



U.S. DEPARTMENT OF ENERGY

# FLOWIN PRIZE

Official Rules

September 2022

# 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
xxx	xxx

# Executive Summary

## Overview

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

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 will have three phases with a total prize pool of \$5.75M, plus at least \$1.1M in vouchers for technical support from DOE national laboratories. Prizes will be 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. This document presents the rules for Phase One. 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	\$100,000	\$75,000	8
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 expended at DOE national laboratories. DOE will not take any interest in intellectual property developed by competitors under this prize.

Awards will be made for each phase, and only the winning teams of each phase will be eligible to compete for the next phase.

In Phase One of the FLOWIN Prize, the winning submissions will be those teams that have an existing floating platform technology, have determined critical hurdles to the commercialization of that technology, and demonstrate that they can make significant progress toward identifying and developing a supply chain within the United States to produce the technology. Up to eight winning teams will receive \$100,000 each in cash and at least \$75,000 each in vouchers for technical services provided by DOE national laboratories as they prepare Phase Two submissions.

Phase Two of the prize will open after the Phase One winner announcement. Only Phase One winners will be eligible to submit packages for the Phase Two prize. 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. 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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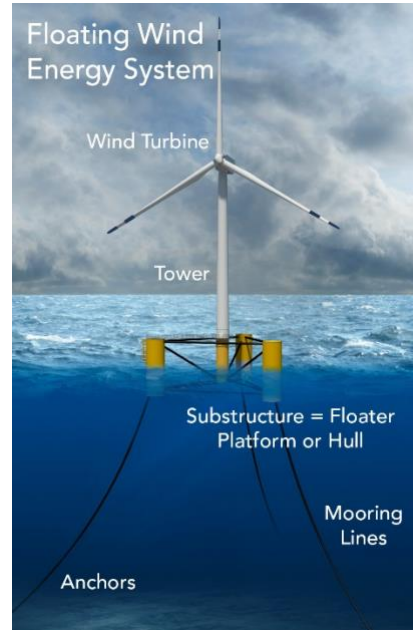
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# Glossary

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. <sup>1</sup>
Industrialization	The process to enable the floating wind system to be mass-manufactured for deployment at scale. Consider, “What would you do differently if you were producing 50–200 units instead of just a couple?”
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 station—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.
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.



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<sup>1</sup> 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.<sup>2</sup> 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.<sup>3</sup> 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 homes<sup>3</sup> 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. 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.<sup>4</sup> 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.

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

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<sup>2</sup> 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/>.

<sup>3</sup> 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>.

<sup>4</sup> 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>.



quality jobs, environmental justice and inclusion of underserved communities as reflected in the administration’s Justice40 Initiative.<sup>5,6</sup> 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&CA 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.<sup>7</sup> 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:

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<sup>5</sup> 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.

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

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

1. Incentivize and support further development of technically and economically viable floating wind platform structures that can support 12-MW-rated or larger<sup>8</sup> wind turbines in water 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

Under a prize structure, funding awards are made on the merits of completed work. The winners of Phase One will receive cash awards of \$100,000 each; there will be up to eight winners. They will also receive vouchers for technical assistance worth at least \$75,000 each. Only Phase One winners may submit packages in Phase Two of the prize, which will follow Phase One awards. In Phase Two, it is anticipated that there will be up to five winners, with \$450,000 awarded per winner, plus 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	\$100,000	\$75,000	8
Phase Two	\$450,000	\$100,000	5
Phase Three	\$900,000	-	3

It is expected that cash awards and technical assistance will offset expenses and help winning organizations overcome 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

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<sup>8</sup> This prize focuses on 12–15-MW turbines, but smaller turbines will be considered if there is sufficient justification that they are appropriate for large-scale floating offshore wind industrialization.

- 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 One Summary

Under Phase One of the FLOWIN Prize, competitors must submit a document describing team capabilities, the floating platform technology they intend to manufacture, a high-level summary of their existing design and its current state of manufacturing readiness, and their vision for large-scale production. These submissions will be reviewed according to the criteria in Section 2.4 by DOE and external experts selected by DOE. The winning teams will each receive a cash prize of \$100,000 and a voucher for technical services provided by DOE national laboratories as they prepare Phase Two submissions.

### 1.3.2 Phase Two Summary

Phase Two of the prize will open after the Phase One awards are announced, and entrants will be limited to Phase One winners. Competitors will be eligible to compete for another round of cash prizes and technical services vouchers. Details of the Phase Two criteria will be released during Phase One.

During Phase Two, teams will research and develop plans to transition their floating structure 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. 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 final gigawatt-scale wind farm.

### 1.3.3 Phase Three Summary

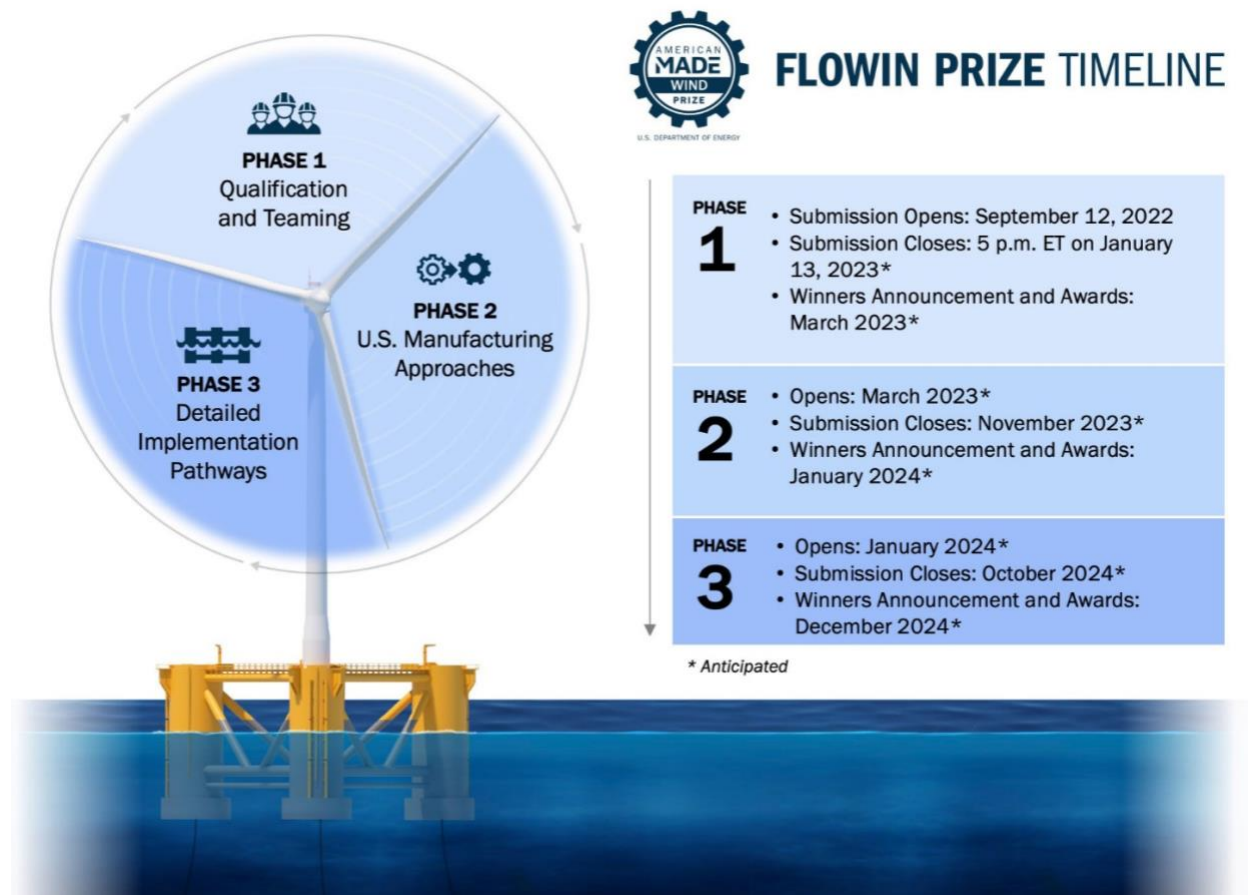
Phase Three of the prize will open after the announcement of Phase Two winners. Only Phase Two winners will be eligible to compete for another round of cash prizes. Details of the Phase Three criteria will be released during Phase Two or earlier.

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. 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.

## Key Dates

- **Phase One Submission Opens:** September 12, 2022
- **Phase One Submission Closes:** 5 p.m. ET on January 13, 2023
- **Phase One Winner Announcement and Awards:** March 2023 (anticipated)
- **Phase Two Opens:** March 2023 (anticipated)
- **Phase Two Submission Closes:** November 2023 (anticipated)
- **Phase Two Winner Announcement and Awards:** January 2024 (anticipated)
- **Phase Three Opens:** January 2024 (anticipated)
- **Phase Three Submission Closes:** October 2024 (anticipated)
- **Phase Three Winners Announcement and Awards:** December 2024 (anticipated)



## 1.4 Eligibility and Competitors

The competition is only open to legally formed entities including for-profits, nonprofits, academic institutions, and non-federal government entities such as states, counties, tribes, and municipalities.

Competitors are subject to the following requirements:

- If a lead competitor is a private entity, it must be incorporated in and maintain a primary<sup>9</sup> 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 program<sup>10</sup> 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 risk<sup>11</sup> 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

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

<sup>10</sup> 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.

<sup>11</sup> Currently, the list of countries of risk includes Russia, Iran, North Korea, and China

perjury that the named competitor meets the eligibility requirements for this prize competition and complies with all other rules contained in the Official Rules document. I further represent that the information contained in the submission is true and contains no misrepresentations. I understand false statements or misrepresentations to the Federal Government may result in civil and/or criminal penalties under 18 U.S.C. § 1001 and § 287.

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.<sup>12</sup> The Selection Official may consider the inclusion of these types of entities as part of the selection decision.

## 1.5 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. Finally, NREL will conduct independent verification of the levelized cost of energy (LCOE) of proposed designs during Phase Two and Three of the prize.
- **Industry Connector:** As a resource available to competitors, DOE plans to engage an industry organization to facilitate connections between interested competitors and potential supply chain partners
- **Vouchers:** Winners in Phases One and Two will receive vouchers for at least \$75,000 and \$100,000, respectively, that they may use to fund technical work at DOE national laboratories to assist in their design refinement and production planning. Capabilities statements from prominent labs will be provided to competitors prior to the Phase one 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.

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<sup>12</sup> 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.

## 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 (in the following Important 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 Dates

- **Phase One Submission Opens:** September 12, 2022
- **Phase One Submission Closes:** 5 p.m. ET on January 13, 2023
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- **Phase Three Opens:** January 2024 (anticipated)
- **Phase Three Submission Closes:** October 2024 (anticipated)
- **Phase Three Winners Announcement and Awards:** December 2024 (anticipated)

### 2.3 What to Submit for Phase One

The items in

Table 2. Phase One Submission Requirements

Table 2 constitute the submissions package for Phase One 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 One Submission Requirements

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

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<sup>13</sup> May be made public but only for the winning teams.

## 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
- 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 make a public-facing, one-slide submission 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 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 One award and voucher. At a high level, competitors should outline the scope of work and expected deliverables.

## 2.3.4 Technical Narrative [Scored]

Competitors should write a Technical Narrative describing their team/organization, the design and status of the floating platform, planned activities to enable mass manufacturing, and anticipated advances to the design and cost elements through this process.

Table 5 lists the suggested content to include in the Technical Narrative and the corresponding criteria, in the form of statements, on which the reviewers' scoring will be based.

The total length of the Technical Narrative cannot exceed **5,000** words. Competitors may include up to **10** supporting visualizations or graphics (graphics captions are not included in the overall word count). If submitted, appendices are included within the word count unless explicitly excluded in the Suggested Content column of



Table 5. 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.

## 2.4 Review Criteria and Suggested Content

### 2.4.1 Evaluation Categories

Phase One is intended to evaluate competitors' technical design credibility, their qualifications, and their proposed U.S. manufacturing approach as presented in the submissions.

Phase One focuses on setting a baseline for the current technology, with a vision for improvements through intermediate-scale deployment and ultimately gigawatt-scale deployment.

There are four key categories of information that need to be addressed in the submittal package; these will be evaluated during the prize judging. An overview is given below, with more details in Section 2.4.3, and clarifications in Appendix 1:

- **Category 1: Platform Design Status and Feasibility**

This category focuses on various aspects that demonstrate the design is fit-for-purpose and has been suitably vetted:

  - **Technical Feasibility:** Provide floating platform design and engineering details to the extent necessary to demonstrate technical feasibility and status of testing and validation. This criterion is double-weighted.
  - **Design Site Characteristics:** Describe the site conditions to which the platform has been designed (e.g., threshold parameters for wind, waves, and other relevant metrics) and indicate why these are suitable for sites in U.S. waters where gigawatt-scale floating wind farms are likely.
  - **Integration Plan:** Ensure compatibility of the platform with other components of the offshore wind farm, including turbine, anchors, and transmission cables.
  - **Suitability of Design for U.S. Mass Manufacturing and Large-Scale Deployment:** Confirm that the design is adaptable for mass manufacturing, and that potential design changes to enable serial production have been considered.
  
- **Category 2: U.S. Manufacturing Outline and Commercialization Pathways**

Category 2 assesses the manufacturing, deployment, and commercialization plans for the platform, including how the initial design can be adapted to make optimal use of the domestic supply chain for mass-manufacturing components.

  - **Production and Commercialization Readiness:** Provide an overview of the planned progression from the current stage of product development to full commercialization.
  - **Manufacturing and Supply Chain Development:** Provide an outline of plans for serial production, considering the range of components, facilities, manufacturing processes, and U.S. supply chain development required.
  - **Assembly and Deployment Plan:** Describe options for final assembly and deployment of the floating platform at wind farm scale.
  - **Capital Costs:** Review proposed means of reducing costs through design refinements, production planning, and economies of scale.
  - **Risk Assessment:** Review the risks and unknowns associated with manufacturing and deploying the floating platform as part of a gigawatt-scale wind farm.

- **Category 3: U.S. Location Considerations**

This category addresses the locations where the floating platform could be assembled and deployed from, how workforce needs could be met, and potential environmental and ocean co-use effects.

- **Port and Vessel Infrastructure:** Summarize the key parameters for a port base and the vessels required to carry out the assembly and deployment plan.
- **Workforce and Community Benefit:** Summarize workforce needs, how the project will create high-quality jobs and how the proposed manufacturing plans may help realize Justice40 community benefit objectives.
- **Environmental and Co-Use Considerations:** Provide an evaluation of potential environmental and co-use impacts of producing, installing, and operating the platform on a large scale.

- **Category 4: Team and Management**

Category 4 provides information on how the product development will be managed, the entities that make up the core team, and how diversity and inclusion will be assured.

- **Project Management and Execution Plan:** Describe the planned organizational framework and team management structure to execute the necessary steps in achieving successful product manufacturing, commercialization, and supply chain development, and how the prize money will further overall progress in U.S. manufacturing for offshore wind.
- **Team Qualifications:** Provide a summary of the credentials and experience of the main competitor and other organizations within the team, whether confirmed or in roles that remain to be filled.
- **Diversity Plan:** Summarize a diversity, equity, and inclusion plan that describes the actions the team will take to foster an inclusive work environment and promote diversity throughout the organization and supply chain.

The submission should include information covering all the above aspects on at least a high level to confirm that they have been considered. 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 Section 2.4.3.

## 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, 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 One Categories	Number of Scored Statements	Percentage of Total Score	Total Possible Points
Category 1: Design status and feasibility	4 - Statement 1 is double-weighted	31%	30
Category 2: U.S. manufacturing and commercialization pathways	5	31%	30
Category 3: U.S. location considerations	3	19%	18
Category 4: Team and management	3	19%	18
TOTAL	16	100%	96

### 2.4.3 Submission Content and Evaluation

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 so indicated in the table. The right-hand column contains the scored 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

PHASE ONE Suggested Content	Scored Statements
<b>Category 1: Platform Design Status and Feasibility</b>	
<b>Technical Feasibility:</b> Describe the floating platform that is proposed for U.S. manufacturing. Include basic design drawings and sufficient information about the design process to confirm that the concept has been appropriately modeled and tested and is feasible for large-scale wind	The information provided confirms the technical feasibility of the floating concept for large-scale wind farm deployment, as well as a level of product engineering readiness and maturity justifying detailed production planning. <b>This statement is double-weighted.</b>

<p>farm deployment supporting wind turbines of at least 12-MW rating.<sup>14</sup></p> <p>Describe the status of testing and validation, plus a summary of the Front-End Engineering and Design (FEED) process demonstrating progress toward the concept maturity criteria outlined in Appendix 1:.</p>	
<p><b>Design Site Characteristics:</b> List the range of meteorological ocean (metocean) conditions and specifications to which the platform has been designed, and indicate why these are appropriate for deployment in U.S. waters.</p> <p>See Appendix 1:.</p>	<p>The competitor’s product design parameters are appropriate and realistic for anticipated floating project sites within U.S. waters.</p>
<p><b>Integration Plan:</b> Describe the approach to ensure compatibility of the subject design with other necessary wind farm components (e.g., turbines, cables), including engineering for attachment points, design loads, harmonic considerations, etc.</p> <p>Include information illustrating how the design is compatible with or adaptable to currently available and next-generation offshore wind turbines, including interaction of control strategies and functions, as appropriate.</p>	<p>The narrative demonstrates a logical and informed technical approach to integrating the floating platform design with the balance of offshore wind system components during deployment and operation.</p>
<p><b>Suitability of Design for U.S. Mass Manufacturing and Large-Scale Deployment:</b> Show how key features of the current design make it ready or adaptable for serial production through standardization of components and use of processes leveraging or improving the capabilities of the existing U.S. supply chain.</p>	<p>The competitor has provided sufficient details to establish that there are key features of the proposed product design that make it practical and suitable for mass manufacturing in the United States.</p>
<p><b>Category 2: U.S. Manufacturing Outline and Commercialization Pathways</b></p>	
<p><b>Production and Commercialization Readiness:</b> Summarize the planned steps and activities leading from the current technical readiness level to wind-farm-scale production, including an overview of proposed commercialization pathways.</p> <p>See Appendix 1:.</p>	<p>The steps within the planned progression from current technical development status to serial production are realistic, and the proposed pathways to commercialization appear to have a high likelihood of success.</p>

<sup>14</sup> Designs to support smaller utility-scale turbines for specific locations (e.g., the Great Lakes) or applications may be considered if convincing rationale is provided.

<p><b>Manufacturing and Supply Chain Development:</b> Provide a manufacturing outline that includes the key materials required, the availability of major components and whether they can be sourced domestically, and anticipated U.S. supply chain development activities that may be needed for cost-effective serial production.</p> <p>Discuss the need for and current availability of specific manufacturing capabilities such as fabrication facilities, processes, and specialized tooling.</p>	<p>The manufacturing and supply chain overview identifies the key materials, components, and capabilities needed for serial production, as well as steps to be taken to develop the necessary U.S. supply chain.</p>
<p><b>Assembly and Deployment Plan:</b> Describe or illustrate the planned approach(es) for final assembly and deployment of the platforms at wind farm scale, including on-site integration with turbines and other components, and consideration of how potential U.S. site and infrastructure constraints could be overcome.</p>	<p>The approach to product assembly and deployment has outlined how key steps of the process will be accomplished and appears to be achievable for large-scale deployments in the United States.</p>
<p><b>Capital Costs:</b> To establish that the team has considered pathways to lowering the cost of energy, provide a high-level assessment of the key production and installation cost categories and potential means of reducing costs in each. See Appendix 1: for representative categories.</p>	<p>The competitor has demonstrated that they have assessed costs in key categories, have considered potential cost reduction targets, and have provided rationale for the feasibility of those reductions.</p>
<p><b>Risk Assessment:</b> Identify the key risks and unknowns associated with scaling up to manufacture, deploy, and operate the floating platform design at the quantities required for gigawatt-size wind farms. Include potential mitigation measures.</p>	<p>The risk assessment conveys an understanding of critical factors related to achieving successful production, installation, and performance of the platform design, characterizes high-level risks, and identifies potential mitigation approaches.</p>
<p><b>Category 3: U.S. Location Considerations</b></p>	
<p><b>Port and Vessel Infrastructure:</b> Summarize the site requirements of a port base including marine access. See Appendix 1: for a list of possible parameters and specification categories to consider. These requirements should be realistic for existing U.S. ports, and/or include potential upgrades.</p> <p>Identify related vessel needs and handling and lifting equipment capacities.</p> <p>Specific candidate ports and vessels do not need to be identified in this phase.</p>	<p>The competitor has identified the primary needs of a port base with assembly, holding, and deployment capabilities and has identified vessel requirements.</p>
<p><b>Workforce and Community Considerations:</b> Summarize the process for documenting workforce competencies and skill requirements, engaging with labor unions and other workforce partners to ensure the availability of a skilled and qualified local workforce as production levels increase.</p>	<p>The competitor has considered how a workforce with the necessary skills can be developed and has identified how progress toward Justice40 community benefit objectives can be realized, particularly</p>

<p>Indicate how long-range manufacturing and supply chain development plans can contribute to realizing the objectives of the Biden administration’s Justice40 Initiative by benefiting disadvantaged and underserved communities.</p> <p>See Appendix 1:.</p>	<p>accessibility to those jobs for community residents.</p>
<p><b>Environmental and Co-Use<sup>15</sup> Considerations:</b> Provide a summary of potential environmental and co-use impacts (positive and negative) specific to the team’s platform design, fabrication, and deployment. Include potential mitigation to reduce negative impacts on the environment and co-users as well as features that offer benefits over alternative methods and materials.</p> <p>Illustrate awareness of emissions generated through production and how reductions could be realized through refinement of procedures and manufacturing at scale.</p> <p>See Appendix 1:.</p>	<p>The competitor has identified potential environmental and co-use concerns/benefits associated with the production methods and deployment and understands the challenges associated with each in order to consider relevant improvements.</p>
<p><b>Category 4: Team and Management</b></p>	
<p><b>Management and Execution Plan:</b> Describe the planned organizational framework and team management structure to execute the steps toward achieving successful product manufacturing, commercialization, and supply chain development. Include a notional timeline and provisions for coordination and communication between partners.</p> <p>Briefly describe how the prize money will be used to further progress toward U.S. manufacturing and deployment of offshore wind energy systems.</p>	<p>The competitor’s plans, as summarized, reflect an effective organizational and management approach for attaining the stated objectives and for realizing positive impact of the prize money.</p>
<p><b>Team Qualifications:</b> List key team members and/or organizations and summarize their relevant experience and role on the team. Show that the team has expertise that encompasses offshore platform engineering, manufacturing, supply chain management, workforce development, and offshore wind farm development. If the team has any expertise gaps, identify those and how the team will address them.</p> <p>Additional letters of support are acceptable from non-team members. Additional letters should be limited to a single page and will not count toward the Technical Narrative word count.</p>	<p>The proposed team structure and level of expertise is appropriate for developing a commercial floating wind platform and the associated U.S. supply chain to support gigawatt-scale wind farm deployment.</p>

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<sup>15</sup> Co-use consideration refers to assessment of potential impacts on other entities with activities in the marine environment such as, but not limited to, navigation and fishing.

**Diversity Plan:** Summarize the diversity plan by which the team fosters a welcoming and inclusive environment, supports people and organizations from underrepresented groups in science, technology, engineering, and mathematics (STEM), as well as participants from Minority Serving Institutions, and encourages the inclusion of individuals from these groups on the team.

The competitor has a plan to foster an inclusive environment and encourage team participation by individuals and organizations representing a diverse range of backgrounds.

## 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 non-federal 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. 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 Note: Clarifications are provided here only for those categories and subcategories for which specific reference to this appendix is made within Table 5.

## 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. Early-stage design concepts will not be of interest to the prize evaluators.

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 able to 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 One 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:

- Include basic design drawing(s) sufficient to illustrate the architecture and key features of the product
- Describe the status of testing and validation to date, including 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.

## 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 gigawatt-scale floating wind farms are likely to be deployed.

### Recommended Site Characteristics Content in Phase One 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 to convey the design envelope and parameter values that they have considered to date in the floating product engineering process, and that those parameters are relevant to a representative site or sites in U.S. waters. Categories may be added.

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. Manufacturing Outline and Commercialization Pathways

### A1.2.1 Criterion: Production and Commercialization Readiness

#### 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 criterion is to confirm that progress made in these areas justifies development of a detailed production plan for subsequent phases of the prize competition.

#### Recommended Commercial Readiness Content in Phase One Technical Narrative

An effective narrative should provide information such as:

- An overview of initial long-range manufacturing plans that summarizes a progression from current design status to production for large, utility-scale wind farms, with a focus on key supply chain elements and fabrication/assembly facilities
- Roadmap for commercial development and funding
- Demonstrable commercial interest or capability including, if possible, letters of support or interest from key stakeholders and potential customers
- Reference to similar past development activities.

### A1.2.2 Criterion: Capital Costs

#### Background

The purpose of this Phase One criterion is to confirm that an applicable range of project capital costs impacted by the competitor's design have been considered, along with potential means of reducing those costs. This information will be refined and applied to "Levelized Cost of Electricity" life cycle analyses in subsequent phases of the prize competition.

#### Recommended Capital Costs Content in Phase One Technical Narrative

Provide information indicating that key capital cost categories of the subject floating substructure have been assessed, along with realistic potential cost reductions in each category due to factors such as increased levels of production, mature supply chain, refined production and installation processes, and design innovations.

Table A-2 provides a sample format that may be used to summarize broad cost categories and provide notes on how target cost reductions could be achieved. Categories may be added or deleted as appropriate.

Other factors that relate to controlling or reducing overall wind farm project costs may also be discussed, such as impact on operations and maintenance requirements.

Table A-2. Sample Format for Summarizing Cost Categories and Related Cost Reductions

Capital Cost Categories Related to Floating Platform Production	Key Factors and Actions Leading to Anticipated Cost Reductions
Materials	
Fabrication (labor and other direct charges)	
Fabrication facilities (including transport to place of system assembly)	
Floating system assembly	
Installation at wind farm (labor, logistics, etc.)	
Additional capital costs impacted by platform	

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

### A1.3.1 Criterion: Port and Vessel Infrastructure

#### Background

The requirements of port facilities and available vessels for fabricating, assembling, holding, and deploying floating offshore systems will vary with substructure configuration and size. The intent of this criterion is to confirm that the competitor has 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 in Phase One Technical Narrative

Summarize key base port requirements and optimal vessel capabilities for carrying out at least the functions listed above to the extent they are relevant to the subject design configuration.

Port infrastructure that may be relevant include but are not limited to:

- Depth capacity
- Laydown area space
- Wet storage space
- Assembly/installation area
- Quayside length
- Soil bearing capacities
- Lifting/handling capacities and specific equipment needs
- Channel draft
- Channel width
- Air draft restrictions.

## A1.3.2 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 in Phase One Technical Narrative

Provide a summary of long-range work force needs, 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 under-utilized industrial sites and adjacent communities.

## A1.3.3 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.

### Recommended Environmental and Co-Use Consideration Content in Phase One Technical Narrative

The narrative should include an assessment of impacts of the subject design on aspects of the natural environment such as:

- Fish and mammals
- Avian species
- Seabed disturbance
- Water pollution
- Air pollution (specifically emissions, see below).

The narrative should also address how this design may affect nearby marine co-use activities such as navigation and fishing, or lessen the effects on them relative to other common design configurations.

An important aspect of environmental assessment is the consideration of emissions (environmental releases) throughout a product's life cycle from raw materials through production, use, and disposal. Competitors should establish in Phase One that there is an awareness of methods to reduce emissions that can be applied during the more advanced stages of the manufacturing planning process.

Assuming current technical and manufacturing readiness as a baseline, provide an overview of the most promising means through which calculated life cycle emissions could be reduced by the time the product progresses to commercial maturity in gigawatt-scale wind farms. The narrative may also include mention

of specific elements of the design or planned manufacturing approach that could enable the product to have inherently lower emissions than other design solutions.

Potential means of reducing life cycle emissions include:

- Reduce material or component requirements
- Utilize alternative engineered materials
- Avoid material extraction and production emissions
- Reduce material and component transport emissions
- Reduce defects, delays, or waste during production and assembly
- Lower installation process emissions
- Increase potential end-of-life component and material recycling rates.

# 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 January 13, 2023, before the prize's Phase One 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 nonsubstantive 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.



U.S. DEPARTMENT OF ENERGY