



U.S. DEPARTMENT OF ENERGY

FLOWIN PRIZE

Official Rules
Phase 2

March 2023 (Updated January 2024)

Preface

The U.S. Department of Energy’s Floating Offshore Wind Readiness Prize will be governed by 15 U.S.C. §3719 and this Official Rules document. This is not a procurement under the Federal Acquisitions Regulations and will not result in a grant or cooperative agreement under 2 CFR 200. The Prize Administrator reserves the right to modify this Official Rules document if necessary and will publicly post any such notifications as well as notify registered prize participants.

Date	Modification
July 14, 2023	New submission dates for cost estimation draft and final submission; updated definitions; added category of material not subject to length restrictions.
January 9, 2024	New open dates, submission dates, and announcement dates for Phase Two and Phase Three.

Executive Summary

Overview

The Wind Energy Technologies Office (WETO) of the U.S. Department of Energy’s (DOE) Office of Energy Efficiency and Renewable Energy (EERE) is running the FLoating Offshore Wind ReadINess (FLOWIN) Prize in accordance with authorizations under the Energy Act of 2020.

Phase One of the FLoating Offshore Wind ReadINess (FLOWIN) Prize was announced on September 12, 2022, with submittals from competitors due by January 13, 2023. The present rules pertain to Phase Two of the prize, which will be open from March 21, 2023 until March 1, 2024. Only Phase One awardees are eligible to compete in Phase Two.

The objectives of the prize are to advance designs for floating offshore wind platforms for on-site manufacturing; improve the readiness of the supply chain to enable mass production and assembly in the United States; lower associated costs and risks; and further the principles of job quality, inclusion, and environmental justice embodied in the Biden administration’s executive orders and Justice40 Initiative.

The overarching goal of the FLOWIN prize is to establish a pathway to cost-effective domestic manufacture and deployment of commercial utility-scale floating wind farms in U.S. waters.

The prize objectives will be accomplished by encouraging teaming among the different types of companies and relevant labor unions needed to manufacture and deploy floating wind farms; helping them iterate platform designs to enable easier production within U.S. infrastructure; and supporting the development of robust plans to move forward to industrial-scale deployment.

It is not the intent of this prize to fund early-stage development, design, or testing of new floating wind platform concepts. Therefore, only platform designs that have reached an advanced level of technical readiness are of interest, as detailed in the evaluation criteria.

Prizes

The FLOWIN Prize has three phases with a total prize pool of \$5.85M, plus at least \$1.175M in vouchers for technical support from DOE national laboratories. Prizes are divided among multiple awardees. The potential cumulative cash award value to any one awardee through the three phases is \$1.45M, plus at least \$175k in vouchers. The structure of the prize phases is provided in Table ES-1:

Table ES-1. Structure of FLOWIN Prize Phases

	Cash Prize per Awardee	Voucher Value per Awardee	Anticipated Number of Awards
Phase One (completed)	\$100,000	\$75,000	9
Phase Two	\$450,000	\$100,000	5
Phase Three	\$900,000	-	3

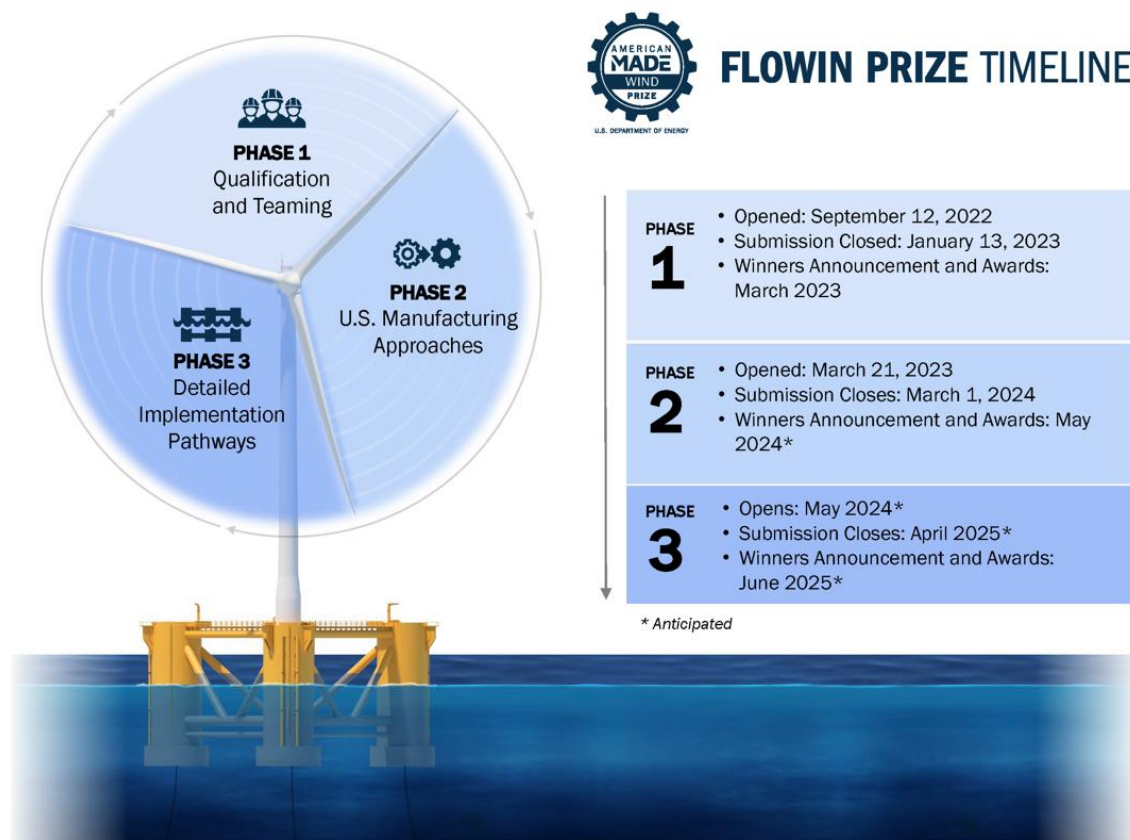
Under a prize structure, funding awards are made on the merits of completed work and may be used to offset the costs of further work. There are no restrictions on how winners use the cash prizes. Vouchers are funds that must be used at DOE national laboratories. Awards are made for each phase, and only the winning teams of each phase are eligible to compete for prizes in subsequent phases. DOE will not take any interest in intellectual property developed by competitors under this prize.

In Phase One of the FLOWIN Prize, the winning submissions demonstrated that teams had a technically advanced floating platform technology under development and had identified supply chain challenges and pathways to commercialization.

Phase Two of the prize opens with the release of this rules document. Up to five winners are anticipated for Phase Two, each receiving a cash prize (\$450,000) and a technical services voucher (at least \$100,000) based on their Phase Two progress in developing a plan for serial production and assembly.

Phase Three of the prize will open after the Phase Two winners are announced. Only Phase Two winners will be eligible to compete in Phase Three. The activities evaluated in Phase Three will be related to the completion of location-specific implementation plans for U.S. manufacture and deployment of the floating wind technology. Competitors will need to establish an industrialization pathway from their current stage of technology development to deployment in gigawatt-scale wind farms. All aspects of the process will need to be addressed, including U.S. suppliers, fabrication facility and tooling plans, specific port accommodations, and how vessel requirements will be met, maximizing the use of U.S. infrastructure where possible. Up to three winners are anticipated for Phase Three, each receiving a cash prize of \$900,000.

Subject to future appropriations, DOE is considering additional funding beyond this prize to further support the development of floating platform technology and infrastructure innovations for the U.S. wind industry.



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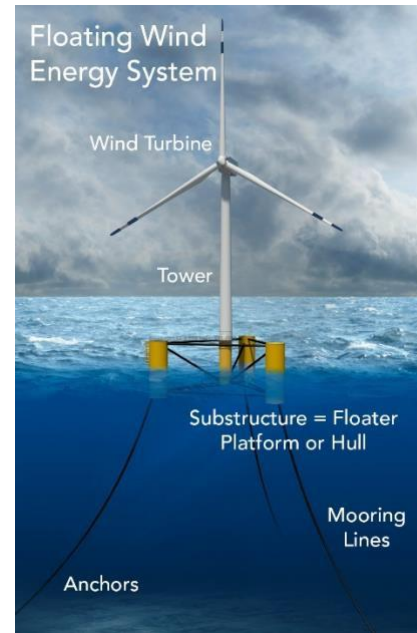
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Glossary

For the clarity of this document, several terms are defined below:

Commercialization	The process of bringing new products to market. In this context, it is the process by which floating wind platforms can be made and sold on a large scale to support a robust domestic industry.
Environmental justice	The fair treatment and meaningful involvement of all people—regardless of race, color, national origin, or income—with respect to protection from environmental and health hazards, and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.
Fabrication	The process of making or assembling a product from raw materials and components.
Floating substructure/ platform/hull or floater	Part of the floating wind system that connects to the tower and mooring system and consists of a buoyant substructure able to support operational loads. ¹
Industrialization	The process to enable the floating wind system to be mass-manufactured for deployment at scale.
Manufacturing	The making of products, usually from raw materials, using machinery. Mass manufacturing is the manufacturing of products in large numbers.
Megawatt- scale/gigawatt-scale	Megawatt (MW), a unit of power equal to one million watts, is used as a measure of the output of a power generator—in this case, individual wind turbines. A gigawatt (GW) equals 1,000 megawatts. As used herein, gigawatt-scale refers to anticipated wind farms comprising large numbers of individual turbines that total over 1 GW in capacity. Estimated production rates should be appropriate to building this scale of project development.
Ocean co-use	Multiple activities that occur in the maritime space, with overlapping spatial extent.
Production	The whole process of making products or goods to be sold (or deployed) as a final output. Manufacturing and fabrication are within the process of production. Serial production is the combination of multiple phases or components to enable high-throughput production of large quantities of product.
Supply chain	A network of organizations, suppliers, resources, facilities, and activities that are needed to produce, distribute, and deploy a product.



¹ For further information, see IEC Standard 61400-3-2 *Design Requirements for Floating Offshore Wind Turbines*.

1 Background

The Biden administration has set ambitious goals to address climate change, including achieving a 50%–52% reduction from 2005 levels in economywide net greenhouse gas pollution by 2030, a zero-carbon electricity grid by 2035, and reaching net zero emissions economywide by no later than 2050.² Achieving these goals will require both innovative solutions and the acceleration of the deployment and implementation of climate and energy technologies, policies, and processes, with environmental and climate justice as key considerations.

In March 2021, the U.S. Department of Energy (DOE), U.S. Department of the Interior, and U.S. Department of Commerce announced a national goal to deploy 30 gigawatts (GW) of offshore wind capacity by 2030.³ Deploying 30 GW represents a significant increase from the 42 megawatts (MW) of offshore wind energy currently operating in the United States. Reaching the 30-GW-by-2030 goal would generate enough electricity to power over 10 million American homes³ and establish the United States as a major participant in the global offshore wind energy industry. It would also create tens of thousands of jobs in a range of occupations that would pay at or above the national average and sustain more than \$12 billion a year in offshore wind project capital investments. Such project investments would spur additional investments in supply chain development, port revitalization, vessel construction, wind power plant operations, and onshore assembly facilities.

While the majority of the pre-2030 deployment will be fixed-bottom wind turbines, at least 2.5 GW is likely to be floating turbines, with the potential to build another 5–10 GW of floating wind capacity in the early 2030s. To reach a potential 110 GW of offshore wind energy by 2050, floating turbines will need to make a significant contribution. Floating offshore wind technology is needed in deep water (generally deeper than 40–60 meters), where deploying fixed-bottom structures becomes uneconomical or impractical.

To accelerate floating offshore wind deployment, the Biden administration announced a Floating Offshore Wind Shot™ in September 2022, with the target of reducing the cost of floating offshore wind by 70% by 2035. This is the fifth Energy Earthshot launched by DOE, but the first to be interagency in recognition of the all-of-government approach needed. In parallel with the cost reduction target, the Bureau of Ocean Energy Management (BOEM) announced a deployment target of 15 GW floating offshore wind energy by 2035.

Floating offshore wind will be key to achieving long-term deployment goals, as approximately 60% of the nation’s offshore wind resource potential is in deepwater areas where floating platforms would be used.⁴ As such, the U.S. floating offshore wind market is expected to be large; with focused investment, the country could become a global leader in this part of the industry, as no commercial-scale floating wind projects have yet been constructed. Deployment of floating offshore wind platforms will lag fixed-bottom structures because the technology is less mature, but floating offshore wind energy capacity could eventually exceed that of fixed-bottom offshore wind energy in the United States. Through the ability to mass-manufacture systems, and with dedicated infrastructure development, floating offshore wind energy could also be more cost-effective.

² The White House. 2021. “FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies.” <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/>.

³ The White House. 2021. “FACT SHEET: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs.” <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-job>.

⁴ The technical resource potential is the amount of resource that could potentially be developed using existing technology but excludes areas that are unlikely to be developed or cannot legally be developed. For more information, see Computing America’s Offshore Wind Energy Potential: <https://www.energy.gov/eere/articles/computing-america-s-offshore-wind-energy-potential>.

DOE is committed to pushing the frontiers of science and engineering, catalyzing clean energy jobs through research, development, demonstration, and deployment (RDD&D), and ensuring the creation of quality jobs, environmental justice, and inclusion of underserved communities as reflected in the administration’s Justice40 Initiative.^{5,6} The research and development (R&D) activities that are rewarded through this prize will support the governmentwide approach to the climate crisis by driving innovation that can lead to the deployment of clean energy technologies, which are critical for climate protection.

Specifically, this prize will enable the production of clean offshore energy through the development of a domestic supply chain and local infrastructure, accelerating the market readiness of U.S. designs. In addition, this prize will emphasize increasing diversity of staff, increasing diversity of voices in design, and increasing quantification and emphasis on supporting underserved communities.

1.1 DOE/EERE Renewable Energy R&D Support

The DOE Office of Energy Efficiency and Renewable Energy (EERE) supports research, development, demonstration, and deployment (RDD&D) of renewable energy and energy efficiency technologies. DOE funds RDD&D activities in climate and energy technologies through its 17 national laboratories and a variety of mechanisms that include external competitive solicitations. In addition, DOE programs support building and sustaining an innovation ecosystem for climate and energy technologies, encompassing early-career and high-road workforce development, entrepreneurial programs and resources for individuals and organizations, and support for communities and regions.

The Wind Energy Technologies Office (WETO) invests in research to address wind energy technology and manufacturing challenges and inform solutions as part of its research and development (R&D) portfolio. Its overall goal is to facilitate responsible, sustainable, and economically viable clean energy deployment. WETO’s R&D activities spur innovation, lower wind energy costs and impacts, maximize the use of available wind resources, accelerate reliable and safe energy production, improve the number and quality of jobs, address social and economic effects of wind energy deployment, and provide data and technical assistance. WETO works with other DOE offices to maximize the impacts of funds spent on wind energy research, including the Advanced Research Projects Agency–Energy (ARPA-E), and their recent investments in the ATLANTIS program.⁷ EERE partners with federal and state entities in the execution of its wind energy research program. DOE and its offices do not implement or enforce regulatory processes related to wind energy.

1.2 Prize Goal

The goal of this prize is to establish a pathway to cost-effective domestic manufacture and deployment of gigawatt-scale floating wind farms in U.S. waters. Toward realization of that goal, the prize will:

1. Incentivize and support further development of technically and economically viable floating wind platform structures that can support 12-MW-rated or larger⁸ wind turbines in water

⁵ The term “underserved communities” refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life, as exemplified by the list in the definition of “equity.” E.O. 13985. For purposes of this prize, as applicable to geographic communities, competitors can refer to economically distressed communities identified by the Internal Revenue Service as Qualified Opportunity Zones; communities identified as disadvantaged or underserved communities by their respective States; communities identified on the Index of Deep Disadvantage referenced at <https://news.umich.edu/new-index-ranks-americas-100-most-disadvantaged-communities/>, and communities that otherwise meet the definition of “underserved communities” stated above. See Appendix section A1.3 for specific considerations related to the focus of this prize.

⁶ <https://www.whitehouse.gov/omb/briefing-room/2021/07/20/the-path-to-achieving-justice40/>.

⁷ ATLANTIS = Aerodynamic Turbines Lighter and Afloat with Nautical Technologies and Integrated Servo-control: <https://arpa-e.energy.gov/technologies/programs/atlantia>.

⁸ This prize focuses on 12 MW or larger turbines, but smaller turbines will be considered if there is sufficient justification that they are appropriate for large-scale floating offshore wind industrialization.

- depths over 40 meters.
- 2. Incentivize the creation of a supply chain that will enable domestic on-site manufacturing of floating offshore wind farm components utilizing a skilled and trained workforce.
- 3. Promote awareness of the importance and principles of inclusion and environmental justice.

The FLOWIN Prize aims to support organizations carrying out activities that enhance the readiness of the United States to cost-competitively manufacture and deploy utility-scale floating offshore wind farms by facilitating collaboration among floating wind platform designers, fabricators, and project site developers. Collaborators could include floating platform designers; developers; engineering, procurement, and construction companies (EPCs); fabricators; logistics firms; ports; and vessel operators. Such activities will spur technology refinement, identify manufacturing needs and capabilities, and develop or adapt assembly and deployment infrastructure.

Successful prize submission narratives will demonstrate that teams have the capability to successfully develop and implement plans that will achieve the objectives of this prize.

1.3 Prize Phases

Only Phase One winners may submit application packages in Phase Two of the prize. In Phase Two, it is anticipated that there will be up to five winners, with \$450,000 awarded per winner, plus technical assistance vouchers of at least \$100,000 each. Phase Three will have a cash prize of \$900,000 per winner, and up to three winners. Table 1 outlines the FLOWIN Prize structure per phase.

Table 1. Structure of FLOWIN Prize Phases

	Cash Prize per Awardee	Voucher Value per Awardee	Anticipated Number of Awards
Phase One (completed)	\$100,000	\$75,000	9
Phase Two	\$450,000	\$100,000	5
Phase Three	\$900,000	-	3

It is expected that cash awards and technical assistance will help offset expenses and aid winning organizations in overcoming technical and organizational hurdles in successfully bringing new technologies to the U.S. market.

To achieve the desired impact on U.S manufacturing readiness, competitors are expected to engage in areas of interest that include:

- Targeting development of and collaboration with the U.S. supply chain to identify pathways to on-site manufacturing and deployment of specific floating wind technologies
- Engineering to refine or “industrialize” existing floating platform designs for serial production in the United States using existing or modified facilities and/or modular designs enabling cost-effective fabrication and assembly
- Optimizing manufacturing processes and fabrication tooling required for serial production, including efficient use of materials to increase productivity, lower costs, and improve manufacturability
- Identifying low-emission processes for manufacturing offshore platforms to strengthen the U.S. supply chain for future opportunities

- Optimizing the integration of balance-of-floating-system components with the substructure to lower costs and enhance safety and performance
- Identifying and evaluating existing infrastructure such as ports and vessels and proposing any required improvements or adaptations as part of integrated manufacturing and deployment strategies
- Enhancing coordination between industry and federal, state, and local agencies and organizations to realize mutual objectives for product commercialization, job creation, and domestic content
- Other innovative ideas that improve the readiness of floating platforms for serial production in the United States, including “future-proofing” platform designs to accommodate turbine ratings beyond 15 MW.

1.3.1 Phase Two Summary

U.S. Manufacturing Approaches

During Phase Two, teams will research and develop plans to transition their floating platform technologies from proven designs to serial production for deployment in gigawatt-scale wind farms. These plans should identify the required subcomponents and specifically emphasize activities such as U.S. manufacturing and supply chain development, material handling and tooling requirements, limitations in existing infrastructure (e.g., ports and vessels), and potential design engineering refinements to lower cost and increase domestic content. Submissions should show an understanding of a realistic progression of development and phasing of deployment to achieve the installation of gigawatt-scale wind farms.

Detailed requirements are given in Section **Error! Reference source not found.**

1.3.2 Phase Three Summary

Detailed Implementation Pathways

Phase Three of the prize will open after the announcement of Phase Two winners. Only Phase Two winners will be eligible to compete. Final details of the Phase Three criteria will be released after Phase Two has closed.

The activities evaluated in Phase Three will be related to the completion of a detailed, highly credible implementation plan for U.S. manufacturing and deployment of the subject floating technology.

Competitors will need to establish an industrialization pathway leading from their current stage of technology development to its deployment in gigawatt-scale wind farms in U.S. waters. All aspects of the process will need to be addressed, including the expected contribution of U.S. suppliers, fabrication facility and tooling plans, specific port accommodations, and how vessel requirements will be met. This plan should also identify current limitations that might hinder increased use of the U.S. supply chain as well as recommended solutions.

1.4 Key Dates

Competitors will have approximately 11 months to complete Phase Two submittal packages after the opening date as shown in the Timeline graphic below.

- Phase Two Opens: March 21, 2023
- Phase Two Submission Closes: March 1, 2024
- Phase Two Winner Announcement and Awards: May 2024 (anticipated)
- Phase Three Opens: May 2024 (anticipated)
- Phase Three Submission Closes: April 2025 (anticipated)
- Phase Three Winners Announcement and Awards: June 2025 (anticipated)

1.5 Eligibility and Competitors

The competition is only open to legally formed entities including for-profits, nonprofits, academic institutions, and nonfederal government entities such as states, counties, tribes, and municipalities. Competitors are subject to the following requirements:

- Competitors must be Phase One winners.
- If a lead competitor is a private entity, it must be incorporated in and maintain a primary⁹ place of business in the United States.
- If the lead competitor is an academic institution, it 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 and other federally funded research and development center (FFRDC) employees cannot compete in the prize.
- Individuals are not eligible to compete on their own. Because of the scope of this prize, only legally formed entities may compete in this prize.
- Entities 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 as a restricted party on one or more screening lists of the Departments of Commerce, State, and Treasury are not eligible to compete. See [Consolidated Screening List](#).
- This prize competition is expected to positively impact U.S. economic competitiveness. Participation in a foreign government talent recruitment program¹⁰ as defined in DOE Order 486.1 could conflict with this objective by resulting in unauthorized transfer of scientific and technical information to foreign government entities. Therefore, individuals participating in foreign government talent recruitment programs of foreign countries of risk are not eligible to compete. Further, teams that include individuals participating in foreign government talent recruitment programs of foreign countries of risk¹¹ are not eligible to compete.

As part of the submission to this prize program, competitors 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 I am providing this submission to the Federal Government. 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

⁹ This means a U.S.-incorporated entity that does business in the United States and has staff based in the United States.

¹⁰ Foreign government talent recruitment program is defined as an effort directly or indirectly organized, managed, or funded by a foreign government to recruit science and technology professionals or students (regardless of citizenship or national origin, and 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 physically relocate to the foreign state for the above purpose. Some programs allow for or encourage continued employment at U.S. 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.

¹¹ Currently, the list of countries of risk includes Russia, Iran, North Korea, and China.

penalties under 18 U.S.C. § 1001 and § 287.

Entities may only submit one application as the lead but can be part of the team on other applications.

In keeping with the goal of growing a community of innovators, competitors are encouraged to form multidisciplinary teams, including with labor unions, while developing their concept. The HeroX platform (see Section 2.1) 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. There will also be a networking event (to be announced) to enable potential competitors and partners to connect.

Competitors are highly encouraged to include individuals from groups historically underrepresented in the fields of science, technology, engineering, and mathematics (STEM) on their teams. As indicated in the prize criteria, competitors are required to describe how diversity and inclusion objectives will be incorporated into their development process.

Minority Serving Institutions, Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, or entities located in a disadvantaged community that meet the eligibility requirements listed above are encouraged to apply.¹² The Selection Official may consider the inclusion of these types of entities as part of the selection decision.

1.6 Support for Competitors

The competitors will be supported through several mechanisms:

- Prize and Network Administrator: National Renewable Energy Laboratory (NREL): DOE has partnered with NREL to administer the FLOWIN Prize. NREL will help competitors locate and leverage the capabilities at the national laboratories and other program resources available to FLOWIN competitors.
- Industry Connector: As a resource available to competitors, DOE has engaged the Business Network for Offshore Wind to provide tailored connections within the supply chain to aid competitors in meeting their individual needs for equipment, materials, and services.
- DOE will have experienced offshore wind cost analysts from NREL assist competitors in carrying out detailed cost analyses. NREL personnel will be under strict confidentiality agreements and “firewalled” from any other related NREL activities.
- DOE staff anticipates offering optional webinars on topics of interest to competitors such as financing opportunities through the DOE Loan Programs Office; “green manufacturing” and advanced recycling approaches and resources; and developing effective diversity, equity, and inclusion plans.
- Vouchers: Winners in Phase Two will receive vouchers for at least \$100,000 that they may use to fund technical work at DOE national laboratories to assist in their design refinement and production planning. Relevant technical capabilities of prominent labs will be presented to competitors prior to the Phase Two deadline so that competitors can prepare their Voucher Work Slide, an element of submission for this prize. The Voucher Work Slide will detail a competitor’s priorities for voucher spending. Details of the preferred DOE national laboratory should be included in the Voucher Work Slide only and not in the Technical Narrative.

Vouchers are funds that must be used at DOE national laboratories. DOE will not take any interest in intellectual property developed by competitors under this prize. However, any intellectual property

¹² DOE defines “disadvantaged communities” to be areas that most suffer from a combination of economic, health, and environmental burdens, such as poverty, high unemployment, air and water pollution, and the presence of hazardous wastes as well as a high incidence of asthma and heart disease. Examples include but are not limited to: economically distressed communities identified by the Internal Revenue Service as Qualified Opportunity Zones; communities identified as disadvantaged communities by their respective States; communities identified on the Index of Deep Disadvantage (Wadley, Jared and Lauren Slagter. 2020. Index of Deep Disadvantage. University of Michigan. Last updated: Jan. 30, 2020. <https://news.umich.edu/new-index-ranks-americas-100-most-disadvantaged-communities/>), and communities that otherwise meet the DOE definition of a disadvantaged community. See Appendix Section A1.3 for specific considerations related to the focus of this prize.

developed at a national lab will be subject to the terms of the agreement between the competitor and the national lab. Lab contracting staff will negotiate appropriate agreements with voucher recipients.

1.7 Check-In Meetings

WETO will hold status meetings with individual competitors at 3 and 6 months after a phase opens to answer questions and gauge progress toward the submittal package for that phase. They will also provide opportunities for competitors to request clarifications from DOE. These meetings will not impact prize scoring or judging.

2 Submission Requirements and Review Process

2.1 How to Enter

Go to [HeroX](#) and follow the instructions for registering and submitting all required materials before the deadline as listed in the following Important Process Dates section or as displayed on the HeroX website. Competitors can also form teams or find partners through the HeroX platform and through facilitated discussion organized through the Prize Administrator.

2.2 Important Process Dates

- Phase Two Opens: March 21, 2023
- Phase Two Submission Period Closes: March 1, 2024
- Phase Two Winner Announcement and Awards: May 2024 (anticipated)
- Phase Three Opens: May 2024 (anticipated)
- Phase Three Submission Closes: April 2025 (anticipated)
- Phase Three Winners Announcement and Awards: June 2025 (anticipated)

2.3 What to Submit for Phase Two

The items in Table 2 constitute the required submissions package for Phase Two of the FLOWIN Prize and must be submitted through the HeroX platform. The submission will not be considered if any of these documents are not included. Each is described in more detail in the subsections following the table.

Table 2. Phase Two Submission Requirements

Item	Will Be Made Public	Scored Item
Cover Page	No	No
Summary Slide	Yes ¹³	No
Technical Narrative	No	Yes
Voucher Work Slide	No	No

2.3.1 Cover Page

The Cover Page, included in the final submission, will not be made public or scored. Competitors should list basic information about their submission, including:

- Title
- Entity name
- Point of contact

¹³ May be made public but only for the winning teams.

- Key project members (names, contacts, and links to their professional online profiles)
- Other partners (if any)
- Competitor's city and state.

2.3.2 Summary Slide

Competitors should submit an updated public-facing, one-slide summary that introduces their team and organization and their mission. Please include the following information on your summary slide:

- Primary submitter name (team captain)
- City and state
- Members' names (including partners and affiliates)
- Submission title
- Brief description of platform design
- Brief description of serial production approach.

Competitors are free to present the information in any format and are encouraged to use graphic imagery to convey their design and approach. Any text must be readable on a standard printed page and in a conference room projection and should be in at least 14-pt font. This will not be scored but may be used for public communication of the prize winners.

2.3.3 Technical Narrative [Scored]

Table 5 lists the expected content to be included in the required Technical Narrative, as well as the corresponding evaluation criteria on which the reviewers' scoring will be based. Scoring of entries will reflect the responsiveness of the narrative, and any supporting information provided in an appendix, to the evaluation criteria. To facilitate review by the judges, it is expected that the narrative will follow the outline provided by Table 5 in terms of responses to the four categories and the individual criteria listed under each.

The total length of the Technical Narrative cannot exceed 15,000 words. Up to 20 graphics and figures may be included in the narrative without the text within them or their captions being included in the word count. To provide an effective flow of information to reviewers, it is advisable to imbed key technical drawings and other illustrative graphics, tables, etc. within the main narrative, rather than compiled at the end of the narrative.

In addition to the narrative and the allowed graphics and figures mentioned above, there are three categories of material that will be expected as appendices not subject to length restrictions:

- Letters of support.
- An Excel (not PDF) spreadsheet providing estimates responding to the "Production Rate" criterion within Evaluation Category 2.
- An Excel (not PDF) cost spreadsheet responding to the requirements of the "Costs" criterion within Evaluation Category 2, for which an example is included as Table A-2 in the appendix of this document.
- Basis of estimates- copies of key cost proposals or third-party estimates that support specific values entered into the cost spreadsheet.

[Important Note Regarding Expected Content](#)

The same information may be incorporated into the narrative for more than one phase of the Prize, provided it has been updated to reflect progress made, and remains responsive to evaluation criteria of the current phase. Reviewers are NOT expected to be familiar with the material submitted in prior phases.

The Technical Narrative must be submitted as a PDF via the HeroX platform along with the other submission documents. Information beyond the word limit or contained in hyperlinks to external sources will not be reviewed or considered by the reviewers or the judge.

2.3.4 Voucher Work Slide

Using the template provided on HeroX and the national lab capabilities list to be provided to competitors after the prize announcement, competitors should identify which national lab(s) and capabilities they are most interested in using if they win the Phase Two award and voucher. At a high level, competitors should outline the scope of work and expected deliverables.

2.4 Review Criteria and Suggested Content

2.4.1 Evaluation Categories

Table 5 provides detailed content expectations and evaluation criteria that will be used in judging. The table is divided into four categories, which are summarized below. Supplemental clarifications are included in Appendix 1 by category.

Evaluation Category 1: Platform Design Status and Suitability for Purpose

Intent: Establish that the floating platform design is fit for the intended purpose, has been tailored to facilitate mass manufacturing for large-scale floating wind farms, and has been suitably vetted for structural integrity, reliable operation when supporting a wind turbine, and survivability in harsh marine environments.

Evaluation Category 2: U.S. Production Planning

Intent: Establish manufacturing, supply chain, and deployment plans to achieve gigawatt-scale production of the floating platform and assess related costs and domestic content.

Evaluation Category 3: U.S. Location Considerations

Intent: Identify locations where the floating platform could be assembled and deployed, indicate how workforce needs could be met, and address potential environmental and ocean co-use effects.

Evaluation Category 4: Commercialization Pathway and Execution Plan

Intent: Outline how the anticipated progression from current product status to commercial wind- farm-scale sales and serial production capabilities will be managed; assess risks and mitigation measures.

The submission should include information covering all the aspects above to demonstrate that they have been considered, with the responses provided in the same sequence within the narrative. While it is recognized that the word limit may restrict the details that can be provided, competitors should highlight their knowledge and progress within each category, keeping in mind the scoring parameters provided in Table 5.

2.4.2 Scoring Methodology

The Technical Narrative will be assessed based on a series of scoring statements, described in Table 5; each statement will be scored from 1 to 6, as shown in Table 3, based on how well the narrative addresses the scoring criteria. Table 4 explains how the scores for each submission will be calculated.

Table 3. Scoring Criteria Descriptions

1	2	3	4	5	6
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

Table 4. Scoring Methodology

Phase Two Categories	Scored Statements	Percentage of Total Score	Total Possible Points
Category 1: Platform Design Status and Suitability for Purpose	4	26.7%	24
Category 2: U.S. Production Planning	5	33.3%	30
Category 3: U.S. Location Considerations	3	20%	18
Category 4: Commercialization Pathway and Execution Plan	3	20%	18
TOTAL	15	100%	90

2.4.3 Submission Content and Evaluation Criteria

Table 5 describes the suggested content for the competitor to provide in the Technical Narrative to successfully address each criterion. Further clarifications of certain criteria are provided in Appendix 1:, if indicated in the table. The right-hand column contains the scoring statements that the reviewers will be using for each of the criteria. Individual reviewers will assign a score between 1 and 6 for each scored statement after reviewing the competitor’s submission package.

Table 5. Suggested Technical Narrative Content and Scored Statements for Phase One

Evaluation Category 1: Platform Design Status and Suitability for Purpose	
Intent: Establish that the floating platform design is fit for the intended purpose, has been tailored to facilitate mass manufacturing for large-scale floating wind farms, and has been suitably vetted for structural integrity, reliable operation when supporting a wind turbine, and survivability in harsh marine environments.	
Content Expectations	Scored Statements
<p>Technical Feasibility:</p> <p>a) Provide an up-to-date overview of the floating platform concept and key aspects of the design with particular focus on progress made during Phase Two of the prize, as well as perceived advantages over other design approaches. Provide illustrations.</p> <p>b) Summarize recent progress of the Front-End Engineering and Design (FEED) process and the status of completed or planned platform engineering validation reviews, component and material tests, tank or field testing, and demonstrations to establish that the design is robust and ready to be considered for large-scale manufacturing and commercial investment.</p> <p>c) Indicate any key new or remaining design challenges and unknowns, and how the competitor proposes to address them through engineering and technical risk analysis.</p> <p>See Appendix A1.1.1 for suggested list of information to demonstrate technical maturity of the floating platform concept.</p>	<p>The updated engineering and validation information provided, including summaries of recent progress, continues to support the assertion that the competitor’s floating platform design is suitable for deployment and operation in large-scale wind farms. Plans for addressing remaining design refinement and technical validation needs are appropriate.</p>
<p>Design Site Characteristics: Provide an updated list indicating refinements or progress made in identifying the range of meteorological ocean (metocean) conditions and specifications to which the floating platform has been designed, particularly addressing the extent to which the design is or may be tailored to or targeted for performance in critical parameters of specific U.S. regions, as well as in possible future weather extremes. See Appendix A1.1.2 for typical parameters, including those indicative of specific regions.</p>	<p>The competitor’s product design parameters demonstrate an understanding of and compatibility with the characteristics of likely or targeted floating offshore deployment sites in U.S. waters.</p>
<p>Integration With Turbine and Balance of Plant: Based on latest design refinements, including changes made or proposed to facilitate manufacturing, provide an updated approach to ensuring compatibility of the floating platform design with other necessary wind farm components (e.g., turbine, mooring) and processes (e.g., installation and maintenance), including engineering for attachment, lifting and towing points, design loads, and harmonic considerations. Include information illustrating how the design is compatible with or adaptable to specific currently available and</p>	<p>The narrative demonstrates continued implementation of a logical and informed technical approach to integrating the floating platform design with the balance of offshore wind system components during deployment operation and maintenance, including the interface requirements of commercially available turbines, and anticipated next-generation</p>

<p>anticipated next-generation offshore wind turbines, including interaction of control strategies and functions, as appropriate. The target range of turbine ratings under this prize is 12 MW and above. If detailed data on actual turbines are not available to the competitor, it is advisable to incorporate specifications of an industry-accepted reference turbine such as the IEA Wind 15-MW reference turbine.</p>	<p>commercial turbines, likely to be specified by project developers for gigawatt-scale floating offshore projects.</p>
<p>Optimization of Design for U.S. Mass Manufacturing and Deployment: Provide the rationale behind design features and proposed changes intended to reduce cost, complexity, and increase throughput of serial production and deployment, and/or enable U.S. manufacture. Show that feedback from supply chain and deployment assessments (Evaluation Category 2 below) has been integrated in the platform design.</p>	<p>The competitor has demonstrated that they have thoroughly assessed the manufacturability of the platform design with relevant experts and have provided the rationale behind specific design features or adaptations proposed to date that optimize its suitability for domestic mass manufacturing and deployment.</p>

Evaluation Category 2: U.S. Production Planning

Intent: Establish manufacturing, supply chain, and deployment plans to achieve gigawatt-scale production of the floating platform and assess related costs and domestic content.

Content Expectations	Scored Statements
<p>Preliminary U.S. Platform Manufacturing Plan: Provide a draft manufacturing plan for the updated floating platform design that includes key materials and quantities required; fabrication requirements; specialized processes and tooling; primary outsourced components; transportation and handling needs; and steps leading to final platform assembly. Identify remaining gaps, barriers, and unknowns to be resolved, along with proposed solutions that could be addressed through technology.</p>	<p>The U.S. manufacturing plan covers the range of inputs, procedures, and direct sources required to fabricate, transport, and assemble the subject platform design. The processes identified are realistic, and the potential solutions to gaps and barriers are feasible.</p>
<p>U.S. Supply Chain Assessment: Provide an assessment of how to most effectively meet the supply, services, and fabrication requirements listed in the manufacturing plan and how to maximize domestic content. Include candidate supply chain companies and partnerships. Include an analysis identifying U.S. regional and national supply chain constraints and gaps such as lack of domestic availability, uncompetitive costs, or logistics difficulties. Elaborate on potential solutions such as using different processes or components, partnering to build necessary capabilities, or design modifications to inform the optimization for manufacturing process (Evaluation Category 1). Include a proposed timeline for making the necessary key supply chain decisions and scheduling critical deliveries to execute the full manufacturing plan.</p>	<p>The U.S. supply chain assessment shows congruity with the platform design details, and the requirements, and timing of the preliminary manufacturing plan. It is thorough in scope, identifies potential suppliers and partners, and recognizes gaps and constraints.</p> <p>The potential solutions to addressing known gaps are feasible. Efforts to maximize domestic content have been summarized.</p>

Preliminary Integration and Deployment Plan: Provide an updated approach for final assembly and deployment of the platforms at gigawatt-wind-farm scale, including on-site or quayside integration with turbines and other components. Detail how to maintain stability during platform tow-out and anchoring. Include required lifting and handling capacities, laydown areas and soil bearing capacities, wet and dry assembly areas, and vessel needs. Identify constraints currently limiting implementation of the approach at gigawatt scale in the U.S. and/or regionally and recommend potential solutions.

See Appendix A1.2.1 for port and vessel infrastructure information to consider in crafting the narrative.

The approach to product assembly and deployment is well thought out and feasible. Potential constraints on implementing the approach have been articulated and effective solutions have been proposed.

Production Rate: Estimate the floating platform fabrication and installation cycle time and facility throughput in terms of megawatts per month and per year.

Indicate key assumptions related to tooling and facilities. Provide a preliminary plan for reducing cycle time and increasing throughput, including the rationale and feasibility of those reductions. Indicate whether improvements will arise from changes in platform design and/or changes in supply chain, manufacturing and assembly methods, or facilities.

The competitor has carried out a credible fabrication and installation estimation process to arrive at unit cycle time and throughput and has a preliminary plan to reduce cycle time and/or increase facility throughput in the U.S. to meet deployment targets.

Costs: Estimate the costs of mass-manufacturing and deploying the floating platform in a commercial-scale wind farm project, as per the Preliminary Platform Manufacturing Plan and the Preliminary Integration and Deployment Plan. This should include the mass manufacturing of the platform components, overall assembly, mounting the turbines, and installing the system at a project site (including the mooring and anchoring system), based on a bill of materials and labor. Include estimates for the necessary investment in facilities, tooling, and other equipment, as identified in the Supply Chain Assessment, although port infrastructure does not have to be costed at this stage. Specify the degree to which all components can be sourced and manufactured in the U.S., and categorize how the mass-manufacturing process, as laid out, affects costs through the development and use of a U.S. domestic supply chain. Identify other feasible cost reduction pathways and the required infrastructure or other investment needed to implement these.

Grid connection costs, including cable costs and installation, should not be included. Inter-array connection requirements at each platform should be included.

The intent of this effort is to establish credible direct and related costs of producing and deploying the platform to aid in the competitor's decision making and commercialization process. Absolute levels of cost will not be used for comparison purposes with other competitors. Supporting information to verify the accuracy of the cost estimates, and the level of certainty associated with those costs should be included.

The competitor has carried out a credible cost analysis, presented in an effective format, that aligns with the Manufacturing Plan, Supply Chain Assessment, and Integration and Deployment Plan. They have identified possible cost reduction pathways, and the required steps for implementation.

The analysis assesses which goods and services can be readily sourced domestically, and how this content could be increased over time with increases in production volume and domestic supply chain capabilities. It also identifies the impact of infrastructure improvements that could maximize use of the U.S. supply chain such as expanded fabrication and handling capabilities or facilities.

Technical improvements that could lead to cost savings have been incorporated into the analysis, as well as external sensitivities that may potentially impact the ability to realize estimated costs.

Indicate sensitivities potentially impacting costs such as price volatility and lack of optimal port facilities or other infrastructure and how those could be overcome. Indicate what assumed cost improvements may arise from refinements in platform design, changes in mass-manufacturing methods or logistics, and/or supply chain maturity.

Ensure that there is consistency between cost assumptions and details provided in response to other prize criteria (e.g., manufacturing plan, supply chain assessment, commercialization pathway), particularly regarding timelines.

NREL analysts will review the in-process cost analyses to assist individual competitors in meeting the expectations detailed in Appendix A1.2.2.

Evaluation Category 3: U.S. Location Considerations

Intent: Identify locations where the floating platform could be assembled and deployed, indicate how workforce needs could be met, and address potential environmental and ocean co-use effects.

Content Expectations	Scored Statements
<p>Candidate Deployment Site(s) and Port(s): Provide scenarios identifying a potential offshore wind energy area or multiple areas where deployment of a gigawatt-scale floating wind farm is likely and identify potential ports and vessel types that could support assembly and installation of the floating platform design. Confirm that the deployment sites fall within the parameters established in the “Design Site Characteristics” criterion. Based on the requirements provided in response to the criterion “Preliminary Integration and Deployment Plan,” indicate to what extent the potential ports and vessel types meet the requirements for carrying out the final assembly and installation approach, and identify any gaps, modifications, or upgrades that would need to be addressed for the proposed ports and vessels.</p> <p>At this stage, <u>no commitment is required from specific facilities</u>, but identification of ports that either have suitable facilities or have the potential for such facilities within a feasible distance to potential deployment sites should be included, summarizing the relative extent and maturity of related investigations and outreach discussions.</p>	<p>The competitor has identified one or more sites where gigawatt-scale floating wind farms may be developed, along with ports and vessels that could support floating platform assembly and deployment for those areas. They have confirmed that the site characteristics fall within the design parameters of their floating platform. They have shown to what extent the ports and vessels meet the criteria indicated in the “Preliminary Integration and Deployment Plan” and have identified practical modifications or upgrades that could be made where necessary.</p>

<p>Workforce and Community Considerations: Provide a preliminary plan quantifying anticipated labor needs for meeting full-scale production requirements, and how those needs could be met directly by the lead company and/or at major suppliers.</p> <p>Identify approximate number of workers, necessary skills, potential training needs, and methods for promoting workforce diversity, including organized labor groups. Consider potential impacts, positive or negative, on communities and infrastructure where production processes may be carried out over extended periods of time, and how disadvantaged or underserved groups may benefit. As appropriate to meeting specific workforce needs within communities, include an outreach plan for identifying existing skills and/or developing new ones, which may also serve to promote increased diversity within the required workforce.</p> <p>See Appendix A1.3.1 for additional information.</p>	<p>The preliminary workforce plan is realistic in quantifying production labor and skill needs and how they could be met. It identifies potential impacts of extended large-scale production on local communities, including benefits to disadvantaged and underserved groups.</p>
<p>Environmental and Co-Use Management Plan: Provide an assessment of potential environmental and ocean co-use impacts related to manufacturing, installation, and operation of the platform design. This should include potential ecological, socioeconomic, and emissions impacts as a minimum. Identify an approach to establishing best practices for evaluating, avoiding, and mitigating concerns. See Appendix A1.3.2 for additional details.</p>	<p>The competitor is aware of potential environmental and ocean co-use concerns and has identified an approach to establishing best practices for evaluating, avoiding, and mitigating these issues.</p>

Evaluation Category 4: Commercialization Pathway and Execution Plan

Intent: Outline how the anticipated progression from current product status to commercial wind-farm-scale sales and serial production capabilities will be managed; assess risks and mitigation measures.

Content Expectations	Scored Statements
<p>U.S. Commercialization and Production Readiness Pathway: Present an up-to-date overview and high-level schedule of the planned steps, activities, and opportunities leading from the current technical readiness level of the floating platform to achieving product commercialization in a competitive market and realizing gigawatt-scale U.S. supply chain and production capabilities. Incorporate key steps and milestones indicated in responses to other prize evaluation criteria.</p> <p>Identify any planned phasing of funding and investments needed for the organization to grow to meet its commercialization objectives, including timelines and how financing requirements are anticipated to be met.</p> <p>Include statements of support from potential customers, partners, suppliers, local jurisdictions, and other entities whose collaboration will be needed to achieve those goals.</p>	<p>The steps and milestones within the planned progression from current technical development status to securing large-scale commercial contracts and building supply chain and serial production capabilities in the U.S. are well thought out and realistic, including plans for meeting the financial commitments required for growth of the organization. The competitor shows evidence of doing extensive customer and stakeholder discovery; evidence of industry support indicates a high likelihood of success.</p>

<p>Execution Plan: Provide details on the overall organizational approach to achieving the objectives articulated in the other evaluation categories.</p> <p>Summarize lead competitor’s experience and qualifications as well as overall team composition, experience, and roles. If leaders and/or participants have changed since Phase One, explain the rationale and/or circumstances leading to those changes.</p> <p>Provide an overview of program management structure, including key roles and responsibilities.</p> <p>Include a diversity, equity, and inclusion plan. See Appendix A1.4.1 for additional suggestions on content.</p> <p>Briefly describe how the prize money will positively impact progress in the U.S. toward manufacturing and deployment of floating offshore wind.</p>	<p>The competitor’s plan reflects a coordinated and thorough management approach conveying confidence that their U.S. manufacturing and supply chain development objectives have a high likelihood of success. The team structure and level of expertise are appropriate to address the range of multiyear program needs, and there is a credible plan in place to promote diversity and inclusivity of team and supply chain personnel.</p> <p>The statement on anticipated benefits of the prize funds for the floating offshore wind industry is insightful and realistic.</p>
<p>Risk Assessment: Draft a risk assessment matrix for the process of scaling the floating design for serial production and commercial deployment, including risk description, likelihood, and consequences. This should detail the severity of risk to timeline, finances, and integrity of the supply chain in the U.S. Include risks identified in or related to other evaluation criteria such as the technical development process, supply chain, price volatility, assembly and operations, suitability of available ports, and commercialization hurdles. Discuss potential mitigation measures to lower or eliminate the identified risks.</p> <p>Note: the risk assessment should relate primarily to the overall process of achieving a successful commercial product and U.S. domestic supply chain to provide floating platforms for gigawatt-scale offshore wind farms, and not to the technical risks of the platform design itself. Also, the intent of a risk assessment is not to merely voice opinions regarding the advantages of the competitor’s product over those of other platform designs or companies.</p>	<p>The risk assessment identifies critical factors to be addressed in ensuring product and commercialization success, with a justifiable approach to determining likelihoods and potential consequences. The proposed mitigation measures are well thought out and realistic.</p>

2.5 How We Determine and Award Winners

The Prize Administrator screens all completed submissions and ensures that the teams are eligible. Then the Prize Administrator, in consultation with DOE, assigns subject-matter-expert reviewers who independently score the content of each submission. The reviewers will comprise federal and nonfederal subject matter experts with expertise in areas relevant to the competition. All reviewers will be under a nondisclosure agreement before they are allowed to review submissions, and nonfederal reviewers will be selected to avoid conflicts of interest. They will review the competitors’ submitted Technical Narratives according to the evaluation criteria described in Section 2.4.

2.5.1 Reviewer Panel Scoring

The scoring of submissions will proceed as follows:

- Experts will review each submission individually and assess the information from the competitor as it relates to each statement of the criteria provided in Table 5.
- Reviewers will score each statement from 1 to 6, depending on the degree to which the reviewer agrees that the submission reflects the statement.
- Each statement score will be added together to generate a total score for the submission.
- The total scores from all reviewers will be aggregated to produce a final score for the competing team/organization. This score will inform the judge's decisions on prize awards.

2.5.2 Interviews

DOE may decide to interview a subset of competitors once the submissions have been reviewed. The interviews would be held prior to 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.

2.5.3 Final Determination

DOE will designate a federal employee as the judge before the final determination of the winners. Final determination of the winners by the judge will take into account the reviewers' feedback and scores, application of program policy factors, and the interview findings (if applicable).

2.5.4 Announcement

Approximately 60 days after the contest closes, the Prize Administrator will notify the winners and request the necessary information to distribute the prizes. The Prize Administrator will then publicly announce the winners.

2.6 Additional Terms and Conditions

See Appendix 2: for additional requirements. COMPETITORS THAT DO NOT COMPLY WITH THE ADDITIONAL REQUIREMENTS IN APPENDIX 2 MAY BE DISQUALIFIED.

Appendix 1: Technical Clarifications

The following notes provide clarifications and additional information on desirable content for the Technical Narrative. The sections below indicate the categories and subcategories within Table 5 of this rules document to which they pertain.

Important Notes:

Clarifications are provided here only for those categories and subcategories for which specific reference to this appendix is made within Table 5.

- These notes are supplemental to and should be consulted only in conjunction with the content recommendations and scoring criteria provide in Table 5.
- The same information may be incorporated into the narrative for more than one phase of the Prize, provided it has been updated to reflect progress made and remains responsive to evaluation criteria of the subsequent phase. It should not be assumed that reviewers will be familiar with the material submitted in prior phases.

A1.1 Category 1: Design Status and Feasibility

A1.1.1 Criterion: Technical Feasibility

Background

As indicated in the main body of this rules document, the intent of the FLOWIN Prize is to support the development of plans for producing floating offshore wind substructures. Therefore, it is assumed that the plans put forth by competitors for consideration will be based on floating substructure (also referred to as floater or floating platform) designs that have reached a certain demonstrable level of maturity.

It is expected that a Front-End Engineering and Design (FEED) process for a full-scale design has been completed or is in process. FEED is an engineering design approach used to control expenses and thoroughly plan a project or product before detailed design and engineering. The FEED process should focus on technical requirements, initial cost estimates for the project or product, and identifying and evaluating potential risks.

For the purposes of this prize, “full scale” refers to floating designs that can support commercial turbines of at least 12-MW rating for general utility-scale applications. Designs to support smaller utility-scale turbines for specific locations or applications (e.g., the Great Lakes) may be included if convincing rationale is provided. Support for development of novel floating wind turbine design concepts linked to a given floating substructure is not within the scope of this prize.

Recommended Technical Feasibility Content in Phase Two Technical Narrative

To enable the evaluators to understand and assess the technical feasibility and maturity of the floating substructure design, it is recommended that competitors include the following information in their technical narrative, as relevant to their product development status. If the item below has not been completed, state the timeline for completion so all aspects are covered. Where similar in content to prior phases, the information should be updated based on progress made since those submittals.

- Include basic design drawing(s) including elevations and plan views with key dimensions sufficient to illustrate the architecture and key distinguishing features of the product.
- Describe the status of testing and validation to date, including modeling details, subscale testing/prototyping, full-scale operating prototype(s), and validation of integrated turbine/floating structure system.
- Summarize status and/or summarize results of the FEED process, including determination of operational stability, load response and other key performance indicators.

- Summarize status and/or results of any engineering reviews conducted by independent certification bodies, verification agents, or others that may have conducted technical due diligence.
- Discuss proposed operations and maintenance procedures.
- Present a risk assessment of the design.
- Indicate any key remaining design challenges and unknowns, and how competitors propose to address them through engineering and analysis.

A1.1.2 Criterion: Design Site Characteristics

Background

The intent of this criterion is to have competitors describe the site characteristics that they have considered during the system design process, particularly in terms of key threshold parameters, and to demonstrate their awareness that those design parameters are suitable for U.S. waters where they hope to participate in development of gigawatt- scale floating wind farms.

Recommended Site Characteristics Content in Phase Two Technical Narrative

Table A-1 lists data categories that are typically considered during the process of designing structures for the marine environment. Competitors may use this table or another format in the narrative to convey the design envelope and parameter values that they have considered to date in the floating product engineering process, and include verification that those parameters are relevant to a representative site or sites in U.S. waters. Indicate to what extent the design is tailored or targeted for specific geographic regions or site parameters. Categories may be added to best support statements made regarding suitability of the design for U.S. conditions.

Table A-1. Key Site Parameters Determining Design Suitability (Nonexhaustive List)

Category	Parameter	Product Design Range or Limits	Applicability to Potential U.S. Sites
Water and wave data	Water depth (suitable range)		
	Extreme water levels (highest tides, etc.)		
	Average annual significant wave height		
	50-year extreme wave height		
	Wind/wave misalignment		
Wind data	Turbine wind class to which the product has been engineered		
Other factors	For example, hurricanes, seismic events, or other environmental considerations		

A1.2 Category 2: U.S. Production Planning

A1.2.1 Criterion: Integration and Deployment Plan

Background

The requirements of port facilities and vessels for fabricating, assembling, holding, and deploying floating offshore systems will vary with substructure configuration and size. The competitor should illustrate that they have considered and quantified key port factors and vessel types that will enable or constrain these functions based on their unique platform design. As stated elsewhere, the design under consideration should be sized for turbines of at least 12-MW rating unless otherwise justified.

Recommended Port and Vessel Infrastructure Content

The response to this criterion in the narrative should convey that key base port requirements and optimal vessel capabilities for carrying out at least the functions listed above have been considered to the extent they are relevant to the subject design configuration. Port infrastructure considerations that may be relevant to the narrative include but are not limited to:

1. Depth capacity
2. Laydown area space
3. Wet storage space
4. Assembly/installation area
5. Quayside length
6. Soil bearing capacities
7. Lifting/handling capacities and specific equipment needs
8. Channel draft
9. Channel width
10. Air draft restrictions.

Other categories and parameters may be mentioned as appropriate to help illustrate the thoroughness of the team's assembly and installation planning.

Vessel considerations should include the number, types and capabilities of vessels that are anticipated to be needed.

A1.2.2 Criterion: Costs

Background

The purpose of this criterion is to confirm that a credible, thorough cost analysis has been completed to form the basis of long-range financial planning and cost-reduction efforts. DOE plans to have experienced offshore wind cost analysts at NREL available to assist individual competitors in carrying out the cost analyses. NREL personnel will be under confidentiality agreements and "firewalled" from other NREL activities. It is expected that a draft spreadsheet of costs will be required from competitors for review and constructive critique after the competition has been open for 7 months. Judging of this criterion will be based solely on the thoroughness and credibility of each competitor's analysis relative to commercialization of their floating platform product, and a realistic measure of the uncertainty associated with the analysis. No direct comparisons of costs will be made between the cost analyses submitted by different competitors.

Recommended Costs Content

IMPORTANT NOTE: The draft guidelines and spreadsheet presented below represent the type(s) of analyses that are expected in satisfying the requirements of this criterion. It is anticipated that each team may adjust formulas and assumptions appropriate to their unique circumstances, in conjunction with NREL analysts, to ensure credibility and consistency with best practices and use of standard component and material unit costs when appropriate.

Provide information indicating that key cost categories of the floating substructure have been assessed, as per the proposed Preliminary U.S. Platform Manufacturing Plan. Detail realistic potential costs in each category, and state in the costs narrative how these represent presumed costs lowered due to factors such as increased levels of production, mature supply chain, refined production and installation processes, and design innovations. Other factors of the floating platform design configuration that factor into controlling or reducing overall wind farm project costs may also be discussed in the costs narrative, such as impact on operations and maintenance requirements and costs.

To the extent it proves valuable in conveying the anticipated cost progression based on variable internal and/or external factors, a competitor may incorporate alternate scenarios with varying timetables into their analysis.

Supporting information to verify the accuracy of the cost estimates, and the level of certainty associated with those costs should be included.

Table A.2 provides a sample format that will be provided in Excel spreadsheet format for competitors to fill in and adapt to their project. Categories may be added or deleted as appropriate to a competitor's product details and production planning.

Sample Guidelines and Assumptions:

1. Competitors need to define a commercial-scale project capacity (wind farm capacity, turbine rating, and number of turbine/platform systems) as the basis for the summary bill of materials and costs for the relevant cost elements of the entire project. This should align with the project scale detailed in their Commercialization Plan.
2. Focus on activities taking place at the integration/assembly port. Components produced at secondary sites should be listed as subcomponents with a total cost inclusive of labor, materials, and transport.
3. The relevant components for the bill of materials include the floating platform, station-keeping system, and associated subsystems. Turbine and cable costs/bills of materials are not required.
4. Participants need to identify baseline assembly port requirements and identify likely upgrade costs to advance the port capabilities needed to build the floater.
5. Participants need to provide a high-level estimate of wet tow time from the port to the project site but are not required to conduct a detailed weather window or vessel availability analysis.

Representative Cost Category Descriptions (suggested but not exhaustive):

6. Raw materials, subcomponents, and subassemblies:
 - a. *Definition:* Products that are brought into the final assembly port.
 - b. *Includes:* Procurement cost for each product, including labor, materials, transport to assembly port.
7. Final platform assembly (labor, facilities, and equipment per assembly phase):
 - a. *Definition:* Labor required to assemble the floating platforms at the assembly port.
 - b. *Includes:* Types of workers, person-hours, wages for each floating platform assembly

phase. Hourly rental rates for facilities and specialized equipment. Rental rates can include equipment operator labor, or this labor can be included separately. Participants can define the process and cost phases appropriate to their concept. If necessary, one phase could be the transport to final integration port.

8. Turbine integration (labor, facilities, and equipment per integration phase):
 - a. *Definition:* Labor required to assemble the turbine on the completed floating platform at the integration port (or wind farm site).
 - b. *Includes:* Types of workers, person-hours, wages for each phase of integrating the wind turbine with the completed floating platform. Hourly rental rates for facilities and specialized equipment. Rental rates can include equipment operator labor, or this labor can be included separately. Participants can define the phases for their concept.
9. Transport, installation, and site preparation (vessel costs per phase):
 - a. *Definition:* Costs to transport/install all the integrated turbine/floating platforms to the project site, including the mooring and anchoring system.
 - b. *Includes:* Vessel costs, including charter rates, labor, and fuel, for all required installation vessels. Mooring and anchoring system costs and the time take for installation of these. Costs can be aggregated into a total day rate per vessel type (i.e., labor and fuel do not need to be itemized). Exclude costs associated with the cable laying and installation, but include time take to connect the cable on site.
10. Source and U.S. Content:
 - a. From a drop-down menu of domestic and global regions in the Source column, choose the one that best matches the location from which individual goods or services originate. If, for instance, components or materials are purchased from a U.S. company but originate from Asia without any work on them being carried out by the U.S. entity (i.e., a “pass-through”), source should indicate “Non US-Asia.”
 - b. The U.S. Content column provides a means of tallying the costs of goods and services of U.S. origin and comparing them to the overall production costs. Enter the values from the Total Cost column that apply to items sourced in U.S. regions only.
 - c. As appropriate, the technical narrative should elaborate on the proposed approach to assessing and planning to increase domestic content as production volume and domestic supply chain capabilities increase

Table A-2. Cost Bill of Materials – Floating Platforms for 75-Unit Wind Farm Project (examples provided for illustrative purposes only)

Item	Description	Units	Unit cost	Qty	Total cost	Source	U.S. Content	Basis of estimate
<i>Raw materials, subcomponents, and subassemblies</i>								
Steel plates (example)	Steel plates to be rolled into columns	#	2,000	5,000		Non US - Asia	-	(Steel to be procured in the finished columns)
Finished buoyant columns (example)	Rolled steel columns	#	500,000	150	75,000,000	US - Gulf of Mexico region	56,768,000	Total cost based on fabricator's best estimate. Steel sourced overseas is approximately 13% of total cost.
Tube steel (example)	Tubes formed into trusses	#	1,000	1,000	1,000,000	US - Gulf of Mexico region	1,000,000	
Ballast (example)	Slurry, iron ore, or other ballast materials	#	10	1,000	100,000	US - Gulf of Mexico region	10,000	
Mooring lines (example)	Steel chain for catenary lines	#	100	100,000	10,000,000	Non US - Europe	-	
Anchors (example)	Steel drag embedment anchors	#	1	10	10,000	Non US - Europe	-	
<i>Final platform assembly (labor, facilities, and equipment per assembly phase)</i>								
Welder (example)		hours/FTEs	100	50,000	5,000,000	US - West Coast region	5,000,000	
Manager (example)		hours/FTEs	75	2,000	150,000	US - West Coast region	150,000	
Painter (example)		hours/FTEs	100	10,000	900,000	US - West Coast region	900,000	
Gantry crane (example)	Assemble floater	/day	10,000	75	750,000	US - West Coast region	750,000	
Dry dock (example)	Space for floater assembly	\$/day	5,000	75	375,000	US - West Coast region	375,000	
SPMT (example)	Onsite transportation of subassemblies	\$/day	3,000	75	225,000	US - West Coast region	225,000	
<i>Turbine integration (labor, facilities, and equipment per integration phase)</i>								
Technician/welder		hours/FTEs	100	70	70,000	US - West Coast region	70,000	
Manager (example)		hours/FTEs	75	200	15,000	US - West Coast region	15,000	
Materials/Hrdwre		#	7,500	75	562,500	US - Gulf of Mexico region	562,500	
Ring crane (example)	Integrate turbine onto finished floater	\$/day	10,000	75	1,500,000	US - West Coast region	1,500,000	
SPMT (example)	Onsite transportation of subassemblies	\$/day	3,000	75	225,000	US - West Coast region	225,000	
<i>Transport, installation, and site preparation</i>								
Anchor handling tug vessel (example)	Wet tow to project site	\$/day	2,500	150	375,000	US - West Coast region	375,000	
Anchor handling tug vessel (example)	Anchor installation	\$/day	2,500	300	750,000	US - West Coast region	750,000	
Support tugs (example)	Wet tow to project site		100	150	15,000	US - West Coast region	15,000	
Total Estimated Cost of Platforms(\$)					96,932,500	Est. Domestic Content (\$)	68,690,500	
Unit Cost (75)					1,292,433	Est. Domestic Content (%)	71%	

A1.3 Category 3: U.S. Location Considerations

A1.3.1 Criterion: Workforce and Community Benefit

Background

The objective of the Biden administration's Justice40 Initiative is to ensure that all Americans benefit from investments made toward the nation's clean energy transition. This includes providing pathways for job and enterprise creation in underserved and disadvantaged communities, as well as broad access to clean energy sources and reduction of environmental exposure and climate change impacts.

The definitions of underserved and disadvantaged communities are broad with many different interpretations. For the purposes of this prize, consider factors such as but not limited to high unemployment and underemployment; lack of access to training resources; stressed neighborhoods; loss of former industrial employers or facilities; jobs lost through the energy transition; high transportation cost burden and/or low transportation access.

Recommended Workforce and Community Benefit Content

Update projections of long-range workforce needs to meet serial production targets, including types of skills and training likely to be required. Indicate how these needs could be met through either direct employment or supply chain partners. Include potential opportunities to train and employ individuals in typically underserved and disadvantaged communities. Also indicate potential opportunities to help revitalize former or underutilized industrial sites and adjacent communities.

A1.3.2 Criterion: Environmental and Co-Use Considerations

Background

All structures and related activities have some impact on their natural environment as well as the potential for effects on activities being carried out in their vicinity by others. The intent of this criterion is to establish that the competitor has considered the range of potential impacts related to their design and evaluated whether negative impacts could be reduced and positive impacts enhanced. Ocean co-use refers to multiple activities that occur in the maritime space, often with overlapping spatial extent.

Recommended Environmental and Co-Use Consideration Content

The current legislation governing identification and assessment of environmental effects is provided on the Bureau of Ocean Energy Management website [here](#). The site also provides examples of assessments for existing offshore wind farms.

For Phase Two, the narrative should include the approach to addressing this impact assessment. Prize competitors need to focus their responses only on the environmental assessment factors of wind farm manufacture, installation and operation that pertain to the floating platform and its associated elements such as mooring anchors and cables. It is not anticipated that the data will be available for undertaking the assessment, but a summary of how the assessment will be done, and potential areas of concern where mitigation and management may be necessary should be discussed. This should include methods for assessing emissions, ecological and socioeconomic impacts as a minimum.

A1.4 Category 4: Commercialization Pathway and Execution Plan

A1.4.1 Criteria: U.S. Commercialization and Production Readiness Pathway, Execution Plan, Risk Assessment

Background

There is an ongoing and dynamic interplay between the relative levels of technical readiness, manufacturing readiness, and commercial readiness as a product progresses toward market. The intent of this category is to describe and evaluate how realistic progress will be made in these areas toward receiving floating platform sales commitments and attaining serial production capabilities, including details on management approach, team capabilities, and risk mitigation.

Recommended Content on Commercialization Pathway and Execution

An effective narrative should align with the content specific recommendations and scoring criteria in Table 5 to provide information such as:

- An overview of how implementation of long-range product technical testing and validation, supply chain, and manufacturing plans will be executed, including funding option.
- Road map for commercialization and investment.
- Reference to similar past development activities with successful outcomes.
- Confirmations of commercial interest including letters of support or interest from key stakeholders and potential customers.
- A broad assessment of risks that could impede progress toward the end goals, and how those risks will be mitigated. The format of the risk assessment is at the discretion of the competitor but should be based on established industry practices, and include financial, schedule and supply chain integrity consequences.

Because organizations and team configurations will inevitably evolve during the commercialization process, competitors may indicate how and why their plans and/or participants have changed since Phase One.

Formulating an Effective Diversity, Equity, and Inclusion Plan

Diversity, equity, and inclusion (DEI) plans will be different for each organization and prize competitor based on their unique characteristics and plans. However, there are common elements and approaches that can ensure that individual plans provide effective pathways to achieving DEI objectives. Following the evaluation of Phase One responses to the DEI criterion, the following bullets were compiled as informal guidance for competitors on best practices, suggestions on approach, and examples to consider in developing or refining a DEI plan appropriate to each team and their own product development and commercialization process:

- Beyond indicating core values of the team members, detail how those core values will be integrated into creating the workforce and work environment that you envision and describe (internships, recruiting strategies, etc.).
- Demonstrate commitment to DEI, identify partnerships to advance goals and include action items to enhance DEI beyond composition of the immediate team.
- Plan should be action-oriented. Do not rely on merely mentioning an organization's diversity action plan along with general statements about the value and benefits of diversity.
- Well-rounded plans will include a combination of elements such as an internal component

(various employee trainings, discussion platforms, etc.), external supply chain component (vendor diversity efforts), and student efforts (mentorship to local area students, intent to issue internships to underrepresented students at technical schools and community colleges) to diversify future talent pipelines into the offshore wind industry.

- Provide relevant examples of results from prior programs or efforts.
- Beyond stating that you will seek out underrepresented and minority business entities to promote economic growth for the local communities, describe how that could be accomplished.
- In addition to commitment and approach, provide measurable goals or specific actions to foster DEI.
- Convey depth of understanding of problems/challenges—do not expect small actions to have a big impact (e.g., online trainings to improve communication and support employee retention).
- Add a member to the Technical Advisory Board that represents diversity and inclusion so that it is represented throughout the project in different aspects.
- Direct feedback can inform whether, for instance, online training for improving diverse communications is sufficient.
- Consider bringing in outside DEI consultants to conduct in-person sessions. To save time in the process, consult with a DEI professional in advance to confirm that online training selected by the team would be effective.
- Emphasize recruitment of diverse staff, including an awareness of where diverse employees could be drawn from.
- Consider engaging additional partners that already actively support DEI efforts.
- When providing team summaries or structure, indicate leads for DEI responsibilities.
- If identifying local partners that can help address workforce and supplier diversity and inclusion, provide letters of support.
- Potentially work with experienced community-based organizations and community development groups to build relationships with disadvantaged communities in the local and regional area.
- Provide examples of how local and disadvantaged business enterprises may be integrated into future supply chain including “matchmaker” style events to prepare for learning more about local area businesses that might fit the needs of what you are looking for.
- Bring diverse interns from local/regional area universities and/or junior colleges for development of the future talent pipeline in offshore wind.
- Focus on increasing women in STEM fields and the energy industry; highlight prior experience including educational events and student competitions.
- Obtain letters of collaboration or support from school districts, for instance for mentoring high school engineering clubs or robotics teams.
- Beyond indicating support for diversity and inclusion among suppliers and community partners, mention specific measures in the plan to ensure that underrepresented and minority businesses have the opportunity to work on your projects.
- Specific examples of partnerships and programs that are included in the response to the workforce and community benefits criterion in Category 3 may be expanded upon and used as examples for other team partners to follow in Category 4.
- A self-aware plan would include conducting self-assessments and evaluation of the internal team as well as external advisors or partners, to help meet diversity objectives.
- If performed with intentional focus, the supply chain sourcing strategy could lead to the development of new suppliers from various underrepresented categories that could help to build up new companies within the offshore wind industry.
- To make sure that diversity and inclusion is shown to be an important component of all facets of the project, and not just corporate DEI policy speech, a separate diversity advisory committee could be added, or diversity advisors or consultants could be added to the supply chain and workforce and economic development advisory committees, to make sure that diversity and inclusion practices and considerations are intertwined with the technical and economic project goals.
- Include support letters from potential local and regional community partners (educational or workforce related) that could benefit from being a part of the overall team and could be working

on parallel efforts to create pipeline opportunities for underrepresented communities (rural/economically disadvantaged/tribal communities, etc.) within the offshore wind industry.

Appendix 2: Additional Terms and Conditions

A2.1 Requirements

Your submission for the Floating Offshore Wind Readiness 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 March 1, 2024, before the prize's Phase Two 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 10 of Appendix 2 (Section A2.10). 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.
- 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 I am providing this submission to the Federal Government. 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.

A2.2 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.

A2.3 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.

A2.4 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 winning competitors’ names and organizations and, as applicable, 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.

A2.5 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.

A2.6 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.

A2.7 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.

A2.8 Publicity

The winners of these prizes (collectively, "winners") will be featured on DOE and NREL 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.

A2.9 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.

A2.10 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."

A2.11 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.

A2.12 General Conditions

DOE reserves the right to cancel, suspend, and/or modify the prize, or any part of it, at any time. If any fraud, technical failures, or any other factor beyond DOE's reasonable control impairs the integrity or proper functioning of the prize, as determined by DOE in its sole discretion, DOE may cancel the prize. Any performance toward prize 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 prize, 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.

A2.13 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.
- 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.
- Whether the project promotes increased coordination with nongovernmental entities toward enabling a just and equitable clean energy economy in their region and/or community.
- The inclusion of Minority Serving Institutions, Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, or entities located in a disadvantaged community that meet the eligibility requirements.
- The degree to which the activities described in the submission have been or will be performed in the United States.
- Whether submission content sufficiently confirms the competitor's intent to commercialize technology.

A2.14 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.