators. More detailed information will be provided as the prize progresses.

3. Competitor Support Mechanisms

To better enable competitors to be successful in the Power at Sea Prize, the Prize Administrator provides access to a network of support for competing teams. The following mechanisms have been formalized for competitors to ensure they are able to develop a high-quality application or to support the execution of their proposed activities from the CONCEPT Phase through the DEVELOP Phase of the prize.

Some of these trainings may take place in person. Should competitors elect to attend these in-person events, they are expected to leverage the funds provided through the prize.

3.1 Power Connectors

Power Connectors support all competitors participating in the prize. The Power Connectors will provide equal, direct support, including webinars, training, and networking sessions for the benefit of all teams. Potential areas for support and training opportunities are identified in Table 3, but this list is not intended to be comprehensive.

During the prize, competitors may be asked for their input on the types of support that will be the most relevant to them. The support provided during the prize will be shaped around the needs of the competing teams. Opportunities for virtual participation will be provided to all competitors. A final list of these opportunities will be distributed as the prize develops.

Table 3. Example support that may be provided by supporting organizations.

Example Support Tasks	Details
Outreach & Engagement	<ul style="list-style-type: none"> Identify and reach out to potential applicants for the prize. The focus of this outreach will be to ensure the pipeline of potential applicants grows beyond WPTO's existing networks, bringing in innovators from other industries and improving the diversity of competitors to explore the opportunities in marine energy.
Office Hours	<ul style="list-style-type: none"> Provide feedback to competitors on their submissions in the CONCEPT Phase. This feedback is provided by a third party and does not represent the opinion of WPTO, Pacific Northwest National Laboratory, or the National Renewable Energy Laboratory. This support does not include writing submissions or direct red-lining drafts.
Networking	<ul style="list-style-type: none"> Host virtual networking meetings where competitors can introduce themselves to other competitors that may be interested in collaborating. As the prize progresses, host peer-to-peer workshops where CONCEPT Phase winners and other organizations can discuss challenges and make connections with potential partners. Host a public showcase and networking event featuring the CONCEPT Phase winners, their projects, and any partnership opportunities.
Targeted Trainings	<ul style="list-style-type: none"> Identify training session topics that would be the most impactful for winners. Host seminars featuring experts on topics such as an introduction to marine energy, applications in the blue economy, commercialization best practices, or other topics of interest.

Updates on training sessions, mentorship contacts, and office hours will be posted on the [HeroX platform](#) periodically, and competitors are encouraged to leverage these opportunities.

4. CONCEPT Phase Submission Requirements

4.1 How to Enter

Go to [HeroX](#) and follow the instructions for registering and submitting all required materials before the deadline in the Key Dates section and as displayed on the [HeroX](#) website.

Competitors can also form teams or find partners through the [HeroX platform](#) and are encouraged to form multidisciplinary teams while developing their concept. The [HeroX platform](#) provides a space where parties interested in collaboration can post information about themselves and learn about others who are also interested in competing.

4.2 What to Submit

The following items constitute the CONCEPT Phase submission package and must be submitted through the [HeroX platform](#). Each item is described in more detail in the following sections.

Competitors may provide multiple submission packages for review; however, each must be materially different in content and topic to be considered. If multiple submissions from the same competitor are too similar, only one will be scored and considered for award at the DOE's sole discretion.

Table 4. Submission requirements and scoring guide.

Item	Will Be Made Public ¹	Scored Item
Summary Page	Yes	Accept/Reject
3-Minute Video Pitch	Yes	Yes
Technical Narrative	No	Yes

4.2.1 Public-Facing Submission Materials

4.2.1.1 Summary Page

The Summary Page will be made public and is intended to introduce the competitor and the proposed project. While there is not a score associated with the cover page, this will serve as an initial qualification for competitors to determine the solution’s relevance to the prize.

Competitors will identify basic information about their submission, enabling the prize administration team to assign appropriate reviewers. This information should not exceed a single page, and should include:

- Title.
- Competitor team name and contributing team member names.
- Organization (name, contact information, web link, 9-digit ZIP code).
- Challenge area from the list included in Section 2.3.1.
- Blue economy application from Table 2 in Section 2.2.
- Short description of the proposed plan, activities, and use of the prize funds.
- Link to the 3-minute video pitch.

4.2.2 Scored Submission Items

The scored items in the CONCEPT Phase submission package are the 3-minute video pitch and a technical narrative.

Scored materials will be evaluated on how well they address scoring statements in the respective criterion; each statement (described below) will be scored from 0 to 5, as shown here.

0	1	2	3	4	5
Strongly Disagree/ Does Not Address	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree/Fully Addresses

Table 5 explains how the scores for each submission will be calculated.

¹ Competitors who do not want documents to be made public that are not already intended to be public-facing will need to mark them according to the instructions in Appendix A (Section A.10).

Table 5. Scoring criteria for CONCEPT Phase submission elements.

Scoring Criteria	Number of Scored Statements	Total Possible Points
3-Minute Video Pitch	4	20
Technical Narrative	14	70
Criterion 1: Identification of Application and Challenge Area	3	15
Criterion 2: Proposed System, Subsystem, or Component	6	30
Criterion 3: Team Engagement and Planned Development	5	25
TOTAL	18	90

4.2.2.1 3-Minute Video Pitch

Competitors will produce a 3-minute video that will help the reviewers and public understand the competitor, the concept, and the relevant market the technology intends to serve. Suggested content for the video is noted on the left-hand side of Table 6. The right-hand side of the table includes the scored statements that the reviewers will use to evaluate submissions. Individual reviewers will assign a score between 0 and 5 for each scored statement after reviewing the submission. Reviewers will not view any material beyond 3 minutes.

Competitors should be creative and convey information in a fun and engaging way. Reviewers will focus on the content, not the quality, of the video production, as this is intended to primarily help introduce someone to the technical concept. Upload the video online to a publicly accessible platform (e.g., YouTube, Vimeo).

Table 6. Scoring criteria for 3-minute video pitch.

Scoring Criteria: 3-Minute Video Pitch	
<p>Suggested Content Competitor Provides</p> <ul style="list-style-type: none"> • A high-level description of the concept the competitor aims to develop through this prize should the submission be selected. • An explanation of the blue economy applications the concept aims to serve with further development of their technology. • A clear connection to how the proposed system, subsystem, or component can address the identified challenge area. 	<p>Each Statement Scored on a 0–5 Scale</p> <ul style="list-style-type: none"> • The described system, subsystem, or component appears technologically viable with further development. • The competitor has demonstrated a clear understanding of the blue economy application they intend to support with further development of their technology. • The proposed system, subsystem, or component has the potential to resolve the challenge area they aim to address. • The video presents the system, subsystem, or component in a clear and understandable way.

4.2.2.2 Technical Narrative

Competitors will write a detailed narrative describing the solution. There is a template on the [HeroX platform](#) to use in drafting the technical narrative. The technical narrative should serve as the primary element of the submission, addressing the scoring criteria described in Table 7 and including:

- A clear description of the system, subsystem, or component, including any figures or modeling output related to the concept as graphics.
- A description of any previous work related to the concept and any DOE funding that supported the concept (if applicable).
- A paragraph describing how the system, subsystem, or component will provide power at sea for the intended blue economy application, in alignment with Table 2 in Section 2.2.
- A paragraph describing how the system, subsystem, or component will help resolve the identified challenge area, in alignment with the list included in Section 2.3.1.
- A paragraph describing what competitor support mechanisms were leveraged during the CONCEPT Phase and how they influenced the concept and/or CONCEPT Phase submission, and/or any plans for leveraging the competitor support mechanisms during the DEVELOP Phase. Forward-looking support may include support that would be helpful but is not currently included in this document (see Section 3).

The total page count of the technical narrative must not exceed **10 pages**. The document font size must be 10.5 or greater, with margins of no less than .25 inch minimum on all sides. Acceptable fonts include Franklin Gothic, Helvetica, Times New Roman, Veranda, Tahoma, Gill Sans, Calibri, Palatino, Avante Garde, Arial, Roboto, Montserrat, Libre Franklin, Garamond, Open Sans, Lato, and Avenir. The narrative may also include up to **five** supporting visualizations or graphics.

The technical narrative must be submitted as a PDF onto the [HeroX platform](#) along with the other submission documents. Information contained in hyperlinks to external sources and any text or graphics beyond the designated limits will not be reviewed or considered.

Table 7 describes the content that the competitor should provide in the submission to successfully address each criterion. The right-hand column contains the scored statements the reviewers will use for each criterion. The left-hand column includes suggested content that address each statement. The suggested content provided is not mandatory. Rather, these are examples to help guide responses. Competitors are welcome to use other information as applicable, as long as it effectively addresses the scored statements listed on the right.

Table 7. Scoring criteria for the technical narrative.

Scoring Criteria: Technical Narrative Criterion 1 – Identification of Application and Challenge Area	
<p>Suggested Content Competitor Provides</p> <ul style="list-style-type: none"> • Identification of relevant Power at Sea blue economy application and challenge area, selected from Table 2 in Section 2.2 and the list in Section 2.3.1, respectively. Alternatively, competitors may provide a clear description of an application and/or challenge area not listed but must clearly describe the background on why they are proposing in these areas and justify the benefit to marine energy. • Clear description of how the proposed system, subsystem, or component will address the challenge area identified and serve the proposed end use. • A description of how the concept builds upon past work, including any previous work related to the concept, and any DOE funding that supported the concept (if applicable). 	<p>Each Statement Scored on a 0–5 Scale</p> <ul style="list-style-type: none"> • The system, subsystem, or component is adequately described and is a novel approach to resolving the identified integration challenge. • The system, subsystem, or component has the potential to serve the identified blue economy application and will meet the needs of the blue economy application. • The proposed concept is either a newly developed, novel concept or builds on previous research pursued.
Scoring Criteria: Technical Narrative Criterion 2 – Proposed System, Subsystem, or Component	
<p>Suggested Content Competitor Provides</p> <ul style="list-style-type: none"> • Conceptual drawings (e.g., images of 3D CAD drawings, etc.) of your system, subsystem, or component. • Demonstration that the power generation potential meets application requirements, including a table or list of key (known or likely) design requirements for the identified application. • Identification of physical traits of the system, subsystem, or component such as size, weight, materials, etc. • Explanation of how the system, subsystem, or component may be built, deployed, maintained, and recovered 	<p>Each Statement Scored on a 0–5 Scale</p> <ul style="list-style-type: none"> • The system, subsystem, or component represents an innovative approach built on reasonable assumptions, valid technical foundations, and lessons learned from other notable efforts in this space. • The applicant justifies the method of power generation and has sufficiently explained its principles of operation. • The submission adequately communicates key (known or likely) design requirements and initial thoughts on how these could be addressed in the proposed system, subsystem, or component. • The applicant has communicated initial thoughts on methods for manufacturing, installing, operating, and maintaining the

<p>and/or decommissioned at the end of its useful life.</p> <ul style="list-style-type: none"> • Explanation of how the system, subsystem, or component may address key operating constraints, like biofouling, corrosion, or long-term calibration. • Estimated life expectancy of the system, subsystem, or component. • Description of the method of energy storage and power management, if applicable, and associated specifications on the storage system (capacity, charge and discharge rate, etc.). • If applicable, provide evidence of avoided costs, e.g., ship time, maintenance costs, etc. • Describe the current technology readiness of the system, subsystem, or component. 	<p>proposed system, subsystem, or component.</p> <ul style="list-style-type: none"> • The proposed system, subsystem, or component is between concept and early-stage prototype. • The submission is technically feasible (0 or 5).
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Scoring Criteria: Technical Narrative Criterion 3 – Team Engagement and Planned Development

<p>Suggested Content Competitor Provides</p> <ul style="list-style-type: none"> • Describe the team makeup and how the team will cultivate a culture of inclusion to ensure all team member’s contributions are considered. • Describe potential challenges the team may face in creating an inclusive environment and making accommodations for team members, and how the team plans to address those challenges. • Create a DEVELOP Phase Gantt chart, schedule, and work breakdown structure. • Outline specific risks and a risk management approach to project design, including a description for how the planned work will reduce missing information and risks and increase prospects of successful outcome. • A description of the competitor support mechanisms leveraged during the CONCEPT Phase and how they influenced the CONCEPT submission, and a 	<p>Each Statement Scored on a 0–5 Scale</p> <ul style="list-style-type: none"> • The competitor has clearly outlined a plan to cultivate a culture of inclusion, seek out diverse perspectives, and effectively consider all team member’s contributions. • The competitor has a clear plan to accommodate a diverse team and any team members’ specific needs. • The competitor has provided detailed plans for proceeding with the development of the proposed concept in the next phase. • The competitor identifies risks and the challenges in maturing the technology and has plans that are likely to manage these identified risks. • The competitor has already engaged and commits to continuing to engage with the competitor support mechanisms provided in the DEVELOP Phase.
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description of plans to leverage competitor support during the DEVELOP Phase. Forward looking support may include support that would be helpful but is not listed in Section 3.	
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4.3 How We Determine Winners and Make Awards

The Prize Administrator screens all completed submissions and ensures that the competitors are eligible. Then the Prize Administrator, in consultation with DOE and NOAA, assigns subject matter expert reviewers to independently score the content of each submission. The reviewers will be composed of federal and nonfederal subject matter experts with expertise in areas relevant to the competition. They will review the 3-minute video pitch and the technical narrative submissions according to the evaluation criteria.

4.3.1 Reviewer Panel Scoring

The scoring of submissions will proceed as follows:

- Subject matter expert reviewers will review each submission individually and assess the response from the competitor in relation to each scoring statement on the right-hand side of the tables.
- Reviewers will score each statement from 0 to 5, aside from those noted as a binary scoring statement, depending on the degree to which the reviewer agrees that the submission reflects the statement. This review scale is defined in Section 4.2.2.
- Each statement score will be added together to generate a total score for the submission, which can be up to 85 points, as described in Table 5 in Section 4.2.2.
- The total scores from each reviewer will be averaged to produce a final score for the competitor. This score will inform the judge's decisions on prize awards.

4.3.2 Interviews

DOE may decide to interview a subset of competitors. The interviews would be held before the announcement of the winners and would serve to help clarify questions the reviewers may have. Participating in interviews is not required, and interviews are not an indication of a competitor's likelihood to win.

4.3.3 Final Determination

The Director of the DOE's Water Power Technologies Office is the final judge of the competition and will make award determinations. Final determination of the winners is based on the reviewers' feedback and scores, application of program policy factors, and the interview findings (if applicable).

4.3.4 Announcement

After the prize closes, the Prize Administrator will notify winners and request the necessary information to distribute cash prizes. The Prize Administrator will then publicly announce winners.

See Appendix 1 for additional requirements. COMPETITORS THAT DO NOT COMPLY WITH THE ADDITIONAL REQUIREMENTS IN APPENDIX 1 MAY BE DISQUALIFIED.

Appendix A: Additional Terms and Conditions

A.1 Requirements

Your submission for the prize is subject to the following terms and conditions:

- You must post the final content of your submission or upload the submission form online by 5 p.m. ET on July 26, 2024, before the submission period closes. Late submissions or any other form of submission may be rejected.
- All submissions that you wish to protect from public disclosure must be marked according to the instructions in Section A.10 of this appendix. Unmarked or improperly marked submissions will be deemed to have been provided with unlimited rights and may be used in any manner and for any purpose whatsoever.
- You must include all the required elements in your submission. The Prize Administrator may disqualify your submission after an initial screening if you fail to provide all required submission elements. Competitors may be given an opportunity to rectify submission errors due to technical challenges.
- Your submission must be in English and in a format readable by Microsoft Word or Adobe PDF. Scanned hand-written submissions will be disqualified.
- Submissions will be disqualified if they contain any matter that, in the sole discretion of the U.S. Department of Energy or the National Renewable Energy Laboratory (NREL), is indecent, obscene, defamatory, libelous, and/or lacking in professionalism, or demonstrates a lack of respect for people or life on this planet.
- If you click "Accept" on the [HeroX platform](#) and proceed to register for any of the prizes described in this document, these rules will form a valid and binding agreement between you and DOE and are in addition to the existing [HeroX](#) Terms of Use for all purposes relating to these contests. You should print and keep a copy of these rules. These provisions only apply to the prize described here and no other prize on the [HeroX platform](#) or anywhere else.
- The Prize Administrator, when feasible, may give competitors an opportunity to fix non-substantive mistakes or errors in their submission packages.
- Winners are expected to cover any travel costs with prize funds.
- As part of your submission to this prize, you will be required to sign the following statement:
I am providing this submission package as part of my participation in this prize. I understand that the information contained in this submission will be relied on by the federal government to determine whether to issue a prize to the named competitor. I certify under penalty of perjury that the named competitor meets the eligibility requirements for this prize competition and complies with all other rules contained in the Official Rules document. I further represent that the information contained in the submission is true and contains no misrepresentations. I understand false statements or misrepresentations to the federal government may result in civil and/or criminal penalties under 18 U.S.C. § 1001 and § 287, and 31 U.S.C. §§ 3729-3733 and 3801-3812.

A.2 Verification for Payments

The Prize Administrator will verify the identity and role of all competitors before distributing any prizes. Receiving a prize payment is contingent upon fulfilling all requirements contained herein. The Prize Administrator will notify winning competitors using provided email contact information for the individual or entity that was responsible for the submission. Each competitor will be required to sign and return to the

Prize Administrator, within 30 days of the date on the notice, a completed NREL Request for ACH Banking Information form and a completed W9 form (<https://www.irs.gov/pub/irs-pdf/fw9.pdf>). In the sole discretion of the Prize Administrator, a winning competitor will be disqualified from the competition and receive no prize funds if: (i) the person/entity does not respond to notifications; (ii) the person/entity fails to sign and return the required documentation within the required time period; (iii) the notification is returned as undeliverable; (iv) the submission or person/entity is disqualified for any other reason.

In the event of a dispute as to any registration, the authorized account holder of the email address used to register will be deemed to be the competitor. The "authorized account holder" is the natural person or legal entity assigned an email address by an Internet access provider, online service provider, or other organization responsible for assigning email addresses for the domain associated with the submitted address. All competitors may be required to show proof of being the authorized account holder.

A.3 Teams and Single-Entity Awards

The Prize Administrator will award a single dollar amount to the designated primary submitter, whether consisting of a single or multiple entities. The primary submitter is solely responsible for allocating any prize funds among its member competitors or teammates as they deem appropriate. The Prize Administrator will not arbitrate, intervene, advise on, or resolve any matters or disputes between team members or competitors.

A.4 Submission Rights

By making a submission and consenting to the rules of the contest, a competitor is granting to DOE, the Prize Administrator, and any other third parties supporting DOE in the contest, a license to display publicly and use the parts of the submission that are designated as "public" for government purposes. This license includes posting or linking to the public portions of the submission on the Prize Administrator or HeroX applications, including the contest website, DOE websites, and partner websites, and the inclusion of the submission in any other media worldwide. The submission may be viewed by DOE, Prize Administrator, and judges and reviewers for purposes of the contests, including but not limited to screening and evaluation purposes. The Prize Administrator and any third parties acting on their behalf will also have the right to publicize competitors' names and, as applicable, the names of competitors' team members and organization, which participated in the submission on the contest website indefinitely. By entering, the competitor represents and warrants that:

1. The competitor's entire submission is an original work by the competitor and the competitor has not included third-party content (such as writing, text, graphics, artwork, logos, photographs, likeness of any third party, musical recordings, clips of videos, television programs, or motion pictures) in or in connection with the submission, unless (i) otherwise requested by the Prize Administrator and/or disclosed by the competitor in the submission, and (ii) competitor has either obtained the rights to use such third-party content or the content of the submission is considered in the public domain without any limitations on use.
2. Unless otherwise disclosed in the submission, the use thereof by Prize Administrator, or the exercise by Prize Administrator of any of the rights granted by competitor under these rules, does not and will not infringe or violate any rights of any third party or entity, including, without limitation, patent, copyright, trademark, trade secret, defamation, privacy, publicity, false light, misappropriation, intentional or negligent infliction of emotional distress, confidentiality, or any contractual or other rights.
3. All persons who were engaged by the competitor to work on the submission or who appear in the submission in any manner have:

- a. Given the competitor their express written consent to submit the submission for exhibition and other exploitation in any manner and in any and all media, whether now existing or hereafter discovered, throughout the world;
- b. Provided written permission to include their name, image, or pictures in or with the submission (or, if a minor who is not competitor's child, competitor must have the permission of the minor's parent or legal guardian) and the competitor may be asked by the Prize Administrator to provide permission in writing; and
- c. Not been and are not currently under any union or guild agreement that results in any ongoing obligations resulting from the use, exhibition, or other exploitation of the submission.

A.5 Copyright

Each competitor represents and warrants that the competitor is the sole author and copyright owner of the submission; that the submission is an original work of the competitor or that the competitor has acquired sufficient rights to use and to authorize others, including DOE, to use the submission, as specified throughout the rules; that the submission does not infringe upon any copyright or any other third-party rights of which the competitor is aware; and that the submission is free of malware.

A.6 Contest Subject to Applicable Law

All contests are subject to all applicable federal laws and regulations. Participation constitutes each participant's full and unconditional agreement to these Official Rules and administrative decisions, which are final and binding in all matters related to the contest. This notice is not an obligation of funds; the final award is contingent upon the availability of appropriations.

A.7 Resolution of Disputes

DOE is solely responsible for administrative decisions, which are final and binding in all matters related to the contest. Neither DOE nor the Prize Administrator will arbitrate, intervene, advise on, or resolve any matters between team members or among competitors.

A.8 Publicity

The winners of these prizes (collectively, "winners") will be featured on DOE, NREL, and other DOE National Laboratory websites. Except where prohibited, participation in the contest constitutes each winner's consent to DOE's and its agents' use of each winner's name, likeness, photograph, voice, opinions, and/or hometown and state information for promotional purposes through any form of media worldwide, without further permission, payment, or consideration.

A.9 Liability

Upon registration, all participants agree to assume any and all risks of injury or loss in connection with or in any way arising from participation in this contest. Upon registration, except in the case of willful misconduct, all participants agree to and, thereby, do waive and release any and all claims or causes of action against the Federal Government and its officers, employees, and agents for any and all injury and damage of any nature whatsoever (whether existing or thereafter arising, whether direct, indirect, or

consequential, and whether foreseeable or not), arising from their participation in the contest, whether the claim or cause of action arises under contract or tort.

In accordance with the delegation of authority to run this contest delegated to the judge responsible for this prize, the judge has determined that no liability insurance naming DOE as an insured will be required of competitors to compete in this competition per 15 U.S.C. § 3719(i)(2). Competitors should assess the risks associated with their proposed activities and adequately insure themselves against possible losses.

A.10 Records Retention and Freedom of Information Act

All materials submitted to DOE as part of a submission become DOE records and are subject to the Freedom of Information Act. The following applies only to portions of the submission not designated as public information in the instructions for submission. If a submission includes trade secrets or information that is commercial or financial, or information that is confidential or privileged, it is furnished to the Government in confidence with the understanding that the information shall be used or disclosed only for evaluation of the application. Such information will be withheld from public disclosure to the extent permitted by law, including the Freedom of Information Act. Without assuming any liability for inadvertent disclosure, DOE will seek to limit disclosure of such information to its employees and to outside reviewers when necessary for review of the application or as otherwise authorized by law. This restriction does not limit the Government's right to use the information if it is obtained from another source.

Submissions containing confidential, proprietary, or privileged information must be marked as described below. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under the Freedom of Information Act or otherwise. The U.S. Government is not liable for the disclosure or use of unmarked information and may use or disclose such information for any purpose. The submission must be marked as follows and identify the specific pages containing trade secrets, confidential, proprietary, or privileged information: "Notice of Restriction on Disclosure and Use of Data: Pages [list applicable pages] of this document may contain trade secrets, confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes. [End of Notice]" The header and footer of every page that contains confidential, proprietary, or privileged information must be marked as follows: "Contains Trade Secrets, Confidential, Proprietary, or Privileged Information Exempt from Public Disclosure." In addition, each line or paragraph containing proprietary, privileged, or trade secret information must be clearly marked with double brackets.

Competitors will be notified of any Freedom of Information Act requests for their submissions in accordance with 29 C.F.R. § 70.26. Competitors may then have the opportunity to review materials and work with a Freedom of Information Act representative prior to the release of materials. DOE does intend to keep all submission materials private except for those materials designated as "will be made public."

A.11 Privacy

If you choose to provide HeroX with personal information by registering or completing the submission package through the contest website, you understand that such information will be transmitted to DOE and may be kept in a system of records. Such information will be used only to respond to you in matters regarding your submission and/or the contest unless you choose to receive updates or notifications about other contests or programs from DOE on an opt-in basis. DOE and NREL are not collecting any information for commercial marketing.

A.12 General Conditions

DOE reserves the right to cancel, suspend, and/or modify the contest, or any part of it, at any time. If any fraud, technical failure, or any other factor beyond DOE's reasonable control impairs the integrity or proper functioning of the contests, as determined by DOE in its sole discretion, DOE may cancel the contest. Any performance toward contest goals is conducted entirely at the risk of the competitor, and DOE shall not compensate any competitors for any activities performed in furtherance of this prize.

Although DOE may indicate that it will select up to several winners for each contest, DOE reserves the right to only select competitors that are likely to achieve the goals of the program. If, in DOE's determination, no competitors are likely to achieve the goals of the program, DOE will select no competitors to be winners and will award no prize money.

DOE may conduct a risk review, using Government resources, of the competitor and project personnel for potential risks of foreign interference. The outcomes of the risk review may result in the submission being eliminated from the prize competition. This risk review, and potential elimination, can occur at any time during the prize competition. An elimination based on a risk review is not appealable.

A.13 Program Policy Factors

While the scores of the expert reviewers will be carefully considered, it is the role of the prize judge to maximize the impact of prize funds. Some factors outside the control of competitors and beyond the independent expert reviewer scope of review may need to be considered to accomplish this goal. The following is a list of such factors. In addition to the reviewers' scores, the below program policy factors may be considered in determining winners:

- Geographic diversity and potential economic impact of projects.
- Whether the use of additional DOE funds and provided resources are non-duplicative and compatible with the stated goals of this program and the DOE mission generally.

Whether application is not significantly different from applications previously submitted to other Powering the Blue Economy Prizes (e.g. the [Ocean Observing Prize](#)).

- The degree to which the submission exhibits technological or programmatic diversity when compared to the existing DOE project portfolio and other competitors.
- The degree to which the submission is likely to lead to increased employment and manufacturing in the United States or provide other economic benefits to U.S. taxpayers.
- The degree to which the submission will accelerate transformational technological, financial, or workforce advances in areas that industry by itself is not likely to undertake because of technical or financial uncertainty.
- The degree to which the submission supports complementary DOE-funded efforts or projects, which, when taken together, will best achieve the goals and objectives of DOE.
- The degree to which the submission expands DOE's funding to new competitors and recipients who have not been supported by DOE in the past.
- The degree to which the submission enables new and expanding market segments.

A.14 National Environmental Policy Act Compliance

This prize is subject to the National Environmental Policy Act (NEPA) (42 U.S.C. § 4321, et seq.). NEPA requires federal agencies to integrate environmental values into their decision-making processes by considering the potential environmental impacts of their proposed actions. For additional background on NEPA, please see DOE's NEPA website at <http://nepa.energy.gov/>.

While NEPA compliance is a federal agency responsibility and the ultimate decisions remain with the federal agency, all participants in the Energizing Rural Communities Prize will be required to assist in the timely and effective completion of the NEPA process in the manner most pertinent to their participation in the prize competition. Participants may be asked to provide DOE with additional information on the proposed activities such that DOE can conduct a meaningful evaluation of the potential environmental impacts.

A.15 Definitions

Prize Administrator means both the Alliance for Sustainable Energy operating in its capacity under the Management and Operating Contract for NREL and WPTO. When the Prize Administrator is referenced in this document, it refers to staff from both the Alliance for Sustainable Energy and WPTO staff. Ultimate decision-making authority regarding prize matters rests with the Director of WPTO.

A.16 Return of Funds

As a condition of receiving a prize, competitors agree that if the prize was made based on fraudulent or inaccurate information provided by the competitor to DOE, DOE has the right to demand that any prize funds or the value of other non-cash prizes be returned to the government.

ALL DECISIONS BY DOE ARE FINAL AND BINDING IN ALL MATTERS RELATED TO THE PRIZE.

A.17 Eligibility and Competitors

Only submissions relevant to the technical areas laid out in Section 1 of this document will be considered. The Prize Administrator has the right to refuse any submission for incompleteness or unresponsiveness to the technical topic areas.

The competition is open only to individuals; private entities (for-profits and nonprofits); non-federal government entities such as states, counties, tribes, and municipalities; and academic institutions; subject to the following requirements:

- An individual prize competitor (who is not competing as a member of a group) must be a U.S. citizen or permanent resident.
- A group of individuals competing as one team may win, provided that the online account holder of the submission is a U.S. citizen or permanent resident. Individuals competing as part of a team may participate if they are legally authorized to work in the United States.
- Private entities must be incorporated in and maintain a primary place of business in the United States.
- Academic institutions must be based in the United States.
- DOE employees, employees of sponsoring organizations, members of their immediate families (e.g., spouses, children, siblings, or parents), and persons living in the same household as such persons, whether or not related, are not eligible to participate in the prize.
- Individuals who worked at DOE (federal employees or support service contractors) within six months prior to the submission deadline of any contest are not eligible to participate in any prize contests in this program.
- Federal entities and federal employees are not eligible to participate in any portion of the prize.
- DOE national laboratory employees cannot compete in the prize.

- Entities and individuals publicly banned from doing business with the U.S. government such as entities and individuals debarred, suspended, or otherwise excluded from or ineligible for participating in Federal programs are not eligible to compete.
- Entities identified in Department of Homeland Security (DHS) Binding Operational Directives (BOD) as publicly banned from doing business with the U.S. government are not eligible to compete. See <https://cyber.dhs.gov/directives/>.
- Entities and individuals identified as restricted parties on one or more screening lists of Department of Commerce, State or the Treasury are not eligible to compete. See Consolidated Screening List. https://2016.export.gov/ecr/eg_main_023148.asp.
- Individuals participating in a foreign government talent recruitment program² sponsored by a country of risk³ and teams that include such individuals are not eligible to compete.
- Entities owned by, controlled by, or subject to the jurisdiction or direction of a government of a country of risk.
- To be eligible, an individual authorized to represent the competitor must agree to and sign the following statement upon registration with HeroX:

I am providing this submission package as part of my participation in this prize. I understand that the information contained in this submission will be relied on by the federal government to determine whether to issue a prize to the named competitor. I certify under penalty of perjury that the named competitor meets the eligibility requirements for this prize competition and complies with all other rules contained in the Official Rules document. I further represent that the information contained in the submission is true and contains no misrepresentations. I understand false statements or misrepresentations to the federal government may result in civil and/or criminal penalties under 18 U.S.C. § 1001 and § 287, and 31 U.S.C. §§ 3729-3733 and 3801-3812.

In keeping with the goal of growing a community of innovators, competitors are encouraged to form multidisciplinary teams while developing their concept. The HeroX platform provides a space where parties interested in collaboration can post information about themselves and learn about others who are also interested in competing in this contest.

² Foreign Government-Sponsored Talent Recruitment Program is defined as an effort directly or indirectly organized, managed, or funded by a foreign government, or a foreign government instrumentality or entity, to recruit science and technology professionals or students (regardless of citizenship or national origin, or whether having a full-time or part-time position). Some foreign government-sponsored talent recruitment programs operate with the intent to import or otherwise acquire from abroad, sometimes through illicit means, proprietary technology or software, unpublished data and methods, and intellectual property to further the military modernization goals and/or economic goals of a foreign government. Many, but not all, programs aim to incentivize the targeted individual to relocate physically to the foreign state for the above purpose. Some programs allow for or encourage continued employment at United States research facilities or receipt of federal research funds while concurrently working at and/or receiving compensation from a foreign institution, and some direct participants not to disclose their participation to U.S. entities. Compensation could take many forms including cash, research funding, complimentary foreign travel, honorific titles, career advancement opportunities, promised future compensation, or other types of remuneration or consideration, including in-kind compensation.

³ DOE has designated the following countries as foreign countries of risk: Iran, North Korea, Russia, and China. This list is subject to change.



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November 2023