

This webinar will be recorded.

American-Made Challenges

FLoating Offshore Wind ReadINess (FLOWIN) Prize

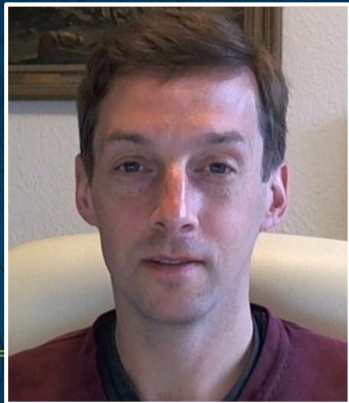
Phase 1: Informational Webinar



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Agenda

- 1 American-Made Overview
- 2 FLoating Offshore Wind ReadINess Prize (FLOWIN Prize)
- 3 Submission Elements and Scoring
- 4 HeroX
- 5 Next Steps
- 6 Q & A

Housekeeping

This webinar will be recorded.

This webinar is being recorded and will be available on HeroX.

Questions?

- There will be a Q&A session at the end of the presentation
- To submit a question, please type it into the Q & A box on the right-hand side of your screen next to the chat box

Technical Issues:

- If you experience technical issues, **please check your audio settings under the “Audio” tab.**
- If you continue experiencing issues, direct message the host

American-Made Challenges



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\$100M
Cash Prizes and
Team Support

30+
Prizes

Grants vs. Prizes



Financial Award Process

Write and submit
concept papers

Concept paper review

Applicants write and
submit full applications

Full applications review

Selections and
negotiations

Begin performing

Prepare and submit
reimbursement request

Request reviewed and
reimbursement issued

Prize Award Process

Begin Performing

Achieve predefined goal

Complete submission
package

Judges score submissions

Winners receive payment

Overview

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What is the FLoating Offshore Wind ReadINess Prize (FLOWIN)?



\$6.85M Prize Competition

Phase 1
Phase 2
Phase 3



**Support from Business Network for
Offshore Wind**

Reduce the cost of floating offshore wind electricity by >70% in deep waters by 2035*

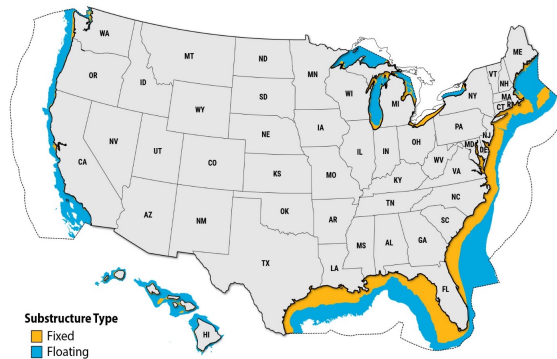
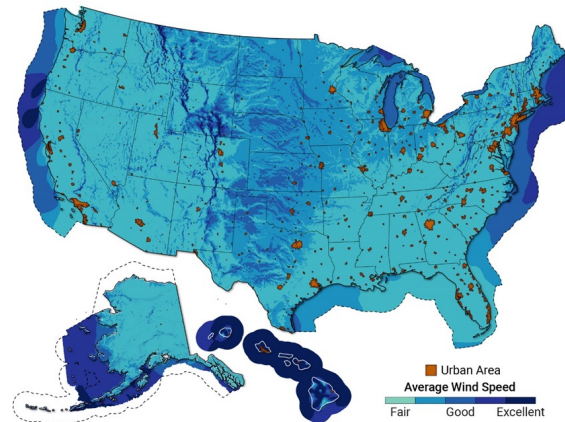
Related DOI Goal to deploy 15GW by 2035



>70% Reduction



2035



*70% cost reduction to \$45 per megawatt hour (MWh).

Parallel Paths to Innovate and Industrialize



Floating Oil and Gas Technology:
Heavy, expensive, customized,
one unit production

Innovation and Optimization

- Physics-based engineering tools
- System up-scaling (higher MW)
- Weight reduction
- Control and load management
- Reliability and maintainability
- Site independence
- Novel platform configurations

Cost Reduction Pathways

Implementation at Scale

- Design for manufacturing and installation
- Systems engineering
- Port adaptation
- Speed of assembly
- Mass produced components
- Local supply chains
- Advanced Manufacturing techniques

**Prize
Focus**

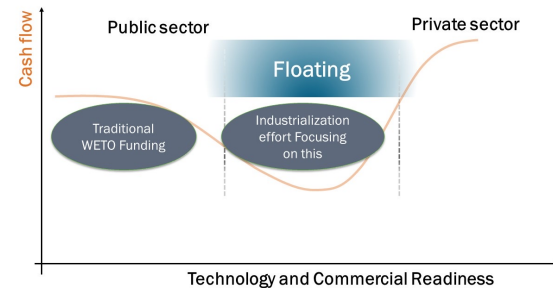
Competitive OSW Costs and Market Maturity

- GW scale utility markets
- Grid services
- Minimal environmental impacts
- Co-existence with ocean users
- Safe work environment

“What would you do different if
you were doing 100-200 instead
of just a couple”

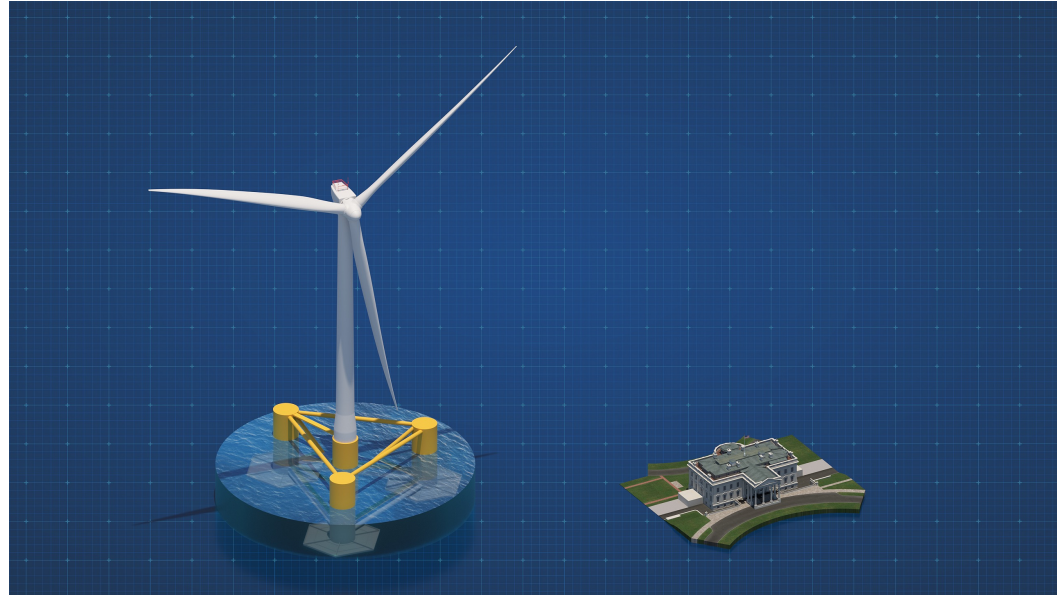
Floating Platform Utility Scale Gaps

- Designs are technically feasible but not optimized for serial production
- High cost to transition from concept feasibility to commercialization
- Designs of floating platforms are not optimized for U.S. manufacturing and deployments
- Uncertainty about role/needs/gaps in ports, manufacturing facilities, and vessels



Impact of Prize

- Build links between designers, developers and the supply chain
- Advance floating wind platform designs to enable mass production and assembly in the U.S.
 - Lower associated costs and risks
- Accelerate domestic production
- Grow domestic industry to become global leader
- Develop industry & workforce in fair, just, and sustainable way



Goal of the FLOWIN Prize



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

Phase 1

- Platform Design Status & Feasibility
- U.S. Manufacturing Outline and Commercialization Pathways
- U.S. Location Considerations
- Team & Management



Phases & Prizes

	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





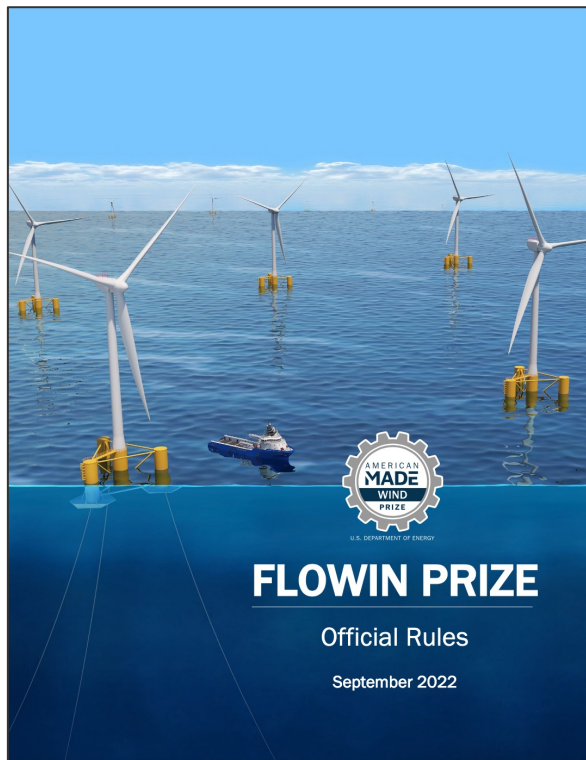
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Phase 1

Submission Elements Overview

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Read the Rules



Official rules for the
FLOWIN Prize
are available online.

[FLOWIN HeroX Page](https://www.herox.com/FLOWIN) → Resources Tab

<https://www.herox.com/FLOWIN>

Eligibility

The competition is open to the following entities:

- ✓ **Private entities** (for-profits and nonprofits)
 - If a lead competitor is a private entity, it must be incorporated in and maintain a primary place of business in the United States.
- ✓ **Nonfederal government entities** (such as states, counties, tribes, and municipalities)
- ✓ **Academic institutions** (based in the United States)

Ineligibility

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

Important Dates

Phase 1: (4 months)

- September 12, 2022: Phase 1 Launch
- **January 13, 2023: Phase 1: Submission Deadline**
- March 2023: FLOWIN Prize Phase 1 Winners Announced & Phase 2 Begins



Phase 2 & 3:

- March 2023: Phase 2 Opens
- November 2023: Phase 2 Closes
- January 2024: Phase Two Winners Announced & Phase 3 begins
- October 2024: Phase Three Submission Closes
- December 2024: Phase Three Winners Announced



Submission Package

- Cover page content (not public, not scored)
- Summary Slide (to be made public, not scored)
- Technical Narrative (not public, scored)
- Voucher Work Slide (not public, not scored)



Required ☒

Scored ☐

Public ☐

Cover Page

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



Required	✓
Scored	✗
Public	✓

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 manufacturing approach



Required 

Scored 

Public 

Voucher Work Slide

Competitors should identify which national lab(s) and capabilities they are most interested in using if they win Phase One.

At a high level, competitors should outline the scope of work and expected deliverables.

Provide one slide per entity you plan to engage.

What is a Voucher?

Vouchers allow winners from Phase 1 and Phase 2 to access tools, equipment, and expertise at national laboratories— which supports the development, testing, and validation of your solutions. **Lab Capabilities will be provided during Phase 1.**

Phase 1: Winners will receive a \$75,000 voucher

Phase 2: Winners will receive a \$100,000 voucher

Required

Scored

Public

✓

✓

✗

Technical Narrative

PHASE ONE Suggested Content	Scored Statements
Category 1: Platform Design Status and Feasibility	
<p>Technical Feasibility: 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 farm deployment supporting wind turbines of at least 12-MW rating.¹⁴</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>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. This statement is double-weighted.</p>
<p>Design Site Characteristics: List the range of meteorological ocean (metocean) conditions and specifications to which the platform has been <u>designed, and</u> 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>Integration Plan: 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>Suitability of Design for U.S. Mass Manufacturing and Large-Scale Deployment: 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>



TIPS & TRICKS

- ✓ Remember your audience
- ✓ Be specific (this portion isn’t public)
- ✓ Pay attention to the word count



Required 

Scored 

Public 

Technical Narrative

Category 2: U.S. Manufacturing Outline and Commercialization Pathways	
<p>Production and Commercialization Readiness: 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>
<p>Manufacturing and Supply Chain Development: 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>Assembly and Deployment Plan: 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>Capital Costs: 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>Risk Assessment: 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>

Required

Scored

Public

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Technical Narrative

<p>Category 3: U.S. Location Considerations</p> <p>Port and Vessel Infrastructure: 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>Workforce and Community Considerations: 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>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>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, <u>particularly accessibility</u> to those jobs for community residents.</p>
<p>Environmental and Co-Use¹⁵ Considerations: 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 <u>in order to</u> consider relevant improvements.</p>

Required

Scored

Public

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Technical Narrative

Category 4: Team and Management	
<p>Management and Execution Plan: 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>Team Qualifications: 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>
<p>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.</p>	<p>The competitor has a plan to foster an inclusive environment and encourage team participation by individuals and organizations representing a diverse range of backgrounds.</p>



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Phase 1

How We Score

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Expert Reviewers and Scoring

Scoring

- Experts will review each submission individually and assess the information from the competitor as it relates to each statement of the criteria provided.
- 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.

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, as well as program policy factors

Program Policy Factors

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

- Geographic diversity and potential economic impact of projects.
- Whether the use of additional DOE funds and provided resources are non-duplicative and compatible with the stated goals of this program and the DOE mission generally.
- Whether 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.
- Whether submission content sufficiently confirms the competitor's intent to commercialize technology

The degree to which the submission:

- exhibits technological or programmatic diversity when compared to the existing DOE project portfolio and other competitors.
- is likely to lead to increased employment and manufacturing in the U.S. or provide other economic benefits to U.S. taxpayers.
- 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.
- supports complementary DOE-funded efforts or projects, which, when taken together, will best achieve the goals and objectives of DOE.
- expands DOE's funding to new competitors and recipients who have not been supported by DOE in the past.
- enables new and expanding market segments.
- activities described have been or will be performed in the United States.



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Phase 1

Find Support

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Looking for More Support?

Connect with the Business Network
for Offshore Wind



<https://www.offshorewindus.org/>

Email: policy@offshorewindus.org



Business Network Leadership Team



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Phase 1

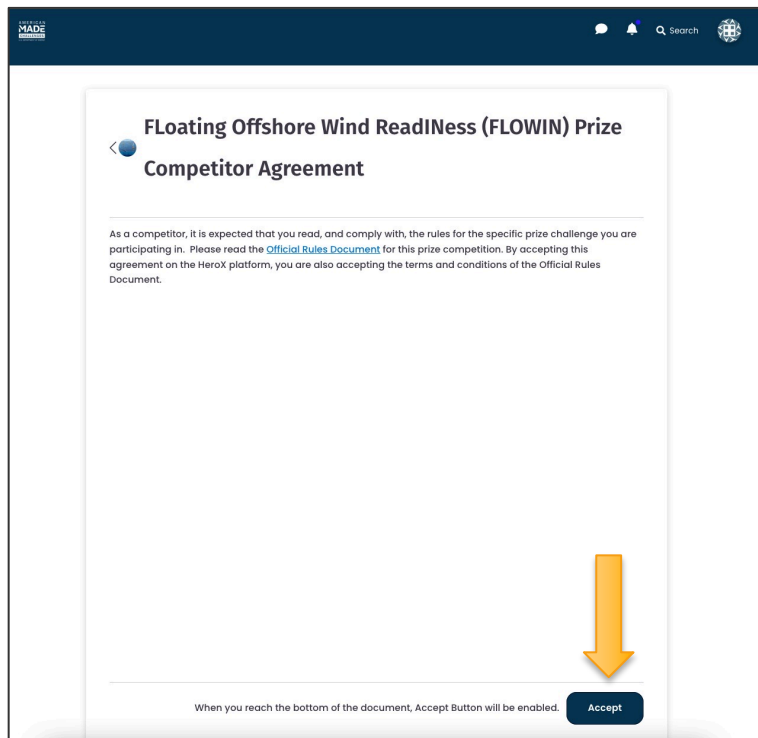
Apply on HeroX

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The screenshot displays the HeroX platform interface for the 'Floating Offshore Wind Readiness (FLOWIN) Prize'. At the top, there's a dark blue header with the 'AMERICAN-MADE' logo and a 'Log in' link. Below the header, the page title 'American-Made Challenges' is followed by a view count of 339 and buttons for 'Share' and 'Follow (12)'. The main content area features a large image of offshore wind turbines on floating platforms. To the right of the image, the challenge title 'Floating Offshore Wind Readiness (FLOWIN) Prize' is prominently displayed. Below the title, a brief description states: 'The FLOWIN Prize will bring the U.S. closer to the goals of a decarbonized electricity grid by 2035 and a net zero economy by 2050.' Further down, there are three category tags: 'Energy, Environment & Resources', 'Government', and 'Technology'. The 'Stage' is listed as 'Enter', and the 'Prize' is '\$6.85M in Cash Awards and Vouchers'. A large blue button labeled 'SOLVE THIS CHALLENGE' is positioned below this information. At the bottom of the page, a navigation bar includes links for 'Overview', 'Guidelines', 'Timeline', 'Updates' (with a notification badge), 'Forum', 'Teams' (with a notification badge), 'Resources', and 'FAQ'. The 'Challenge Overview' section is currently active, showing the title 'The Floating Offshore Wind Readiness Prize' and a detailed description: 'This \$5.75 million prize was launched by the U.S. Department of Energy's (DOE's) Wind Energy Technologies Office (WETO) to pave the way for the cost-effective domestic manufacturing and deployment of commercial utility-scale floating offshore wind energy turbines in U.S. waters. WETO's first-ever prize, the FLOWIN Prize, supports the Biden administration's goal to decarbonize'.



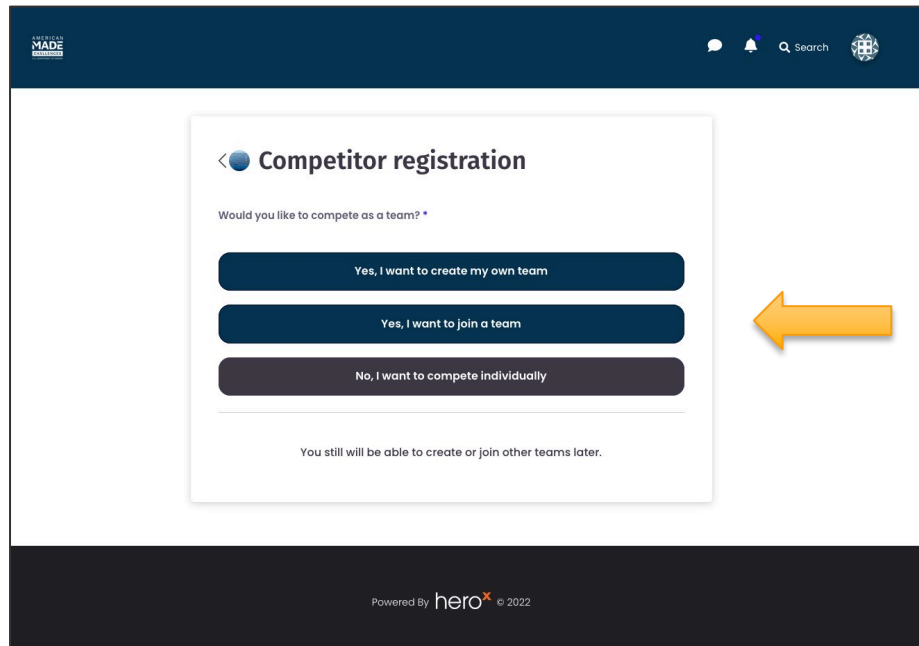
<https://www.herox.com/FLOWIN>



Floating Offshore Wind ReadINESS (FLOWIN) Prize Competitor Agreement

As a competitor, it is expected that you read, and comply with, the rules for the specific prize challenge you are participating in. Please read the [Official Rules Document](#) for this prize competition. By accepting this agreement on the HeroX platform, you are also accepting the terms and conditions of the Official Rules Document.

When you reach the bottom of the document, Accept Button will be enabled. **Accept**



Competitor registration

Would you like to compete as a team? *

Yes, I want to create my own team


Yes, I want to join a team

No, I want to compete individually

You still will be able to create or join other teams later.

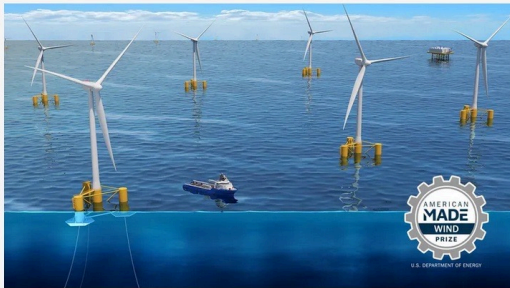
Powered By heroX © 2022

① You have successfully completed your registration! To start your submission, click on the Begin Entry button.



American-Made Challenges

340 Share Following (13)



Floating Offshore Wind ReadINess (FLOWIN) Prize

The FLOWIN Prize will bring the U.S. closer to the goals of a decarbonized electricity grid by 2035 and a net zero economy by 2050.

Energy, Environment & Resources Government Technology

Stage:
Enter

Prize:
\$6.85M in Cash Awards and Vouchers

BEGIN ENTRY JOIN A TEAM

Overview Guidelines Timeline Updates 1 Forum Teams 13 Resources FAQ

Challenge Overview

The FLOWIN Prize

This \$5.75 million prize was launched by the U.S. Department of Energy's (DOE's) [Wind Energy Technologies Office](#) (WETO) to pave the way for the cost-effective domestic manufacturing and

What's Next?

1. Follow the challenges on HeroX

<https://www.herox.com/FLOWIN>

2. Read the rules:

FLOWIN HeroX → Resources Tab

3. Start innovating!

4. Apply by **January 13, 2023**



Thank you!

Questions?

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Email: FLOWINprize@nrel.gov