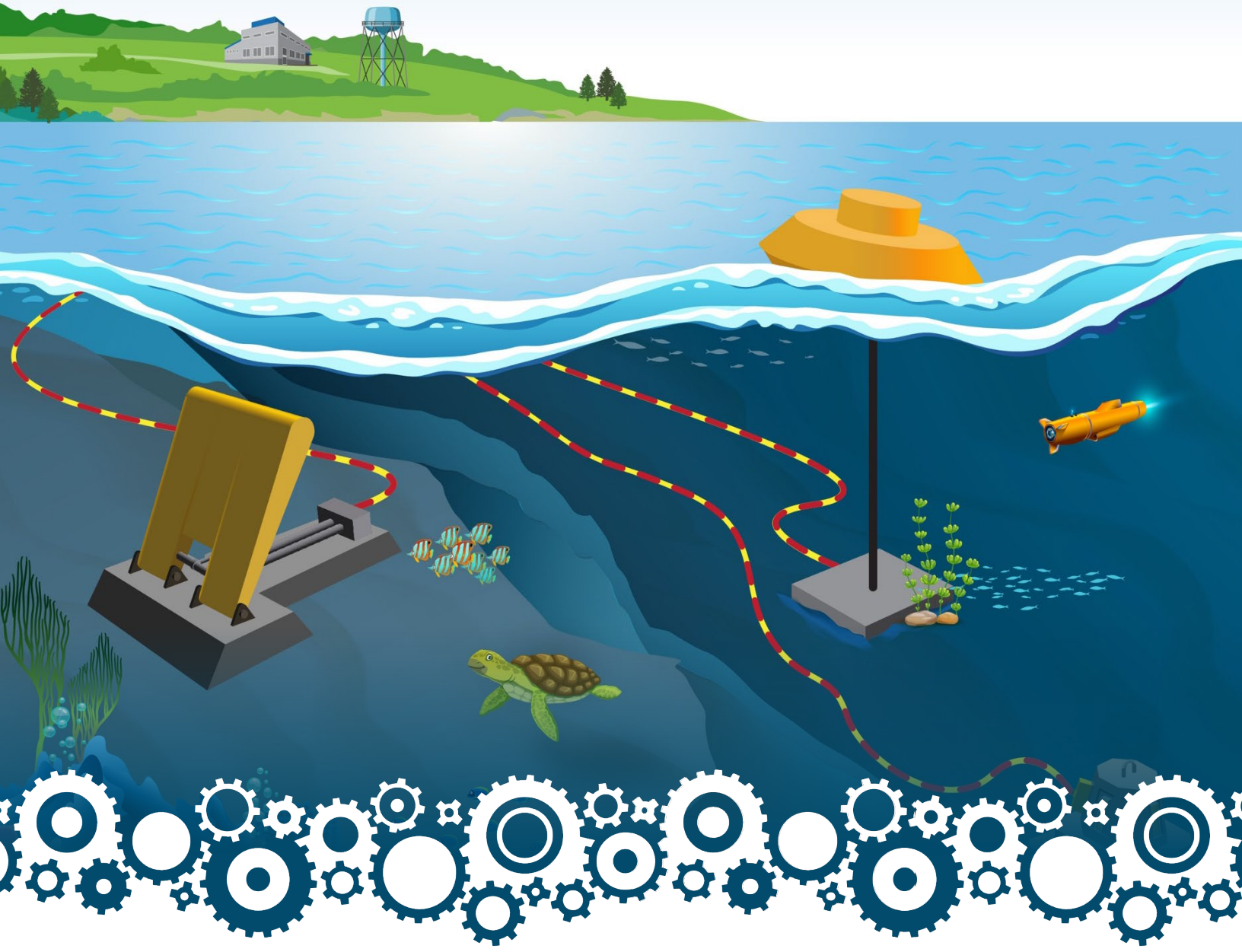
AMERICAN MADE
U.S. DEPARTMENT OF ENERGY

2026 Marine Energy Collegiate Competition



OFFICIAL RULES

DECEMBER 2025

Preface

The U.S. Department of Energy's Marine Energy Collegiate Competition 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
9.11.2025	Revised eligibility language to clarify accreditation requirements and explicitly include Tribal Colleges and Universities (TCUs).
12.1.2025	Combined the January and February submissions to a single "Mid-Year" submission.
12.1.2025	Combined the prize amounts for the January and February submission under the Mid-Year submission.
12.1.2025	Clarified the Publicly and Liability provisions.

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1 Introduction

1.1 Purpose

The U.S. Department of Energy (DOE) Water Power Technologies Office's (WPTO's) Marine Energy Collegiate Competition (MECC, also referred to as the "Competition" in this rules document) invites interdisciplinary teams of postsecondary, undergraduate, and graduate students from a variety of academic programs to solve marine energy challenges in the blue economy. Through the competition, WPTO hopes to inspire students to innovate in and accelerate the emerging marine energy industry. The competition will enable students to network with marine energy professionals, learn about marine energy careers, and gain insights into marine energy's potential to contribute to a reliable and secure energy future.

1.2 Prize Overview

The competition will select and award up to 30 student teams, based on the application scoring criteria in Section 3, the opportunity to participate in MECC and win a cash prize pool of up to $150,000 in the first stage.

Selected teams that complete the required Mid-Year submissions will each be eligible to win up to $10,000 per submission. Teams awarded for the Mid-Year submissions are then eligible to compete for the awards for the final event and grand prize.

Details on cash prizes at each stage can be found in Table 1. All cash prizes will be paid to the lead academic institutions.

Specific requirements for each stage of the competition are included in the following sections.

Table 1. Cash Prize Distributions
All amounts are up to the total noted and are not guaranteed. Funds are distributed to the selected and eligible lead team's academic institution.

Stage	Cash Prize per Team	Total Cash Prize Pool
Application to Participate	Up to $5,000	Up to $150,000
Mid-Year Submission	Up to $10,000	Up to $300,000
Final Event	Up to $5,000	Up to $150,000
Grand Prize*	TBD*	Up to $20,000*
Total	**$20,000 (+Grand Prize awards)**	**$620,000**

**Grand Prize cash prizes will be distributed to Megawatt League first-, second-, and third-place winners and winners of each Kilowatt League scored challenge. Specific amounts for winner placements will be announced closer to the final event.*

As a part of MECC, competitors may have the opportunity to engage in networking events with marine energy industry experts during the final event, which the organizers anticipate holding alongside the Offshore Renewable Energy Conference (OREC). This engagement is intended to encourage connections between competitors and industry professionals and help prepare students for the job market in this industry.

1.3 Background

Advancing the marine energy sector and the development of reliable, cost-competitive technologies can offer Americans a new source of independent, resilient energy and represents a key opportunity for the United States to lead in global energy dominance. Through the Powering the Blue Economy™ initiative, WPTO supports the advancement of technologies to integrate marine energy to power applications in coastal and maritime markets to enable low-impact growth of the blue economy. Specific applications include autonomous vehicles to further ocean exploration, deep-water offshore aquaculture, battery and fuel cell technology for marine transportation, desalination and water treatment, and alternative fuels like biofuels derived from marine algae and hydrogen from seawater. These and other blue economy applications for marine energy are intended to be the basis of MECC projects.

1.4 Prize Goals

DOE and the NREL launched the first MECC in 2020. The competition's goals are to:

- Bring together groups of students from multiple disciplines and backgrounds.
- Encourage teams to explore opportunities for marine energy technologies that can benefit other existing maritime industries via real-world concept development experiences.
- Inspire future innovators as an entryway into the marine energy and blue economy sectors.

Student teams will be evaluated on how effectively their projects meet these goals when determining winners of the grand prize.

This competition aims to provide experience with a wide range of blue economy and marine energy opportunities and provide a foundation for future opportunities in these sectors. Throughout the competition, teams will have the opportunity to gain insights into various marine energy and energy careers and access professional development resources and career opportunities in these sectors. All teams will be invited to attend regular educational webinars and industry presentations intended to enhance their educational experience. The MECC has helped students in the past by connecting them with job opportunities and instilling an interest in and understanding of marine energy careers.

Ultimately, this collegiate competition is designed to foster educational programs and would benefit from classroom curriculum as well as the creation of remote learning, industry partnerships, informal independent-study projects, industry mentorships, and clubs.

1.5 Key Dates

Dates are subject to change. Teams should check HeroX for the most up-to-date information.

Table 2. Key Competition Dates

Milestone	Date
MECC application opens	August 25, 2025
MECC application closes	September 19, 2025
Deadline for Kilowatt League teams to request move into Megawatt League	December 31, 2025

Deadline for Megawatt League teams to request move into Kilowatt League	March 1, 2026
Mid-year submissions deadline	February 23, 2026
Signed Safety and Technical Inspection Form deadline	April 15, 2026
Final deadline for Business Challenge report, Technical Design Challenge report, and Build and Test Challenge report	May 4, 2026
Metrics report deadline	May 11, 2026
Final event	May 18–21, 2026

1.6 Eligibility and Competitors

The competition seeks to bring together interdisciplinary undergraduate and graduate student teams and is only open to academic institutions, subject to the following requirements:

- Interested teams must submit an initial application to act as a competitor in the competition and be selected to compete.
- Teams may consist of a combination of undergraduate and graduate students but must be at least 50% students who are pursuing their bachelor's and/or associate's degree at the beginning of the competition. Only 50% of the team may be pursuing an advanced degree (master's, Ph.D., etc.). Teams must also identify a Team faculty advisor representing the lead academic institution.
- To be eligible for cash prizes, academic institutions must have federally-recognized accreditation.
- Non-U.S. institutions are eligible to participate on their own, without a U.S. university partner; however, these teams will not be eligible to receive cash prizes.
- Multiple institutions are eligible to form a singular team; however, multi-institutional teams must designate the lead institution and partner institution(s). For teams comprising U.S. and non-U.S. institutions, the lead institution must be an eligible U.S. institution to receive cash prizes.
- Each institution may only sponsor one team. Multiple teams applying from an institution will be asked to partner internally. Institutions appearing on multiple teams, either acting as the lead or partner institution, will be required to choose only one team to participate in.
- DOE employees, employees of sponsoring organizations, DOE support service contractors, 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.
- DOE national laboratory employees cannot compete in the prize. For the family members of lab employees participating in the competition, the lab employee's scope of their employment cannot overlap with any aspect of the prize competition.

- 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.
- Former federal employees should ensure that their participation complies with the post-government employment rules. Please contact the appropriate general counsel's office with any questions.
- Current university students who are employed at DOE national labs can participate, including interns; however, they cannot use federal lab facilities and/or resources as part of the competition because these facilities are not open to all competitors.
- Entities and individuals publicly banned from doing business with the U.S. government such as entities and individuals debarred, suspended, or otherwise excluded from or ineligible for participating in federal programs are not eligible to compete.
- Individuals participating in a foreign government talent recruitment program[1] sponsored by a foreign country of concern[2] and teams that include such individuals are not eligible to compete.
- Entities owned by, controlled by, or subject to the jurisdiction or direction of a government of a foreign country of concern are not eligible to compete.
- To be eligible, an individual authorized to represent the competitor must agree to and sign the following statement upon registration with HeroX:

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

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

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

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

All cash prizes will be paid to the lead academic institutions.

Based on prior experience with collegiate competitions, Prize Administrators recommend a team size of ten to twenty participants, but there is no official limit to the number of participants per team. However, for each team, the number of students participating in the final event may be limited based on timing and/or space restrictions. Interdisciplinary teams including students with backgrounds in the following areas are highly encouraged: engineering, marine science, environmental science, business, marketing, communications, policy, social sciences, and other related fields.

Specific application requirements and evaluation criteria are included in this document. The Prize Administrator has the right to refuse any submission for incompleteness or unresponsiveness to the prize goals.

2 Competition Overview

In the 2026 MECC, the student teams selected through the application process will have approximately 8–10 months to develop and present their concepts at the final event planned to be held in May 2026. During the competition, the teams will submit written documents demonstrating their progress on a schedule described in this document, attend monthly all-team calls, receive an assigned industry mentor, and have access to educational webinars and networking opportunities with marine energy experts.

2.1 Competition Theme

Since the primary theme of the competition is Powering the Blue Economy,[3] teams will frame each of their challenge submissions around applications within the blue economy. Teams are allowed to either advance existing technology through this competition or develop new technologies.

2.2 Challenges

The competition will consist of six challenges, described below, and will culminate in a final event.[4] Requirements and number of challenges depend on the league in which the team is competing (see Section 2.3). Each of the four scored challenges includes distinct submissions that selected teams must complete to be awarded cash prizes for that challenge. Teams also have the opportunity to compete in two separate unscored challenges.

The six challenges of MECC are:

- **Business Plan Challenge (Scored)**: Teams will identify a promising market within the blue economy (either a market identified in the WPTO Powering the Blue Economy report or another potential market within the blue economy) and determine the best marine energy system to serve the market's needs. Teams will then evaluate the performance requirements of the marine energy system for end users in the identified market and develop a business plan.[5]
- **Technical Design Challenge (Scored)**: Teams will evaluate the performance requirements in their chosen blue economy market by identifying and interviewing at least three potential end users. Teams will complete a detailed design of a marine-energy-powered device to serve those end users.
- **Build and Test Challenge (Scored)**: Teams will build a scaled prototype of their concept and perform a series of lab tests to meet their defined build and test objectives.
- **Community Connections Challenge (Scored)**: Teams will engage with the marine energy industry and relevant communities to: (1) connect with professionals to explore an industry challenge they are passionate about, (2) develop innovative solutions to address that challenge, and (3) take meaningful action toward implementing one of their solutions.
- **Poster (Unscored)**: Teams will bring one poster to the final event summarizing the team's efforts in the Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge. Including a summary of the Community Connections Challenge is optional, as

[3] https://www.energy.gov/sites/prod/files/2019/09/f66/73355-v2.pdf
[4] See Appendix E for the alternative competition structure in the event of a final virtual event.
[5] Potential future customers within the selected blue economy market.

technical content will likely occupy most of the poster space. However, teams are welcome to incorporate elements from their Community Connections Challenge if they choose.

Why participate? The poster provides a valuable opportunity to showcase your team's work to a wide audience, including industry professionals, potential employers, and peers. It also helps sharpen your ability to communicate complex ideas visually and concisely—an essential skill in any technical or business career.

- **Quick Pitch (Unscored):** During the final event, teams will have 90 seconds to present their concept and findings from the challenges in front of the final event attendees.

  Why participate? The quick pitch is a platform to practice public speaking, capture attention, and make a lasting impression on professionals in the field. It also helps teams refine their message and clearly articulate the value of their work—skills that are critical for interviews, networking, and pitching future projects.

At the end of the competition, all competing teams are expected to attend the final event planned to be held in May 2026 to present results from the challenges. The written submissions as well as presentations will be reviewed by experts selected by the Prize Administrator. Specific details on submission requirements and scoring criteria are included in the following sections.

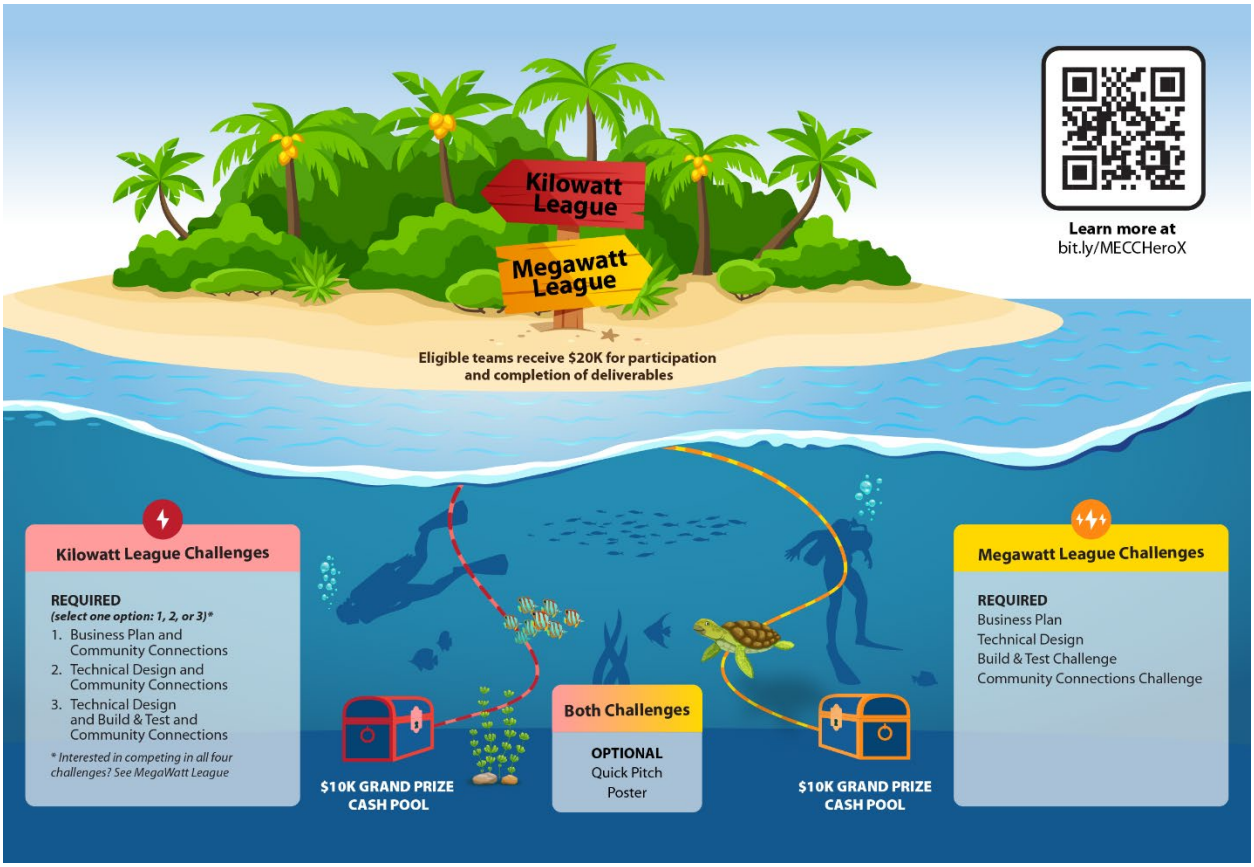
2.3 Leagues

The 2026 MECC has two distinct participation leagues:

1. **Kilowatt League** (Foundational Level): Designed for teams new to the competition or those opting for a scaled-down participation experience.
2. **Megawatt League** (Advanced Level): Aimed at teams prepared to fully participate in all MECC challenges.

Both leagues are part of the same competition but will have different submission requirements and prizes as described in the tables and sections below.

Figure 1: Challenge Requirements per League



2.3.1 *Kilowatt League (Foundational Level)*

- Teams must participate in the Community Connections Challenge and <u>at least one</u> of the following:
    - Business Plan Challenge
    - Technical Design Challenge
    - Build and Test Challenge (requires participation in the Technical Design Challenge).
- Designed for teams seeking a more flexible competition experience.
- Eligible for up to $20,000 per team for successful participation.
- Eligible for grand prize awards.
- Required to submit Mid-year submissions and final reports for selected challenges, and must conduct two presentations at the final event.

2.3.2 *Megawatt League (Advanced Level)*

- Teams must participate in <u>all four</u> core challenges:
    - Business Plan Challenge
    - Technical Design Challenge
    - Build and Test Challenge

- Community Connections Challenge.

- Eligible for up to $20,000 per team for successful participation.
- Eligible for final grand prize cash awards.
- Required to submit Mid-Year submissions and full final reports, and must conduct two presentations at the final event.

2.3.3 League Participation and Requests To Move Leagues

The competition will allow teams to select a league in which they would like to compete during the application process. The Prize Administrator reserves the right to reassign teams to a different league to ensure balanced participation and a competitive environment across both the Megawatt League and Kilowatt League. Reassignments may be based on factors such as team experience, institutional support, and the goal of maintaining fairness, regional diversification, and comparable levels of competition across both leagues. Any changes will be communicated to teams in a timely manner.

Kilowatt League teams can request to move into the Megawatt League by Dec. 31, 2025. Requests for a league transfer can be made via email to the Prize Administrator at water.competiton@nrel.gov.

Megawatt League teams can request to move into the Kilowatt League by March 1, 2026. Requests for a league transfer can be made via email to the Prize Administrator at water.competiton@nrel.gov.

2.4 Assigned Mentors

Eligible teams selected to participate will be assigned an industry mentor for support throughout the competition. Industry mentors will play a critical role throughout the competition, providing teams with real-world experience, technical insight, and other important support. The Prize Administrator will assign mentors to teams and will provide a recommended and non-binding mentorship agreement form for each team and mentor to sign after mentor assignments are made.

2.5 Prizes

- Megawatt League teams who complete all competition elements across all four core challenges are eligible to receive up to $20,000 in cash prizes, a participation plaque, and recognition through DOE and NREL channels. Additionally, the first-, second-, and third-place overall winners will receive trophies and grand prize cash awards from a pool of $10,000 to be divided between the top three teams.

- Kilowatt League teams can receive up to $20,000 in cash prizes for successful completion of required deliverables, a participation plaque, and recognition through DOE and NREL channels. Additionally, the first-place winner of each challenge will receive trophies and grand prize cash awards from a pool of $10,000 to be divided between the four scored challenges.

2.5.1 Final Awards and Grand Prizes

In addition to the awards and prizes, as determined according to Table 3, all teams will receive a participant plaque.

Table 3. Final Awards and Grand Prizes

Track	Award	Criteria	Prize
Megawatt League	First Place	The team that earns the highest combined score in the four challenges	Trophy Split of up to $10,000 Megawatt League grand prize pool. Cash prizes will be paid to each winning team's lead institution.
Megawatt League	Second Place	The team that earns the second- highest combined score in the four challenges	Trophy Split of up to $10,000 Megawatt League grand prize pool. Cash prizes will be paid to each winning team's lead institution.
Megawatt League	Third Place	The team that earns the third- highest combined score in the four challenges	Trophy Split of up to $10,000 Megawatt League grand prize pool. Cash prizes will be paid to each winning team's lead institution.
Megawatt League	Individual Challenge Awards: • Business Plan Challenge • Technical Design Challenge • Build and Test Challenge • Community Connections Challenge	The team that earns the highest score in the associated challenge	Trophy
Kilowatt League	Business Plan Challenge Winner	The team that earns the highest average score in the Business Plan Challenge	Trophy Split of up to $10,000 Kilowatt League grand prize pool. Cash prizes will be paid to each winning team's lead academic institution.
Kilowatt League	Technical Design Challenge Winner	The team that earns the highest average score in the Technical Design Challenge	Trophy Split of up to $10,000 Kilowatt League grand prize pool. Cash prizes will be paid to each winning team's lead academic institution.
Kilowatt League	Build and Test Challenge Winner	The team that earns the highest average score in the Build and	Trophy Split of up to $10,000 Kilowatt League grand prize

		Test Challenge	pool. Cash prizes will be paid to each winning team's lead academic institution.
Kilowatt League	Community Connections Winner	The team that earns the highest average score in the Community Connections Challenge	Trophy Split of up to $10,000 Kilowatt League grand prize pool. Cash prizes will be paid to each winning team's lead academic institution.
Combined	Best Quick Pitch	As voted on by final event attendees	Trophy
Combined	Best Poster	As voted on by final event attendees	Trophy

2.6 How We Determine and Award Winners

The Prize Administrator screens all completed submissions and, in consultation with DOE, assigns reviewers to independently score the applicable content of each submission based on the criteria described in this document. The reviewers will be composed of federal and nonfederal subject matter experts with expertise in relevant areas.

Reviewers will review and score submissions throughout the competition according to the described evaluation criteria. The Prize Administrator will tally the scores.

During the final event, attendees will have the opportunity to vote for Best Quick Pitch and Best Poster. The Prize Administrator will provide attendees with website information to cast their vote, and the team with the most votes in the category will be declared the winner.

2.6.1 Final Determination

The Director of DOE's Water Power Technologies Office is the Judge of the competition and will make the final determination. Final determination of winners by the Judge will take the reviewers' scores and program policy factors in Appendix A into account.

3 Application Requirements

To participate, interested teams must submit an application in PDF format on the HeroX platform by **11:59 p.m. MT on September 19, 2025**. Teams will not be eligible to compete if an application is not submitted by the deadline. Submissions will be reviewed and scored by the Prize Administrator and DOE staff using the evaluation criteria listed in the following subsections and in the scoring rubric shown in Table 4.

3.1 What To Submit

Each application for MECC must be a maximum of three pages and include a response for each of the following sections.

3.1.1 Team Contact Information

The team contact information must include:

- Lead academic institution
- Partner institutions (if applicable)
- Team faculty advisor(s) name and department (faculty member or primary representative)
- Faculty advisor(s) email
- Faculty advisor(s) phone number
- Collegiate team student leader(s) name and declared/intended major (if known)
- Collegiate team student leader(s) email.
- League in which team would like to participate (Kilowatt or Megawatt).

3.1.2 Educational Objectives and Integration (35%)

Teams should provide a brief introduction of their team, why they are interested in participating in this competition, and their commitment to engage in MECC educational opportunities. This includes but may not be limited to subject matter expert speakers, tools, overviews, and other educational webinars.

The application provides an achievable and detailed description of:

- How the competition would be integrated into the team's academic experiences (e.g., courses integrating competition elements or other programs that otherwise support competition-related work, scholarships, independent-study projects, or research assistantships designed to support successful student participation in the competition) or, if this is not possible due to a lack of available programs of this type, a plan to cultivate knowledge through other means (e.g., remote learning, industry partnerships, informal independent-study projects, industry mentorships, and clubs).

3.1.3 Organization and Project Planning (30%)

The application provides an achievable and detailed description of:

- How the team will execute elements of the competition, including how unique obstacles, such as academic calendars or virtual collaboration challenges, will be overcome (if applicable, noting previous participation in similar competitions).

- How the team will be supported by faculty and staff—and external partners, where applicable—to ensure that students can be successful in achieving the competition objectives (e.g., list faculty, staff, and other mentors and how they will advise students throughout the competition).
- Which departments across the institution will participate and actively support the team to meet competition requirements, including a description of what this support will look like across each of these departments.

3.1.4 Team Composition (25%)

The application provides a detailed description of:

- Efforts to ensure that the team will comprise students and faculty with a wide range of backgrounds, skill sets, and educational training relevant to marine energy.
- A clear plan to incorporate the varied skillsets and educational backgrounds of the teams into the activities during the competition.

3.1.5 Institutional Support and Fundraising (10%)

Cash prizes will be awarded per team by the Prize Administrator as outlined in Table 1. While once awarded, there are no requirements governing the use of prize money, teams are encouraged to use prize funds to support their project goals. Note that these funds may not cover the full expenses of team projects or participation for all students; therefore, applicants should describe how they will seek additional resources (e.g., software, educational materials, and project planning tools) that they anticipate needing as part of the competition. Teams should clearly describe expected costs and how any funding is expected to be spent in an effort to help them achieve their project goals.

Table 4. Application Component Scoring Rubric

Application Component and Scoring Criteria	Maximum Possible Points
Team Introduction, Educational Objectives, and Integration The application provides a complete team overview followed by an achievable and detailed description of how the competition would be integrated into the team's academic experiences and a plan to cultivate student knowledge.	35
Organization and Project Planning The application provides an achievable and detailed description of: • How the team will execute elements of the competition, including how unique obstacles, such as academic calendars or virtual collaboration challenges, will be overcome. • How the team will be supported by faculty and staff—and external partners, where applicable—to ensure that students can be successful in achieving the competition objectives (e.g., list faculty, staff, and other mentors and how they will advise students throughout the competition). • Which departments across the institution will participate and actively support the team to meet competition requirements, including a description of what this support will look like across each of these departments.	30
Team Composition The application includes: • Efforts to ensure that the team will comprise students and faculty with a	25

Application Component and Scoring Criteria	Maximum Possible Points
wide range of backgrounds, skill sets, and educational training relevant to marine energy. • A clear plan to incorporate the varied skill sets and educational backgrounds of the teams into the activities during the competition.	
Institutional Support and Fundraising The application includes a detailed and achievable description of how the team will seek additional resources (e.g., software, educational materials, and project planning tools) they anticipate needing as part of the competition.	10
Total	**100**

4 Kilowatt League (Foundational Level)

During the full period of the MECC, Kilowatt League participants will need to submit and/or present a number of required submissions by the submission deadlines as outlined in Table 5.

Teams selected to compete through the application process will be eligible to receive cash prizes on the schedule outlined in Table 5 following submission of the required materials. There are no requirements governing the use of prize money. Teams are encouraged to use the first two cash prizes (for initial selection and Mid-Year submissions) to support travel and participation in the final event, purchase materials for the Build and Test Challenge, and/or foster sustained marine energy programs and curricula at their home institutions. Teams that attend and actively participate in the MECC final event in May 2026 will be eligible to receive an additional cash prize of $5,000.

Table 5. Kilowatt League Submission Deadlines

Submission	Submission Deadline	Cash Prizes Awarded
Application to participate (open August 25, 2025). All selected teams will be invited to compete in the rest of the competition.	September 19, 2025, 11:59 p.m. MT	Selected teams will be eligible to receive up to $5,000, distributed to the selected and eligible lead academic institution.
Community Connections Mid-year Submissions: Team roster and team overview* AND Interview summary and outreach strategy *At a minimum, 1 of the following:* Business Plan Mid-Year Submission: List of end users. Detailed Technical Design Mid-Year Submission: Confirmation of selected blue economy market *If competing in the Build and Test Challenge:* Build and Test Mid-Year Submission: Description of testing objectives	February 23, 2026, 11:59 p.m. MT	Each lead academic institution can receive up to a $10,000 cash prize
If competing in the Build and Test Challenge: Submission of signed Safety and Technical Inspection Form	April 15, 2026, 11:59 p.m. MT	
At a minimum, submission of one of the following: Business Plan or Technical Design report *If competing in the Build and Test Challenge:* Submission of final Build and Test Challenge report	May 4, 2026, 11:59 p.m. MT	
Submission of metrics report	May 11, 2026, 11:59 p.m. MT	
During the final event	May 18-21, 2026	Each team that meets the submission requirements for the final reports and

		presents at the final event will be eligible to receive an additional $5,000 cash prize, paid to the lead academic institution.
90-second quick pitch	Bring slide to final event	
Display of poster summarizing Business Plan, Technical Design, and Build and Test	Bring to final event	
Presentation of (1) Community Connections Challenge (10 minutes) and (2) technical presentation including at least one of the following: Business Plan or Technical Design (15 minutes). If competing in the Build and Test Challenge, competitors will incorporate their results into the technical presentation.	Bring slides to final event	

*Template provided.

All of the submissions will be scored as described in Table 6. Details on what to include in these submissions and the scoring criteria used to evaluate them are described in the following sections for each of the challenges.

Kilowatt League Teams will be scored only on the challenges they choose to compete in. Points will only be tallied per challenge, and winners of each challenge will receive a trophy and be eligible for the Kilowatt League grand prize cash awards.

Table 6. Kilowatt League Scoring Summary for Core Competition Submissions

Description	Maximum Possible Points
Business Plan Challenge*	**100**
Mid-Year Submission: Identification of End Users	5
Final Report	50
Business Plan Challenge Portion of Final Technical Presentation and Q&A	45
Technical Design Challenge*	**100**
Mid-Year Submission: Confirmation of Blue Economy Market	5
Final Report	50
Technical Design Challenge Portion of Final Technical Presentation and Q&A	45
Build and Test Challenge*	**100**
Mid-Year Submission: Description of Testing Objectives	5
Final Report	50
Build and Test Challenge Portion of Final Technical Presentation and Q&A	45
Community Connections Challenge*	**100**

Mid-Year Mid-Year Submission: Team Overview and Team Roster	5
Mid-Year y Submission: Interview Summary, and Outreach Strategy	5
Metrics Report	45
Community Connections Challenge Final Presentation and Q&A	45
Final Score Calculation	**Total Points in Each Challenge**

**Formatting requirements are in place to ensure an equal amount of space for all teams to tell their stories to the reviewers. Reports not formatted to the listed requirements or that are deemed to be utilizing more than the allotted pages will be penalized at the discretion of the reviewers proportional to the infraction. Furthermore, extra pages will be ignored.*

4.1 Business Plan Challenge - Kilowatt League

In the Business Plan Challenge, teams will identify a promising market within the blue economy and determine the best marine energy device to serve the market's needs. Teams will then evaluate the performance requirements of the marine energy system for end users[6] in the identified market and develop a business plan.

While developing their business plan, competing teams must evaluate the near-term market potential for their concept and/or system, ideally in the next 5–10 years. Business plans will be reviewed based on whether teams completed a robust market analysis and considered any potential shortfalls.

In the Business Plan Challenge, teams must submit a Mid-Year submission and final report. Additionally, teams will present the results of the Business Plan Challenge as part of a final live presentation to a panel of reviewers during the final event.

4.1.1 Business Plan Challenge Mid-Year Submission: Identification of End Users

Kilowatt League teams competing in the Business Plan Challenge will submit a list of potential end users for their concepts on the HeroX platform in Excel format that includes end-user organization/community name and whether the team will pursue an interview with the end user. The end users for the Business Plan Challenge Mid-Year submission can be from the same organizations the team decides to interview for the Community Connections Challenge if desired, but it is recommended that teams talk to as many different stakeholders as possible. **This submission is due February 23, 2026, 11:59 p.m. MT.**

The Business Plan Challenge Mid-Year submission will be scored against the following criteria:

Table 7. Kilowatt League Business Plan Challenge Mid-Year Submission

Description	Maximum Possible Points
The team has submitted a list of potential end-user organizations/communities and has noted whether they will pursue interviews with each.	5
Total	**5***

[6] Potential future customers within the selected blue economy market.

**1 point will be deducted for each day a submission is late, up to 3 days, at which point the team is no longer eligible to receive points for this submission.*

4.1.2 Business Plan Challenge Final Report

Each Kilowatt League team participating in the Business Plan Challenge must submit a final report summarizing the results of the Business Plan Challenge in PDF format on the HeroX platform. **This report is due May 4, 2026, by 11:59 pm MT.** This report will be combined into one document that will also include the Technical Design Challenge final report and the Build and Test Challenge final report, if competing in those challenges.

The Business Plan Challenge final report should follow these formatting requirements:

- Pages should be 8.5 inches by 11 inches, paginated and with 1-inch margins at a minimum.
- Content should be single-spaced at a minimum.
- The body of the report must use an 11-point font at a minimum.
- Captions for figures and tables must be numbered for easy navigation.
- The final reports must be packaged into a single PDF file (see Appendix D).

The final report describing the Business Plan Challenge should serve as the primary means for a team to provide detailed information about their project to the reviewers. Teams are encouraged to describe the technology design and how the business plan supported by market research shaped the design. The final report should include the following:

- **Cover sheet**, including all involved team members, mentors, faculty, and others (e.g., sponsors and advisors), contact information, and a clear indication of each person's role. The total word count must be included on the cover page. If competing in the Technical Design Challenge or the Build and Test Challenge, **only one cover sheet is required for the compiled report.**
- **Executive summary** briefly describing the project. This must not exceed 2 pages (including figure captions). The Prize Administrator recommends that teams write this section after completing their reports to summarize the key aspects of their project. If competing in the Technical Design Challenge or Build and Test Challenge, **only one executive summary is required for the compiled report.**
- **Report narrative** of up to 15 pages describing the Business Plan Challenge. A detailed guide for what to include in the report narrative can be found on HeroX.
- List of references (not included in the report narrative page limit).

At the conclusion of the competition, all team reports will be posted to the competition website.

The Business Plan Challenge final report is worth 50 points. Expert reviewers will evaluate the report against the following criteria:

Table 8. Kilowatt League Scoring Rubric for the Final Business Plan Challenge Report (50 Points)

Description	Maximum Possible Points
Extent to which the team demonstrates market feasibility (marketability, buildability, public/market acceptance, identification of stakeholders and end users, cost competitiveness in comparison to other energy sources)	10
The team thoroughly evaluates risk and proposes mitigation strategies (e.g., recognition of failure maintenance, operational expenses)	10

Extent to which the business plan demonstrates innovation, creativity, and originality	10
The team conducted at least three end-user interviews/surveys and inputs received are of high quality	10
Accuracy of financial analysis and inclusion of supporting documentation	5
Clear demonstration of student learning and contributions toward the business plan	5
Total	**50***

**5 points will be deducted for each day the report is late up to 3 days, at which point the team is no longer eligible to receive points for this submission. Formatting requirements are in place to ensure an equal amount of space for all teams to tell their stories to the reviewers. Reports not formatted to the listed requirements or that are deemed to be utilizing more than the allotted pages will be penalized at the discretion of the reviewers proportional to the infraction. Furthermore, extra pages will be ignored.*

4.2 Technical Design Challenge - Kilowatt League

In the Technical Design Challenge, teams will evaluate the performance requirements in their chosen blue economy market. Teams will complete a detailed design of a marine-energy-powered device.

Marine energy refers to power harnessed from waves, tides, ocean and river currents, and differences in ocean salt levels, temperatures, and pressure. It does not include offshore wind energy, hydropower, or solar power. MECC requires that at least 51% of the total energy system be powered by marine energy. Therefore, offshore wind energy, hydropower, solar power, and other forms of energy generation can be included in a hybrid design with marine energy but cannot be the majority power-producing unit.

In the Technical Design Challenge, Kilowatt League teams competing in this challenge must submit a Mid-Year submission and final report. Additionally, teams will present the results of the Technical Design Challenge as part of a final live technical presentation to a panel of reviewers during the final event.

4.2.1 Technical Design Challenge Mid-Year Submission: Confirmation of Blue Economy Market

All Kilowatt League teams competing in this challenge will submit the Technical Design Challenge Mid-Year submission on the HeroX platform in PDF format. The submission should be no more than 1 page and is expected to describe the teams proposed concept, highlighting key features and innovations, early technical considerations, and planned next steps. The specifics of the design are not required at this time. **This Mid-Year submission is due February 23, 2026, 11:59 p.m. MT.**

The Technical Design Challenge Mid-Year submission will be scored against the following criteria:

Table 9. Kilowatt League Technical Design Challenge Mid-Year Submission

Description	Maximum Possible Points
The team describes their proposed concept, highlights key features and innovations, early technical considerations, and planned next steps.	5
Total	**5***

**1 point will be deducted for each day a submission is late, up to 3 days, at which point the team is no longer eligible to receive points for this submission.*

4.2.2 Technical Design Challenge Final Report

All Kilowatt League teams competing in this challenge must submit a final report summarizing the results of the Technical Design Challenge in PDF format on the HeroX platform. **This report is due May 4, 2026, by 11:59 pm MT.** If competing in the Business Plan Challenge or Build and Test Challenge, teams will compile this report into one document.

The final report must follow these formatting requirements:

- Pages should be 8.5 inches by 11 inches, paginated, and with 1-inch margins at a minimum.
- Content should be single-spaced at a minimum.
- The body of the report must use an 11-point font at a minimum.
- Captions for figures and tables must be numbered for easy navigation.
- The final document must be packaged into a single PDF file (see Appendix D).

The final report describing the Technical Design Challenge should serve as primary means for a team to provide detailed information about their project to the reviewers. Teams are encouraged to describe the technology design and how end-user feedback shaped the design. The final report should include the following:

- **Cover sheet**, including all involved team members, mentors, faculty, and others (e.g., sponsors and advisors), contact information, and a clear indication of each person's role. The total word count must be included on the cover page. If competing in the Business Plan Challenge or Build and Test Challenge, **only one cover sheet is required for the compiled report.**
- **Executive summary** briefly describing the project. This must not exceed 2 pages (including figure captions). The Prize Administrator recommends that teams write this section after completing their reports to summarize the key aspects of their project. If competing in the Business Plan Challenge or Build and Test Challenge, **only one executive summary is required for the compiled report, which includes the Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge final reports.**
- **Report narrative** of up to 20 pages describing the Technical Design Challenge, including engineering diagrams. A detailed guide for what to include in the report narrative can be found on HeroX.
- List of references (not included in the report narrative page limit).

At the conclusion of the competition, all team reports will be posted to the competition website.

The Technical Design Challenge final report is worth 50 points. Expert reviewers will evaluate the report against the following criteria:

Table 10. Scoring Rubric for the Final Technical Design Challenge Report (50 Points)

Description	Maximum Possible Points
Clear design objective description	5
Accuracy of the power performance analysis	5
Accuracy of the mechanical and electrical loads analysis and associated safety factors	5
Clear description of system optimization efforts (e.g., power/storage capacity to overcome resource intermittency issues)	5

Quality of engineering diagrams, including mechanical and electrical drawings	10
Incorporation of environmental and sustainability factors	5
Incorporation of user needs as part of the design system	10
Clear demonstration of student learning and contributions toward the technical design	5
Total	**50***

**5 points will be deducted for each day the report is late up to 3 days, at which point the team is no longer eligible to receive points for this submission. Formatting requirements are in place to ensure an equal amount of space for all teams to tell their stories to the reviewers. Reports not formatted to the listed requirements or that are deemed to be utilizing more than the allotted pages will be penalized at the discretion of the reviewers proportional to the infraction. Furthermore, extra pages will be ignored.*

4.3 Build and Test Challenge - Kilowatt League

In the Build and Test Challenge, teams will build a prototype that will be tested in a lab or tank for performance and will deliver measured results. Teams have the discretion to decide what to test and where to perform tests. Open-water testing is outside the scope of this competition. At a minimum, teams will need to build and test a scaled model of the system component that is extracting energy from a marine energy resource.

Prize Administrator will provide educational webinars and be available to answer questions; answers to technical questions will be made available to all teams.

In the Build and Test Challenge, teams must submit a Mid-Year submission, a signed Safety and Technical Inspection form, and final report. Additionally, teams will present the results of the Build and Test Challenge as part of a final live technical presentation to a panel of reviewers during the final event.

Kilowatt League teams may only compete in this challenge if they are also competing in the Technical Design Challenge.

4.3.1 Build and Test Challenge Mid-Year Submission: Description of Testing Objectives

All Kilowatt League teams participating in this challenge will submit, in PDF format on the HeroX platform, a description of testing objectives. This submission should be no more than 1 page long and is expected to describe the team's testing objectives. The specifics of the test plan are not required at this time; however, reviewers will review the lab/tank tests the team plans to perform, objectives for performing these tests, the identification of risks, and the team's approach to risk minimization. **This Mid-Year submission is due Feb. 23, 2026, 11:59 p.m. MT.**

The Build and Test Challenge Mid-Year submission will be scored against the following criteria:

Table 11. Kilowatt League Build and Test Challenge Mid-Year Submission

Description	Maximum Possible Points
The team provides a summary of proposed tests, describes the reasons for pursuing each test, and identifies potential risks (technical, budget, schedule, and safety) and mitigation strategies for each risk.	5

Total	5*

**1 point will be deducted for each day a submission is late, up to 3 days, at which point the team is no longer eligible to receive points for this submission.*

4.3.2 Build and Test Challenge Safety and Technical Submission

All Kilowatt League teams competing in this challenge must also submit a signed Safety and Technical Inspection Submission by **April 15, 2026, 11:59 p.m. MT.**

The Safety and Technical Inspection Submission is not scored, but must be submitted to the Prize Administrator prior to initiating any experimental testing, and failure to submit the signed Safety and Technical Inspection Submission will disqualify the team from the Build and Test Challenge. The Safely and Technical Inspection Submission must be signed by either the faculty advisor or the test facility manager. An example format is available on HeroX. Teams are not required to use the example format, but if an alternate format is used, it is the Teams responsibility to ensure all of the information identified on the example form is submitted.

Teams can reference the Technical Design report for device description and operation, and they can focus the Build and Test Challenge report to include, at a minimum, information on:

- The design process, potentially including early concepts, requirements, design reviews, and any iterative loops.
- The fabrication of the prototype.
- The testing, including a list of instrumentation and methods used and a description of the measurements taken.
- An analysis of the raw measurements and summary of results.
- A description of lessons learned from the design, build, and test processes.

4.3.3 Build and Test Challenge Final Report

All Kilowatt League teams competing in this challenge must submit a final report summarizing the results of the Build and Test Challenge in PDF format on the HeroX platform. **This report is due May 4, 2026, by 11:59 pm MT.** Teams will compile this report into one document that will also include the Technical Design Challenge final report and the Business Plan final report, if competing in that challenge.

The final report must follow these formatting requirements:

- Pages should be 8.5 inches by 11 inches, paginated, and with 1-inch margins at a minimum.
- Content should be single-spaced at a minimum.
- The body of the report must use an 11-point font at a minimum.
- Captions for figures and tables must be numbered for easy navigation.
- The final document must be packaged into a single PDF file (see Appendix D).

The final report describing the Build and Test Challenge should serve as the primary means for a team to provide detailed information about their project to the reviewers. Teams are encouraged to describe the technology design and how the business plan supported by market research shaped the design. The final report should include the following:

- **Cover sheet**, including all involved team members, mentors, faculty, and others (e.g., sponsors and advisors), contact information, and a clear indication of each person's role. The total word

count must be included on the cover page. **Only one cover sheet is required for the compiled report.**

- **Executive summary** briefly describing the project. This must not exceed 2 pages (including figure captions). The Prize Administrator recommends that teams write this section after completing their reports to summarize the key aspects of their project. **Only one executive summary is required for the compiled report.**
- **Report narrative** of up to 15 pages describing the Build and Test Challenge. A detailed guide for what to include in the report narrative can be found on HeroX.
- **List of references** (not included in the report narrative page limit).

At the conclusion of the competition, all team reports will be posted to the competition website.

The Build and Test Challenge final report is worth 50 points. Expert reviewers will evaluate the report against the following criteria:

Table 12. Kilowatt League Scoring Rubric for the Final Build and Test Challenge Report (50 Points)

Description	Maximum Possible Points
Clear description of the scaling factors considered in designing and fabricating the model-scale device	10
Clear description of the development of an experimental test plan and how the test plan would allow for the collection of data to prove the team's stated objective	10
Demonstration that the test plan was executed successfully and description of how the instrumentation and measurement design was completed	10
Clear description of how the raw measurements, recorded during model testing, were postprocessed to generate useful data that characterizes the device performance	10
Quality summary of lessons learned during execution of the Build and Test Challenge showing what device modifications, new tests, or changes in recorded measurements the team would consider if their concept were to go through a second round of experimental testing	10
Total	**50***

**5 points will be deducted for each day the report is late up to 3 days, at which point the team is no longer eligible to receive points for this submission. Formatting requirements are in place to ensure an equal amount of space for all teams to tell their stories to the reviewers. Reports not formatted to the listed requirements or that are deemed to be utilizing more than the allotted pages will be penalized at the discretion of the reviewers proportional to the infraction. Furthermore, extra pages will be ignored.*

4.3.4 Build and Test Challenge Testing Facilities

Teams can request support from the Prize Administrator to assist in connecting them with nearby facilities to test their devices if the team does not have adequate on-site testing facilities at their institution. Teams are encouraged to research the Testing Expertise and Access for Marine Energy Research (TEAMER) program, which provides various forms of support for testing and research needs. **It is recommended that teams investigate the TEAMER schedule and requirements immediately upon notice of selection to participate in the MECC.**

Teams who receive support from the TEAMER program or other outside entities are required to describe the work that was done outside of the student team and how the team incorporated any outside work.

4.3.4.1 Physical Design Constraints Within Testing Facility

Given the wide variety of concepts expected in this competition, there are no firm restrictions on the scale of the model that a team can test in an appropriate experimental facility. Therefore, the Prize Administrator expect the model scale will be dependent on two factors: (1) the dimensions of the testing facility chosen and (2) the available budget. Teams are allowed to seek supplemental funding from additional sources outside of MECC to build a larger model or complete a greater number of experimental tests if desired; however, the Build and Test Challenge scoring rubric will focus on the quality of the model design, test plan development, instrumentation and measurement techniques, and postprocessing of measured data rather than on the size and breadth of the experiment.

4.3.4.2 Safety Specifications

The Prize Administrator requires that a safety inspection of the test article and load system by the test facility be passed before the test article can be installed and tested at the chosen experimental facility. An example format of the Safety and Technical Inspection Submission used to evaluate the test article and accompanying instrumentation is available on HeroX. The example format should be edited to suit the needs of each team. Teams are not required to use the example format, but if an alternate format is used, it is the Teams responsibility to ensure all of the information identified on the example form is submitted. Although the test facility will make the final and official determination about whether a test article may be tested in the experimental facility, the Prize Administrator can exclude teams from participating in this challenge if teams do not submit the Safety and Technical Inspection Submission with sufficient detail. The signed Safety and Technical Inspection Submission must be submitted to the Prize Administrator prior to initiating any experimental testing. The Safely and Technical Inspection Submission must be signed by either the faculty advisor or the test facility manager. Failure to submit the signed Safety and Technical Inspection Submission will disqualify the team from the Build and Test Challenge.

4.3.5 Build and Test Challenge Testing Tasks

The marine energy device testing portion of the Build and Test Challenge consists of three distinct tasks: the performance task, durability task, and safety task. This section describes the requirement of the individual tasks in which the prototype is expected to perform and the parameters of the testing conditions.

Through testing, teams can demonstrate their marine energy device's performance through objective tasks, and the testing outcomes help determine if teams have succeeded in developing a durable, safe, high-performing machine. Performance is a strong indicator of a marine energy device's ability to compete successfully in the marketplace.

Each marine energy device, and potentially its corresponding load system, will be tested in the experimental facility chosen by each team. The challenge will include the following aspects: marine energy device performance, marine energy device durability, and marine energy device safety. While the prescribed order will be the same for each team, the exact amount of time spent on each task could vary between teams. Teams are encouraged to select the performance tests most relevant to their design goals. Completing all tasks is not required, and scores will be based on the team's justification for their selected tasks, the quality of their analysis, and the insight gained from the testing—not the quantity of tasks completed. Given that each team may have different levels of

access and time at testing facilities, each team is required to complete at least one task, with suggested priority given in the order of the tasks listed.

4.3.5.1 Marine Energy Device Performance Task

The objective of this task is to test the marine energy device over a range of environmental conditions to develop a performance curve or matrix. Each marine energy device should be tested in various environmental conditions across the operational envelope for the given device. Each team is expected to test their device in at least six operational environmental conditions, which will be left to the team's discretion; teams should provide a description of their decision-making process for the conditions they chose in the final report.

The measured performance for each device can vary and will be decided upon by each team. For example, the team can choose to measure electrical power output, pumped water, compressed air, or simply device response (e.g., amplitude of oscillatory motion, rotations per minute), as measured performance is generally associated with improved power extraction. Each team will be responsible for selecting the sampling rate of their data acquisition systems and will need to include details on any additional filters applied between the measuring instrument and the data acquisition system to reduce noise in the final report. Teams are strongly encouraged to understand the mechanical or electrical loads at model scale in order to select appropriate instrumentation such that the expected measured values do not fall within the noise range of the instrumentation.

4.3.5.2 Marine Energy Device Durability Task

Marine energy devices are expected to perform over the long term and will be subjected to a wide variety of weather conditions. Producing power effectively and over the course of the device's lifetime are desirable design qualities. These devices must be designed to withstand extreme environmental conditions without damage to their mechanical and electrical components. To control high mechanical and electrical loads, marine energy devices must be able to limit their response and output power in these particularly high-energy sea states.

In this task, the marine energy device should be subjected to an environmental condition that corresponds to an extreme or survival situation. Teams will be responsible for describing how and justifying why these sea states were chosen in the test report. The mechanical loads and/or device response should be compared to normal operating conditions to evaluate the survivability of the marine energy device. If the marine energy device changes shape, orientation, submergence, etc., depending on the environmental conditions, the team must describe how this change is implemented but will not be required to have a model with real-time capability during testing.

4.3.5.3 Marine Energy Device Safety Task

Safety is of utmost importance to device designers and manufacturers. To be certified, marine energy devices must be able to safely shut down rapidly and with a fail-safe shutdown capability.

Marine energy devices must shut down when disconnected from the grid as well as manually upon command. Each team may choose to address these shutdown scenarios with one or two systems or mechanisms.

In this task, the marine energy device will be required to safely shut down at one time during the testing period in any environmental condition. For each marine energy device, the shutdown process will be initiated once upon command. It is important that when initiating the command, the data

acquisition system remains active and can continue to monitor the shutdown response of the system.

4.4 Community Connections Challenge - Kilowatt League (Required)

Marine energy workforce development requires a multidisciplinary approach, and marine energy deployments are closely tied to communities. This challenge is designed to strengthen connections between competition participants, the marine energy industry, and local communities. It encourages students to engage beyond engineering and site design, fostering creative, scalable approaches to workforce development and industry-community collaboration. All Kilowatt League teams are required to participate in this challenge.

The purpose of this challenge is to:

- Introduce students to the marine energy industry through direct engagement.
- Expose students to current industry challenges that will need solutions in the coming years.
- Encourage students to consider broader issues beyond technology development.
- Develop a repeatable framework to introduce more students to marine energy career opportunities.

As part of this challenge, teams will submit a Mid-Year submission, a final report, and a presentation at the final event.

In the Mid-Year submission, teams will provide a Team Overview and Team Roster as described in Section 4.4.2Teams must also conduct at least four interviews with marine energy professionals. These interviews should focus on understanding the current state of the industry, including key challenges and opportunities.

Interviewees for this challenge may include the same individuals as those interviewed for end-user insights; however, teams are encouraged to seek a wide range of perspectives to enhance the depth and breadth of their research.

Based on insights gained from these interviews, teams must propose three to five potential solutions to address challenges identified. From these proposed solutions, teams will select at least one to implement in a meaningful way, engaging with the broader marine energy community to drive awareness, discussion, or action.

The final report must include a detailed after-action analysis, describing the specific event or activity executed to address the challenge, the outcomes achieved, and key lessons learned from the process.

The team will be required to present and summarize the process and impact of their work. Specific requirements are defined in the following challenge segments, and deadlines are included in Table 5.

4.4.1 Community Connections Challenge Mid-Year Submissions: Team Overview, Interview Summary, and Outreach Strategy

The Community Connections Challenges will include a Mid-Year submission:

1 A team roster and team overview. Mid-Year

2 An interview summary and outreach strategy.

These submissions are due February 23, 2026, 11:59 p.m. MT.

4.4.1.1 Team Roster

Teams will submit a roster on the HeroX platform in Excel format; an example template is provided on HeroX. The roster should also include contact names and email addresses for students and faculty advisors from partnering institutions. **This submission is due February 23, 2026, 11:59 p.m. MT.**

4.4.1.2 Team Overview

The team overview will introduce team members and their vision for the competition and the energy community. The Prize Administrator will post the team overview on the MECC website and may edit the text for consistency between teams and to meet necessary web standards on energy.gov. Teams should plan to promote the components of the team overview through their social media channels and media connections once they are live on the MECC website. Students should include a strategy of how they will continue promotion of their work.

The Prize Administrator will provide a sample format for submission of the team overview. The Prize Administrator will send a link to sample submission by early December 2025. The submission must include:

- Team name, institution name, city, and state.
- A brief team and project overview. Consider describing your team's technology concept, history with the competition and lessons learned from previous years, vision for a reliable and secure energy future, why your team is participating in MECC, and what they're most excited for in this competition, etc. The length of the overview should be 150–250 words.
- A team photo, including the names of the team members in the order in which they appear. If students are unable to capture a team photo, the team may instead submit a photo of their prototype, team members in the field/working on their project, etc. This photo must be submitted as a separate .jpg or .png file.
- A caption and credit for the photo. The length of the caption should not exceed 125 characters (credit information is not included in limit).

To assist teams, the Prize Administrator will provide an electronic form that can be used for this submission. Teams are not required to use this form and may submit using any format of their choosing (i.e., emailing the Prize Administrator a Microsoft Word document). All submissions should address the substantive measures outlined in the template and described in this Rules document.

4.4.1.3 Interview Summary and Outreach Strategy

An interview summary will detail the progress made to date in engaging marine energy professionals and the insights gained from those interviews. The outreach strategy is an industry best practice to help keep announcements on track and serve as an activity roadmap. The report should address the following and describe the team's proposed activities throughout the year:

- An overview of the interviews completed, including who was interviewed, the sector and state/region they represent, their job title and organization, and a summary.
- Key takeaways and insights the team has gained from these interviews.
- A statement of the challenges they'd like to address and high-level goals the team aims to achieve with their outreach activities.

- Three to five proposed solutions to the challenges and how the team has identified these solutions.
- An overview of the actions the team plans to take by the end of the competition to address one of the proposed solutions.
- Any industry connections or partnerships the team has, and how the team will leverage these connections to achieve their outreach goals.
- The team's social media and communications strategy that highlights progress and milestones, including team social media accounts with hyperlinks, and relationships developed with the team's school newspaper or local media outlets.
- A timeline of events presented in chart form, including:
    - Timeline for proposed events.
    - Timeline for event development and promotion of event.
- Planned outreach announcements and social media posts.

The interview summary and outreach strategy must be no more than 3 pages and formatted according to the following requirements:

- Pages should be 8.5 inches by 11 inches, paginated, and with 1-inch margins at a minimum.
- Content should be single-spaced at a minimum.
- The body of the report must use an 11-point font at a minimum.
- Captions for figures and tables must be numbered for easy navigation.

Submissions will be evaluated on quality of the content using the following scoring criteria and not the length of the submission.

Table 13. Kilowatt League Scoring Rubric for the Community Connections Challenge Mid-Year Submission (Team Roster)

Description	Maximum Possible Points
Team roster is complete and in compliance with the template provided by the Prize Administrator	2
Quality and informativeness of team overview with engaging and creative storytelling	3
Total for CCC Mid-Year Submission	**5***

**1 point will be deducted for each day a submission is late, up to 3 days, at which point the team is no longer eligible to receive points for this submission.*

Table 14. Kilowatt League Scoring Rubric for the Community Connections Challenge Mid-Year Submission (Industry Interviews and Outreach Activities)

Description	Maximum Possible Points
Quality, depth, and specificity of the industry interviews, insights gained from interviews, and three to five proposed solutions and quality and creativity of proposed outreach activities.	5
Total for Community Connections Challenge Mid-Year Submission	**5***

**1 point will be deducted for each day a submission is late, up to 3 days, at which point the team is no longer eligible to receive points for this submission.*

4.4.2 Community Connections Challenge Metrics Report

Teams will submit a final metrics report on the HeroX platform detailing the metrics of their Community Connections Challenge activities throughout the year. **The report is due May 11, 2026, 11:59 p.m. MT.**

The final metrics report must be no more than 5 pages and follow these formatting requirements:

- Pages should be 8.5 inches by 11 inches, paginated, and with 1-inch margins at a minimum.
- Content should be single-spaced at a minimum.
- The body of the report must use an 11-point font at a minimum.
- Captions for figures and tables must be numbered for easy navigation.
- The final document must be packaged into a single PDF file (see Appendix D).

The final metrics report should serve as primary means for a team to provide detailed information about their activities undertaken during the challenge to the reviewers. The final report should include the following:

After-action report including an overview of actions taken to address the challenges identified since the Mid-Year submission, discussion of challenges the team faced and how these challenges were mitigated and lessons learned, a description of how these actions met the team's high-level outreach goals and impact to the marine energy community, and a reflection on the Community Connections Challenge as a whole.

Industry interview outcomes including quantifiable numbers, for example:

- Number of industry interviews, length of interviews, and number of questions.
- Metrics on team and participant attendance at interviews.
- Contact information for each interviewee, including name, company, origin of relationship (i.e., professional or alumni), sector in marine energy industry, and response regarding if this person would be open to continued participation in future MECC events.
- Key learnings and takeaways from the interviews, including how the information gained was applied.
- Description of how the team selected individuals to interview.

Action outcomes for activities or events, including quantifiable numbers, for example:

- Number and types of activities or events.
- Number of attendees, if applicable.
- Estimated time of engagement for each attendee.
- Summary of the activities and key takeaways.
- Types of attendees (industry, academia, community members, etc.).
- Geographic regions represented.
- Metrics on team and participant attendance at events.
- How activities were selected to accommodate target audience.

Action outcomes for communications materials, including social media, with quantifiable numbers, for example:

- Number of page clicks.
- Number of downloads.
- Estimated length of engagement per view.
- Locations of viewers.
- Locations where materials were distributed.
- Metrics on social media account growth.
- Reflection on the team's original communications plan versus results attained, lessons learned, and best practices.

Outreach strategy outcomes with quantifiable numbers, for example:

- Number of persons engaged through outreach.
- Estimated engagement time per person.
- Types of outreach.
- Reflection on outreach strategy, best practices, and lessons learned.

List of references (if applicable).

At the conclusion of the competition, all team reports will be posted to the competition website; as such, when collecting data or feedback from stakeholders, attendees, or program participants, teams should communicate how their information will be used.

The Community Connections Challenge Final Metrics Report is worth 45 points. Expert reviewers will evaluate the report against the following criteria:

Table 15. Kilowatt League Scoring Rubric for the Community Connections Challenge Final Metrics Report

Description	Maximum Possible Points
After-action report: concise, readable, and descriptive with logical flow; communicates information clearly	5
Relevance and completeness of metrics: the team reported on an appropriate set of metrics relevant to their activities	10
Depth and sophistication of analysis: the team demonstrated critical thinking and contextual understanding of the reported data	15
Demonstrated impact and reflection: the team interpreted their work's effectiveness and broader outcomes	10
Use of metrics to inform future actions: the team used their metrics to make conclusions and suggest improvements	5
Final Metrics Report	**45***

**5 points will be deducted for each day the report is late up to 3 days, at which point the team is no longer eligible to receive points for this submission. Formatting requirements are in place to ensure an equal amount of space for all teams to tell their stories to the reviewers. Reports not formatted to the listed requirements or that are deemed to be utilizing more than the allotted pages will be penalized at the discretion of the reviewers proportional to the infraction. Furthermore, extra pages will be ignored.*

4.5 Final Event - Kilowatt League

The culmination of the MECC will occur with a final event planned to take place May 18–21, 2026, in Portland, Oregon, co-located with the Ocean Renewable Energy Conference (see Appendix E for event contingencies).

All teams are invited to attend the final event in May 2026, where they will present their work before a panel of industry experts. Presentations will be given by the student members of the team.

The format of presentations is as follows:

- 15-minute presentation covering the technical challenges the teams participated in (Business Plan Challenge, Technical Design Challenge, or the Build and Test Challenge).
- 10-minute presentation covering the Community Connections Challenge.

Teams will also participate in unscored poster presentations and a 90-second quick pitch session to showcase their work to final event attendees.

4.5.1 Final Event Presentation and Q&A Session

4.5.1.1 Technical Challenges Presentation

Kilowatt League teams will make one presentation summarizing results from the technical challenges they participated in, presenting to a panel of reviewers. This public presentation is intended to enable teams to communicate the technical underpinnings, business case, and/or feasibility of commercialization of their system.

The public presentation is limited to 15 minutes, which will be followed by up to 10 minutes of questions from the panel of reviewers in a private setting. If a Kilowatt League team is presenting on more than one technical challenge, it is at their discretion to determine how much time they allocate to each challenge during the 15-minute presentation. When pitching their marine energy project, teams should use their presentation to showcase maximum creativity and dynamism, highlighting the team strengths and unique approach in a professional manner.

Presenters should highlight their concept prototype and may use high-quality photos, maps, charts, or other visual aids or props to enhance their presentation using slides in the 16:9 widescreen format.

The public presentation submission should be a single file (see Appendix D), which should be brought to the final event.

The Technical Challenges presentation and Q&A is worth 45 points per challenge, as indicated in the following table.

Table 16. Kilowatt League Possible Points per Business Plan, Technical Design, and Build and Test Challenge Portions of Presentation and Q&A

Submission Element	Possible Points
Business Plan Portion of Presentation and Q&A	45
Technical Design Portion of Presentation and Q&A	45
Build and Test Portion of Presentation and Q&A	45

The expert reviewers will use the following criteria in determining these scores.

Table 17. Kilowatt League Scoring Rubric for the Business Plan, Technical Design, and Build and Test Presentation* (45 Points per Challenge)

Description	Maximum Points - Business Plan	Maximum Points - Technical Design	Maximum Points - Build and Test
The presentation is compelling and includes a narrative of inspiration and purpose	5	5	5
Demonstrates thorough market analysis and triple-bottom-line risk assessment	20		
Demonstrates consideration of risks, issues, and challenges along with design assumptions		20	
The team describes lessons learned during execution of the Build and Test Challenge and what device modifications, new tests, or changes in recorded measurements the team would consider if their concept were to go through a second round of experimental testing			20
The presentation is practiced and polished, the team has a professional appearance and manner, and the team clearly communicates technical topics	5	5	5
The team incorporates high-quality graphics, media, and props to support presentation	5	5	5
Accurate and thorough ability to answer reviewers' questions	5	5	5
Demonstration of learning through the competition requirements by the students	5	5	5
Total	**45**	**45**	**45**

**The final presentation must be submitted online to the Prize Administrator in advance of a team's presentation during the final event, and teams should bring a USB with the presentation as backup.*

4.5.2 Community Connections Challenge Presentation

For the Community Connections Challenge presentation, teams will develop a final PowerPoint presentation to share their results on the challenge during the final event. This presentation must include:

- Details on the team, each team member's current studies, and future professional goals.
- A statement of the challenges the team has addressed, an overview of insights gained from industry interviews, a brief discussion of the three to five solutions identified to address this topic area, planning and execution of the action(s), and an assessment of action impact.

Teams should emphasize the quality and visual appeal of each slide and the accompanying presentation by the speaker. Slides should include high-resolution photos to represent each challenge element. Teams may use videos, but this is not required. There will be no template for

these slides so teams can choose how to best convey their Community Connections Challenge experience.

Each team will have 10 minutes to present to a panel of reviewers and to the public during the final MECC event. This will be followed by 10 minutes of questions from the reviewers. Teams will be scored on the professional and clear structure of the presentation, use of effective storytelling techniques and visual elements, and their completion of each of the required submissions, as described in the following table.

Table 18. Kilowatt League Scoring Rubric for the Community Connections Challenge

Description	Maximum Possible Points
PowerPoint is concise and visually engaging, and presentation to reviewers is professional and clear, uses effective storytelling techniques	10
Demonstrated execution and measurements of impact to a wide variety of stakeholders	15
Demonstrated development of best practices and lessons learned through insights gained	10
Successful completion and integration of contest elements through proven alignment with your chosen strategy and associated actions/activities	10
Final Presentation*	**45**

**The final presentation must be submitted online to the Prize Administrator in advance of a team's presentation during the final event, and teams should bring a USB with the presentation as a backup.*

4.5.3 Final Event Poster (Unscored)

One poster summarizing the team's efforts in the technical challenges they competed in is required for each team. The poster does not need to include a summary of the Community Connections Challenge. Teams will bring their poster to the final event. Attendees at the final event will vote for the best poster through an online survey tool. The team with the most votes will win a trophy for "Best Poster."

Poster dimensions should be 36 inches by 48 inches.

Teams are encouraged to showcase their creativity to tell a story of their efforts over the year. Examples of previous MECC posters can be found on the MECC website.[7]

4.5.4 Final Event Quick Pitch (Unscored)

Teams will give a Quick Pitch presentation to the attendees of the final event during one of the conference sessions. Teams will have up to 90 seconds and may show one slide during their elevator-pitch-style presentation. The pitch should describe the team's concept and feasibility.

Attendees at the final event will vote on the winning Quick Pitch through an online survey tool. The team with the most votes will win a trophy for "Best Quick Pitch."

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7 https://openei.org/wiki/PRIMRE/Prizes_and_Competitions/Marine_Energy_Collegiate_Competition_(MECC)/MECC_Teams.

5 Megawatt League (Advanced Level)

During the full period of the MECC, Megawatt League participants will need to submit and/or present a number of required submissions by the submission deadlines, as outlined in Table 19.

Teams selected to compete will be eligible to receive cash prizes on the schedule outlined in Table 19 following submission of the required materials. There are no requirements governing the use of prize money. Teams are encouraged to encourages use the first three cash awards (for initial selection and Mid-Year submissions) to support travel and participation in the final event, purchase materials for the Build and Test Challenge, and/or foster sustained marine energy programs and curricula at their home institutions. Teams that attend and actively participate in the MECC final event in May 2026 will be eligible to receive an additional cash prize per team as a fourth award and will compete for the Megawatt League grand prize cash pool.

Table 19. Megawatt League Submission Deadlines

Submission	Submission Deadline	Funds Awarded
Application to participate (open August 25, 2025). All selected teams will be invited to compete in the rest of the competition	September 19, 2025, 11:59 p.m. MT	Selected teams will be eligible to receive up to $5,000, distributed to the selected and eligible lead academic institution
• Business Plan Challenge Mid-Year Submission: List of end users. • Detailed Technical Design Challenge Mid-Year Submission: Confirmation of selected blue economy market • Community Connections Challenge Mid-Year Submission: Team roster and team overview AND Interview summary and outreach strategy • Build and Test Challenge Mid-Year Submission: Description of testing objectives	February 23, 2026, 11:59 p.m. MT	Each lead academic institution can receive up to a $10,000 cash prize
Submission of signed Safety and Technical Inspection Form	April 15, 2026 11:59 p.m. MT	
Submission of final report (Business Plan, Technical Design, and Build and Test challenges)	May 4, 2026, 11:59 p.m. MT	
Submission of metrics report	May 11, 2026, 11:59 p.m. MT	

During the final event	May 18-21, 2026	Each team that presents at the final event will be eligible to receive an additional $5,000 cash prize, paid to the lead academic institution. Teams compete for a portion of the $10,000 grand prize cash pool (amount subject to change), paid to the lead academic institution.
90-second quick pitch	Bring slide to final event	
Display of poster summarizing Business Plan, Technical Design, and Build and Test Challenges	Bring to final event	
Presentation of (1) Community Connections Challenge (10 minutes) and (2) technical presentation* (25 minutes)	Bring slides to final event	

** The technical presentation includes Business Plan, Technical Design, and Build and Test challenges.*

All of the submissions will be scored as described in Table 20. Details on what to include in these submissions and the scoring criteria used to evaluate them are described in the following sections for each of the challenges.

Megawatt League teams will be scored on all four core challenges (Business Plan, Technical Design, Build and Test, and Community Connections), as they are required to participate in all of them.

Table 20. Megawatt League Scoring Summary for Core Competition Submissions (400 Points)

Description	Megawatt League Maximum Possible Points
Business Plan Challenge (25%)	**100**
Mid-Year Submission: Identification of End Users	5
Final Report	50
Business Plan Challenge Portion of Final Technical Presentation and Q&A	45
Technical Design Challenge (25%)	**100**
Mid-Year Submission: Confirmation of Blue Economy Market	5
Final Report	50
Technical Design Challenge Portion of Final Technical Presentation and Q&A	45
Build and Test Challenge (25%)	**100**
Mid-Year Submission: Description of Testing Objectives	5
Final Report	50
Build and Test Challenge Portion of Final Technical Presentation and Q&A	45
Community Connections Challenge (25%)	**100**

Mid-Year Submission: Team Overview and Team Roster	5
Mid-Year Submission: Interview Summary, and Outreach Strategy	5
Metrics Report	45
Community Connections Challenge Final Presentation and Q&A	45
Total Possible Points	**400***
Final Score Calculation	**Total points across all challenges**

**5 points will be deducted for each day the report is late up to 3 days, at which point the team is no longer eligible to receive points for this submission. Formatting requirements are in place to ensure an equal amount of space for all teams to tell their stories to the reviewers. Reports not formatted to the listed requirements or that are deemed to be utilizing more than the allotted pages will be penalized at the discretion of the reviewers proportional to the infraction. Furthermore, extra pages will be ignored.*

5.1 Business Plan Challenge - Megawatt League (Required)

In the Business Plan Challenge, teams will identify a promising market within the blue economy and determine the best marine energy system to serve the market's needs. Teams will then evaluate the performance requirements of the marine energy system for end users[8] in the identified market and develop a business plan.

While developing their business plan, competing teams must evaluate the near-term market potential for their concept and/or system, ideally in the next 5–10 years. Business plans will be reviewed based on whether teams completed a robust market analysis and considered any potential shortfalls.

In the Business Plan Challenge, teams must submit a Mid-Year submission and final report. Additionally, teams will present the results of the Business Plan Challenge as part of a final live technical presentation to a panel of reviewers during the final event.

5.1.1 Business Plan Challenge Mid-Year Submission: Identification of End Users

Megawatt League teams will submit a list of potential end-users for their concepts on the HeroX platform in Excel format that includes end-user organization/community name and whether the team will pursue an interview with the end user. The end users for the Business Plan Challenge Mid-Year submission can be from the same organizations the team decides to interview for the Community Connections Challenge if desired, but it is recommended that teams talk to as many different stakeholders as possible. **This submission is due Mid-Year 26, 2026, 11:59 p.m. MT.**

The Business Plan Challenge Mid-Year submission will be scored against the following criteria:

Table 21. Megawatt League Business Plan Challenge Mid-Year Submission

Description	Maximum Possible Points
The team has submitted a list of potential end-user organizations/communities and has noted whether they will pursue interviews with each	5
Total for Business Plan Challenge Mid-Year Submissions	**5**

[8] Potential future customers within the selected blue economy market.

5.1.2 Business Plan Challenge Final Report

Each team must submit a final report summarizing the results of the Business Plan Challenge in PDF format on the HeroX platform. **This report is due May 4, 2026, by 11:59 pm MT.** Teams will compile this report into one document that will also include the Technical Design Challenge and Build and Test Challenge final reports.

The Business Plan final report must follow these formatting requirements:

- Pages should be 8.5 inches by 11 inches, paginated and with 1-inch margins at a minimum.
- Content should be single-spaced at a minimum.
- The body of the report must use an 11-point font at a minimum.
- Captions for figures and tables must be numbered for easy navigation.
- The final reports must be packaged into a single PDF file (see Appendix D).

The final report describing the Business Plan Challenge should serve as primary means for a team to provide detailed information about their project to the reviewers. Teams are encouraged to describe the technology design and how the business plan supported by market research shaped the design. The final report should include the following:

- **Cover sheet**, including all involved team members, mentors, faculty, and others (e.g., sponsors and advisors), contact information, and a clear indication of each person's role. The total word count must be included on the cover page. **Only one cover sheet is required for the compiled report, which includes the Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge final reports.**
- **Executive summary** briefly describing the project. This must not exceed 2 pages (including figure captions). The Prize Administrator recommends that teams write this section after completing their reports to summarize the key aspects of their project. **Only one executive summary is required for the compiled report, which includes the Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge final reports.**
- **Report narrative** of up to 15 pages describing the Business Plan Challenge. A detailed guide for what to include in the report narrative can be found on HeroX.
- **List of references** (not included in the report narrative page limit). **Only one list of references is required for the compiled report, which includes the Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge final reports.**

At the conclusion of the competition, all team reports will be posted to the competition website.

The Business Plan Challenge final report is worth 50 points. Expert reviewers will evaluate the report against the following criteria:

Table 22. Megawatt League Scoring Rubric for the Final Business Plan Challenge Report (50 Points)

Description	Maximum Possible Points
Extent to which the team demonstrates market feasibility (marketability, buildability, public/market acceptance, identification of stakeholders and end users, cost competitiveness in comparison to other energy sources)	10
The team thoroughly evaluates risk and proposes mitigation strategies (e.g., recognition of failure maintenance, operational expenses)	10

Extent to which the business plan demonstrates innovation, creativity, and originality	10
The team conducted at least three end-user interviews/surveys and inputs received are of high quality	10
Accuracy of financial analysis and inclusion of supporting documentation	5
Clear demonstration of student learning and contributions toward the business plan	5
Total	50*

**5 points will be deducted for each day the report is late up to 3 days, at which point the team is no longer eligible to receive points for this submission. Formatting requirements are in place to ensure an equal amount of space for all teams to tell their stories to the reviewers. Reports not formatted to the listed requirements or that are deemed to be utilizing more than the allotted pages will be penalized at the discretion of the reviewers proportional to the infraction. Furthermore, extra pages will be ignored.*

5.2 Technical Design Challenge - Megawatt League (Required)

In the Technical Design Challenge, teams will evaluate the performance requirements in their chosen blue economy market by incorporating feedback from the end-user interviews completed in the Business Challenge.

Teams will complete a detailed design of a marine-energy-powered device to serve those end users.

Marine energy refers to power harnessed from waves, tides, ocean and river currents, and differences in ocean salt levels, temperatures, and pressure. It does not include offshore wind energy, hydropower, or solar power, and MECC requires that at least 51% of the total energy system be powered by marine energy. Therefore, offshore wind energy, hydropower and solar power can be included in a hybrid design with marine energy but cannot be the majority power-producing unit.

In the Technical Design Challenge, all teams must submit a Mid-Year submission and final report. Additionally, teams will present the results of the Technical Design Challenge as part of a final live technical presentation to a panel of reviewers during the final event.

5.2.1 Technical Design Challenge Mid-Year Submission: Confirmation of Blue Economy Market

All teams will submit the Technical Design Challenge Mid-Year submission on the HeroX platform in PDF format. The submission should be no more than 1 page and is expected to describe the selected blue economy market the team will address, the reason for choosing that market, and an overview of issues to be explored and analyzed. The specifics of the design are not required at this time. **This Mid-Year submission is due Mid-Year 26, 2026, 11:59 p.m. MT.**

The Technical Design Challenge Mid-Year submission will be scored against the following criteria:

Table 23. Megawatt League Technical Design Challenge Mid-Year Submission

Description	Maximum Possible Points
The team identifies a blue economy market they have decided to address and provides justification for choosing the market and identifies issues to be explored	5
Total	5

5.2.2 Technical Design Challenge Final Report

All teams must submit a final report summarizing the results of the Technical Design Challenge in PDF format on the HeroX platform. **This report is due May 4, 2026, by 11:59 pm MT.** Teams will compile this report into one document that will also include the Business Plan Challenge and Build and Test Challenge final reports.

The final report must follow these formatting requirements:

- Pages should be 8.5 inches by 11 inches, paginated, and with 1-inch margins at a minimum.
- Content should be single-spaced at a minimum.
- The body of the report must use an 11-point font at a minimum.
- Captions for figures and tables must be numbered for easy navigation.
- The final document must be packaged into a single PDF file (see Appendix D).

The final report describing the Technical Design Challenge should serve as primary means for a team to provide detailed information about their project to the reviewers. Teams are encouraged to describe the technology design and how the business plan supported by market research shaped the design. The final report should include the following:

- **Cover sheet**, including all involved team members, mentors, faculty, and others (e.g., sponsors and advisors), contact information, and a clear indication of each person's role. The total word count must be included on the cover page. **Only one cover sheet is required for the compiled report, which includes the Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge final reports.**
- **Executive summary** briefly describing the project. This must not exceed 2 pages (including figure captions). The Prize Administrator recommends that teams write this section after completing their reports to summarize the key aspects of their project. **Only one executive summary is required for the compiled report, which includes the Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge final reports.**
- **Report narrative** of up to 20 pages describing the Technical Design Challenge, including engineering diagrams. A detailed guide for what to include in the report narrative can be found on HeroX.
- **List of references** (not included in the report narrative page limit). **Only one list of references is required for the compiled report, which includes the Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge final reports.**

At the conclusion of the competition, all team reports will be posted to the competition page on PRIMRE.

The Technical Design Challenge final report is worth 50 points. Expert reviewers will evaluate the report against the following criteria:

Table 24. Megawatt League Scoring Rubric for the Final Technical Design Challenge Report (50 Points)

Description	Maximum Possible Points
Clear design objective description	5
Accuracy of the power performance analysis	5

Accuracy of the mechanical and electrical loads analysis and associated safety factors	5
Clear description of system optimization efforts (e.g., power/storage capacity to overcome resource intermittency issues)	5
Quality of engineering diagrams, including mechanical and electrical drawings	10
Incorporation of environmental and sustainability factors	5
Incorporation of user needs as part of the design system	10
Clear demonstration of student learning and contributions toward the technical design	5
Total	**50***

**5 points will be deducted for each day the report is late up to 3 days, at which point the team is no longer eligible to receive points for this submission. Formatting requirements are in place to ensure an equal amount of space for all teams to tell their stories to the reviewers. Reports not formatted to the listed requirements or that are deemed to be utilizing more than the allotted pages will be penalized at the discretion of the reviewers proportional to the infraction. Furthermore, extra pages will be ignored.*

5.3 Build and Test Challenge - Megawatt League (Required)

In the Build and Test Challenge, teams will build a prototype that will be tested in a lab or tank for performance and will deliver measured results. Teams have the discretion to decide what to test and where to perform tests. Open-water testing is outside the scope of this competition. At a minimum, teams will need to build and test a scaled model of the system component that is extracting energy from a marine energy resource.

The Prize Administrator will provide educational webinars and be available to answer questions; answers to technical questions will be made available to all teams.

In the Build and Test Challenge, teams must submit a Mid-Year submission, a signed Safety and Technical Inspection form, and final report. Additionally, teams will present the results of the Build and Test Challenge as part of a final live technical presentation to a panel of reviewers during the final event.

5.3.1 Build and Test Challenge Mid-Year Submission: Description of Testing Objectives

All teams will submit, in PDF format on the HeroX platform, a description of testing objectives. This submission should be no more than 1 page long and is expected to describe the team's testing objectives. The specifics of the test plan are not required at this time; however, reviewers will review the lab/tank tests the team plans to perform, objectives from performing these tests, the identification of risks and the team's approach to risk minimization. **This Mid-Year submission is due February 23, 2026, 11:59 p.m. MT.**

The Build and Test Challenge Mid-Year submission will be scored against the following criteria:

Table 25. Megawatt League Build and Test Challenge Mid-Year Submission

Description	Maximum Possible Points

The team provides a summary of proposed tests, describes the reasons for pursuing each test, and identifies potential risks (technical, budget, schedule and safety) and mitigation strategies for each risk	5
Total for Build and Test Challenge Mid-Year Submission	**5**

5.3.2 Build and Test Challenge Safety and Technical Submission

All Megawatt League teams competing in this challenge must also submit a signed Safety and Technical Inspection Submission by **April 15, 2026, 11:59 p.m. MT.**

The Safety and Technical Inspection Submission is not scored, but must be submitted to the Prize Administrator prior to initiating any experimental testing, and failure to submit the signed Safety and Technical Inspection Submission will disqualify the team from the Build and Test Challenge. The Safely and Technical Inspection Submission must be signed by either the faculty advisor or the test facility manager. An example format is available on HeroX. Teams are not required to use the example format, but if an alternate format is used, it is the Teams responsibility to ensure all of the information identified on the example form is submitted.

Teams can reference the Business Plan and Technical Design reports for device description and operation, and they can focus the Build and Test Challenge report to include, at a minimum, information on:

- The design process, potentially including early concepts, requirements, design reviews, and any iterative loops.
- The fabrication of the prototype.
- The testing, including a list of instrumentation and methods used and a description of the measurements taken.
- An analysis of the raw measurements and summary of results.
- A description of lessons learned from the design, build, and test processes.

5.3.3 Build and Test Challenge Final Report

All teams must submit a final report summarizing the results of the Build and Test Challenge in PDF format on the HeroX platform. **This report is due May 4, 2026, by 11:59 pm MT.** Teams will compile this report into one document that will also include the Business Plan Challenge and Technical Design Challenge final reports.

The final report must follow these formatting requirements:

- Pages should be 8.5 inches by 11 inches, paginated, and with 1-inch margins at a minimum.
- Content should be single-spaced at a minimum.
- The body of the report must use an 11-point font at a minimum.
- Captions for figures and tables must be numbered for easy navigation.
- The final document must be packaged into a single PDF file (see Appendix D).

The final report describing the Build and Test Challenge should serve as the primary means for a team to provide detailed information about their project to the reviewers. Teams are encouraged to describe the technology design and how the business plan supported by market research shaped the design. The final report should include the following:

- **Cover sheet**, including all involved team members, mentors, faculty, and others (e.g., sponsors and advisors), contact information, and a clear indication of each person's role. The total word count must be included on the cover page. **Only one cover sheet is required for the compiled report, which includes the Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge final reports.**
- **Executive summary** briefly describing the project. This must not exceed 2 pages (including figure captions). The Prize Administrator recommends that teams write this section after completing their reports to summarize the key aspects of their project. **Only one executive summary is required for the compiled report, which includes the Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge final reports.**
- **Report narrative** of up to 15 pages describing the Build and Test Challenge. A detailed guide for what to include in the report narrative can be found on HeroX.
- **List of references** (not included in the report narrative page limit). **Only one list of references is required for the compiled report, which includes the Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge final reports.**

At the conclusion of the competition, all team reports will be posted to the competition website.

The Build and Test Challenge final report is worth 50 points. Expert reviewers will evaluate the report against the following criteria:

Table 26. Megawatt League Scoring Rubric for the Final Build and Test Challenge Report (50 Points)

Description	Maximum Possible Points
Clear description of the scaling factors considered in designing and fabricating the model-scale device	10
Clear description of the development of an experimental test plan and how the test plan would allow for the collection of data to prove the team's stated objective	10
Demonstration that the test plan was executed successfully and description of how the instrumentation and measurement design was completed	10
Clear description of how the raw measurements, recorded during model testing, were postprocessed to generate useful data that characterizes the device performance	10
Quality summary of lessons learned during execution of the Build and Test Challenge showing what device modifications, new tests, or changes in recorded measurements the team would consider if their concept were to go through a second round of experimental testing	10
Total	50*

**5 points will be deducted for each day the report is late up to 3 days, at which point the team is no longer eligible to receive points for this submission. Formatting requirements are in place to ensure an equal amount of space for all teams to tell their stories to the reviewers. Reports not formatted to the listed requirements or that are deemed to be utilizing more than the allotted pages will be penalized at the discretion of the reviewers proportional to the infraction. Furthermore, extra pages will be ignored.*

5.3.4 Build and Test Challenge Testing Facilities

Teams can request support from the Prize Administrator to connect them with nearby facilities to test their devices if the team does not have adequate on-site testing facilities at their institution. Teams are encouraged to research the Testing Expertise and Access for Marine Energy Research (TEAMER) program, which provides various forms of support for testing and research needs. **It is recommended**

that teams investigate the TEAMER schedule and requirements immediately upon notice of selection to participate in the MECC.

Teams who receive support from the TEAMER program or other outside entities are required to describe the work that was done outside of the student team and how the team incorporated any outside work.

5.3.4.1 Physical Design Constraints Within Testing Facility

Given the wide variety of concepts expected in this competition, there are no firm restrictions on the scale of the model that a team can test in an appropriate experimental facility. Therefore, the Prize Administrator expects the model scale will be dependent on two factors: (1) the dimensions of the testing facility chosen and (2) the available budget. Teams are allowed to seek supplemental funding from additional sources outside of MECC to build a larger model or complete a greater number of experimental tests if desired; however, the Build and Test Challenge scoring rubric will focus on the quality of the model design, test plan development, instrumentation and measurement techniques, and postprocessing of measured data rather than on the size and breadth of the experiment.

5.3.4.2 Safety Specifications

The Prize Administrator requires that a safety inspection of the test article and load system by the test facility be passed before the test article can be installed and tested at the chosen experimental facility. An example format of a Safety and Technical Inspection Submission used to evaluate the test article and accompanying instrumentation is available on HeroX. The example format should be edited to suit the needs of each team and their design. Teams are not required to use the example format, but if an alternate format is used, it is the teams responsibility to ensure all of the information identified on the example form is submitted. Although the test facility will make the final and official determination about whether a test article may be tested in the experimental facility, the Prize Administrator can exclude teams from participating in this challenge if teams do not submit the signed Safety and Technical Inspection Submission with sufficient detail. The signed Safety and Technical Inspection Submission must be submitted to the Prize Administrator prior to initiating any experimental testing. The Safely and Technical Inspection Submission must be signed by either the faculty advisor or the test facility manager. Failure to submit the signed Safety and Technical Inspection Submission will disqualify the team from the Build and Test Challenge.

5.3.4.3 Marine Energy Device Challenge Testing

The marine energy device testing portion of the Build and Test Challenge consists of three distinct tasks: the performance task, durability task, and safety task. This section describes the requirement of the individual tasks in which the turbine is expected to perform and the parameters of the testing conditions.

Through testing, teams can demonstrate their marine energy device's performance through objective tasks, and the testing outcomes help determine if teams have succeeded in developing a durable, safe, high-performing machine. Performance is a strong indicator of a marine energy device's ability to compete successfully in the marketplace.

Each marine energy device, and potentially its corresponding load system, will be tested in the experimental facility chosen by each team. The challenge will include the following aspects: marine energy device performance, marine energy device durability, and marine energy device safety. While the prescribed order will be the same for each team, the exact amount of time spent on each task could vary between teams. Teams are not required to complete all tasks; however, addressing each

task would demonstrate a holistic approach to the design of a complete system. Given that each team may have different levels of access and time at testing facilities, each team is required to complete at least one task, with suggested priority given in the order of the tasks listed.

5.3.5 Build and Test Challenge Testing

5.3.5.1 Marine Energy Device Performance Task

The objective of this task is to test the marine energy device over a range of environmental conditions to develop a performance curve or matrix. Each marine energy device should be tested in various environmental conditions across the operational envelope for the given device. Each team is expected to test their device in at least six operational environmental conditions, which will be left to the team's discretion; teams should provide a description of their decision-making process for the conditions they chose in the final report.

The measured performance for each device can vary and will be decided upon by each team. For example, the team can choose to measure electrical power output, pumped water, compressed air, or simply device response (e.g., amplitude of oscillatory motion, rotations per minute), as measured performance is generally associated with improved power extraction. Each team will be responsible for selecting the sampling rate of their data acquisition systems and will need to include details on any additional filters applied between the measuring instrument and the data acquisition system to reduce noise in the final report. Teams are strongly encouraged to understand the mechanical or electrical loads at model scale in order to select appropriate instrumentation such that the expected measured values do not fall within the noise range of the instrumentation.

5.3.5.2 Marine Energy Device Durability Task

Marine energy devices are expected to perform over the long term and will be subjected to a wide variety of weather conditions. Producing power effectively and over the course of the device's lifetime are desirable design qualities. These devices must be designed to withstand extreme environmental conditions without damage to their mechanical and electrical components. To control high mechanical and electrical loads, marine energy devices must be able to limit their response and output power in these particularly high-energy sea states.

In this task, the marine energy device should be subjected to an environmental condition that corresponds to an extreme or survival situation. Teams will be responsible for describing how and justifying why these sea states were chosen in the test report. The mechanical loads and/or device response should be compared to normal operating conditions to evaluate the survivability of the marine energy device. If the marine energy device changes shape, orientation, submergence, etc., depending on the environmental conditions, the team must describe how this change is implemented but will not be required to have a model with real-time capability during testing.

5.3.5.3 Marine Energy Device Safety Task

Safety is of utmost importance to device designers and manufacturers. To be certified, marine energy devices must be able to safely shut down rapidly and with a fail-safe shutdown capability.

Marine energy devices must shut down when disconnected from the grid as well as manually upon command. Each team may choose to address these shutdown scenarios with one or two systems or mechanisms.

In this task, the marine energy device will be required to safely shut down at one time during the testing period in any environmental condition. For each marine energy device, the shutdown process will be initiated once upon command. It is important that when initiating the command, the data acquisition system remains active and can continue to monitor the shutdown response of the system.

5.4 Community Connections Challenge – Megawatt League (Required)

Marine energy workforce development requires a multidisciplinary approach, and marine energy deployments are closely tied to communities. This challenge is designed to strengthen connections between competition participants, the marine energy industry, and local communities. It encourages students to engage beyond engineering and site design, fostering creative, scalable approaches to workforce development and industry-community collaboration. All Megawatt League teams are required to participate in this challenge.

The purpose of this challenge is to:

- Introduce students to the marine energy industry through direct engagement.
- Expose students to current industry challenges that will need solutions in the coming years.
- Encourage students to consider broader issues beyond technology development.
- Develop a repeatable framework to introduce more students to marine energy career opportunities.

As part of this challenge, competitors will submit Mid-Year submissions, a final report, and a presentation at the final event.

In the Mid-Year submission, teams will provide a Team Overview and Team Roster as described in Section 5.4.1. And teams must conduct at least four interviews with marine energy professionals. These interviews should focus on understanding the current state of the industry, including key challenges and opportunities.

Interviewees for this challenge may include the same individuals as those interviewed for end-user insights; however, teams are encouraged to seek a range of perspectives to enhance the depth and breadth of their research.

Based on insights gained from these interviews, teams must propose three to five potential solutions to address challenges identified. From these proposed solutions, teams will select at least one to implement in a meaningful way, engaging with the broader marine energy community to drive awareness, discussion, or action.

The final report must include a detailed after-action analysis, describing the specific event or activity executed to address the challenge, the outcomes achieved, and key lessons learned from the process.

The team will be required to present and summarize the process and impact of their work. Specific requirements are defined in the following challenge segments, and deadlines are included in Table 5.

5.4.1 Community Connections Challenge Mid-Year Submissions: Team Overview, Interview Summary, and Outreach Strategy

The Community Connections Challenges will include two Mid-Year submissions:

- A team roster and team overview.
- An interview summary and outreach strategy.

These submissions are due February 23, 2026, 11:59 p.m. MT.

5.4.1.1 Team Roster

Teams will submit a roster on the HeroX platform in Excel format; a template is provided on HeroX. The roster should also include contact names and email addresses for students and faculty advisors from partnering institutions. **This submission is due February 23, 2026, 11:59 p.m. MT.**

5.4.1.2 Team Overview

The team overview will introduce team members and their vision for the competition and the energy community. The Prize Administrator will post the team overview on the MECC website and may edit the text for consistency between teams and to meet necessary web standards on energy.gov. Teams should plan to promote the components of the team overview through their social media channels and media connections once they are live on the MECC website. Students should include a strategy of how they will continue promotion of their work.

The Prize Administrator will provide a sample format for submission of the team overview. The Prize Administrator will send a link to sample submission by early December 2025. The submission must include:

- Team name, institution name, city, and state.
- A brief team and project overview. Consider describing your team's technology concept, history with the competition and lessons learned from previous years, vision for a reliable and secure energy future, why your team is participating in MECC, and what they're most excited for in this competition, etc. The length of the overview should be 150–250 words.
- A team photo, including the names of the team members in the order in which they appear. If students are unable to capture a team photo, the team may instead submit a photo of their prototype, team members in the field/working on their project, etc. This photo must be submitted as a separate .jpg or .png file.
- A caption and credit for the photo. The length of the caption should not exceed 125 characters (credit information is not included in limit).

To assist teams, the Prize Administrator will provide an electronic form that can be used for this submission. Teams are not required to use this form and may submit using any format of their choosing (i.e., emailing the Prize Administrator a Microsoft Word document). All submissions should address the substantive measures outlined in the template and described in this Rules document.

5.4.1.3 Interview Summary and Outreach Strategy

An interview summary will detail the progress made to date in engaging marine energy professionals and the insights gained from those interviews. The outreach strategy is an industry best practice to help keep announcements on track and serve as an activity roadmap. The report should address the following and describe the team's proposed activities throughout the year:

- An overview of the interviews completed, including who was interviewed, the sector and state/region they represent, their job title and organization, and a summary.
- Key takeaways and insights the team has gained from these interviews.

- A statement of the challenges they'd like to address and high-level goals the team aims to achieve with their outreach activities.
- Three to five proposed solutions to the challenges and how the team has identified these solutions.
- An overview of the actions the team plans to take by the end of the competition to address one of the proposed solutions.
- Any industry connections or partnerships the team has, and how the team will leverage these connections to achieve their outreach goals.
- The team's social media and communications strategy that highlights progress and milestones, including team social media accounts with hyperlinks, and relationships developed with the team's school newspaper or local media outlets.
- A timeline of events presented in chart form, including:
    - Timeline for proposed events.
    - Timeline for event development and promotion of event.
- Planned outreach announcements and social media posts.

The interview summary and outreach strategy must be no more than 3 pages and formatted according to the following requirements:

- Pages should be 8.5 inches by 11 inches, paginated, and with 1-inch margins at a minimum.
- Content should be single-spaced at a minimum.
- The body of the report must use an 11-point font at a minimum.
- Captions for figures and tables must be numbered for easy navigation.

Submissions will be evaluated on quality of the content using the following scoring criteria and not the length of the submission.

Table 27. Megawatt League Scoring Rubric for the Community Connections Challenge Mid-Year Submission (Team Roster)

Description	Maximum Possible Points
Team roster is complete and in compliance with the template provided by the Prize Administrator	2
Quality and informativeness of team overview with engaging and creative storytelling	3
Total for Community Connections Challenge Mid-Year Submission	**5***

**1 point will be deducted for each day a submission is late, up to 3 days, at which point the team is no longer eligible to receive points for this submission.*

Table 28. Megawatt League Scoring Rubric for the Community Connections Challenge Mid-Year Submission (Industry Interviews and Outreach Activities)

Description	Maximum Possible Points
Quality, depth, and specificity of the industry interviews, insights gained from interviews, and three to five proposed solutions and quality and creativity of proposed outreach activities	5

Total for Community Connections Challenge Mid-Year Submission	5*

**1 point will be deducted for each day a submission is late, up to 3 days, at which point the team is no longer eligible to receive points for this submission.*

5.4.2 Community Connections Challenge Metrics Report

Teams will submit a final metrics report on the HeroX platform detailing the metrics of their Community Connections Challenge activities throughout the year. **The report is due May 11, 2026, 11:59 p.m. MT.**

The final metrics report should be no more than 5 pages and follow these formatting requirements:

- Pages should be 8.5 inches by 11 inches, paginated, and with 1-inch margins at a minimum.
- Content should be single-spaced at a minimum.
- The body of the report must use an 11-point font at a minimum.
- Captions for figures and tables must be numbered for easy navigation.
- The final document must be packaged into a single PDF file (see Appendix D).

The final metrics report should serve as primary means for a team to provide detailed information about their activities undertaken during the challenge to the reviewers. The final report should include the following:

After-action report including an overview of actions taken to address the challenges identified since the Mid-Year submission, discussion of challenges the team faced and how these challenges were mitigated and lessons learned, a description of how these actions met the team's high-level outreach goals and impact to the marine energy community, and a reflection on the Community Connections Challenge as a whole.

Industry interview outcomes, including quantifiable numbers, for example:

- Number of industry interviews, length of interviews, and number of questions.
- Metrics on team and participant attendance at interviews.
- Contact information for each interviewee, including; name, company, origin of relationship (i.e., professional or alumni), sector in marine energy industry, and response regarding if this person would be open to continued participation in future MECC events.
- Key learnings and takeaways from the interviews, including how the information gained was applied.
- Description of how the team selected individuals to interview.

Action outcomes for activities or events, including quantifiable numbers, for example:

- Number and types of activities or events.
- Number of attendees, if applicable.
- Estimated time of engagement for each attendee.
- Summary of the activities and key takeaways.
- Types of attendees (industry, academia, community members, etc.).
- Geographic regions represented.
- Metrics on team and participant attendance at events.
- How activities were selected to accommodate target audience.

Action outcomes for communications materials, including social media, with quantifiable numbers, for example:

- Number of page clicks.
- Number of downloads.
- Estimated length of engagement per view.
- Locations of viewers.
- Locations where materials were distributed.
- Metrics on social media account growth.
- Reflection on the team's original communications plan versus results attained, lessons learned, and best practices.

Outreach strategy outcomes with quantifiable numbers, for example:

- Number of persons engaged through outreach.
- Estimated engagement time per person.
- Types of outreach.
- Reflection on outreach strategy, best practices, and lessons learned.

List of references (if applicable).

At the conclusion of the competition, all team reports will be posted to the competition website; as such, when collecting data or feedback from stakeholders, attendees, or program participants, teams should communicate how their information will be used.

The Community Connections Challenge Final Metrics Report is worth 45 points. Expert reviewers will evaluate the report against the following criteria:

Table 29. Megawatt League Scoring Rubric for the Community Connections Challenge Final Metrics Report

Description	Maximum Possible Points
After-action report: concise, readable, and descriptive with logical flow; communicates information clearly	5
Relevance and completeness of metrics: the team reported on an appropriate set of metrics relevant to their activities	10
Depth and sophistication of analysis: the team demonstrated critical thinking and contextual understanding of the reported data	15
Demonstrated impact and reflection: the team interpreted their work's effectiveness and broader outcomes	10
Use of metrics to inform future actions: the team used their metrics to make conclusions and suggest improvements.	5
Final Metrics Report*	**45***

**5 points will be deducted for each day the report is late up to 3 days, at which point the team is no longer eligible to receive points for this submission. Formatting requirements are in place to ensure an equal amount of space for all teams to tell their stories to the reviewers. Reports not formatted to the listed requirements or that are deemed to be utilizing more than the allotted pages will be penalized at the discretion of the reviewers proportional to the infraction. Furthermore, extra pages will be ignored.*

5.5 Final Event - Megawatt League

The culmination of the MECC will occur with a final event planned to take place May 18–21, 2026, in Portland, Oregon, co-located with the Ocean Renewable Energy Conference pending unforeseen changes (see Appendix E for event contingencies).

All teams are invited to attend the final event in May 2026, where they will present their work before a panel of industry experts. Presentations will be given by the student members of the team. Teams will also participate in unscored poster presentations and a 90-second quick pitch session to showcase their work to final event attendees.

Teams will make one technical presentation on the results of their Business Plan, Technical Design, and Build and Test challenges to a panel of reviewers. This public presentation is intended to enable teams to communicate the technical underpinnings, business case, and feasibility of commercialization of their system. The presentation should include specifics on the business plan and the design parameters of the team's device. Teams should be prepared to discuss the extent of their market analysis and design validation in their presentation.

The public presentation is limited to 25 minutes, which will be followed by up to 15 minutes of questions from the panel of reviewers in a private setting. It is at each team's discretion to determine how much time they allocate to each challenge during the 25-minute presentation. When pitching their marine energy project, teams should use their presentation to showcase maximum creativity and dynamism, highlighting the team strengths and unique approach in a professional manner.

5.5.1 Technical Presentation Format and Scoring

Presenters should highlight their concept prototype and may use high-quality photos, maps, charts, or other visual aids or props to enhance their presentation using slides in the 16:9 widescreen format.

The public presentation submission should be a single file (see Appendix D), which should be brought to the final event.

The Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge presentation and Q&A are worth 135 points and are weighted as indicated in the following table.

Table 30. Possible Points per Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge Portions of Presentation and Q&A

Points allocated below contribute to the total competition award.

Submission Element	Possible Points
Business Plan Portion of Presentation and Q&A	45
Technical Design Portion of Presentation and Q&A	45
Build and Test Portion of Presentation and Q&A	45

The expert reviewers will using the following criteria in determining these scores.

Table 31. Scoring Rubric for the Business Plan, Technical Design, and Build and Test Presentation* (135 Points)

Description	Total Maximum Possible Points	Maximum Points - Business Plan	Maximum Points - Technical Design	Maximum Points - Build and Test
The presentation is compelling and includes a narrative of inspiration and purpose	15	5	5	5
Demonstrates thorough market analysis and triple-bottom-line risk assessment	20	20		
Demonstrates consideration of risks, issues, and challenges along with design assumptions	20		20	
The team describes lessons learned during execution of the Build and Test Challenge and what device modifications, new tests, or changes in recorded measurements the team would consider if their concept were to go through a second round of experimental testing	20			20
The presentation is practiced and polished, the team has a professional appearance and manner, and the team clearly communicates technical topics	15	5	5	5
The team incorporates high-quality graphics, media, and props to support presentation	15	5	5	5
Accurate and thorough ability to answer reviewers' questions	15	5	5	5
Demonstration of learning through the competition requirements by the students	15	5	5	5
Total	**135**	**45**	**45**	**45**

**The final presentation must be submitted online to the Prize Administrator in advance of a team's presentation during the final event, and teams should bring a USB with the presentation as backup.*

5.5.2 Community Connections Challenge Presentation and Q&A Session

For the Community Connections Challenge presentation, teams will develop a final PowerPoint presentation to share their results on the challenge during the final event. This presentation must include:

- Details on the team, each team member's current studies, and future professional goals.
- A statement of the challenges the team has addressed, an overview of insights gained from industry interviews, a brief discussion of the three to five solutions identified to address challenges, planning and execution of the action, and an assessment of action impact.

Teams should emphasize the quality and visual appeal of each slide and the accompanying presentation by the speaker. Slides should include high-resolution photos to represent each challenge element. Teams may use videos, but this is not required. There will be no template for

these slides so teams can choose how to best convey their Community Connections Challenge experience.

Each team will have 10 minutes to present to a panel of reviewers and to the public during the final MECC event. This will be followed by 10 minutes of questions from the reviewers. Teams will be scored on the professional and clear structure of the presentation, use of effective storytelling techniques and visual elements, and their completion of each of the required submissions, as described in the following table.

Table 32. Scoring Rubric for the Community Connections Challenge

Description	Maximum Possible Points
Final Presentation*	**45**
PowerPoint is concise and visually engaging, and presentation to reviewers is professional and clear, uses effective storytelling techniques	10
Demonstrated execution and measurements of impact to a wide variety of stakeholders	15
Demonstrated development of best practices and lessons learned through insights gained	10
Successful completion and integration of contest elements through proven alignment with your chosen strategy and associated actions/activities	10

**The final presentation must be submitted online to the Prize Administrator in advance of a team's presentation during the final event, and teams should bring a USB with the presentation as a backup.*

5.5.3 Final Event Poster (Unscored)

One poster summarizing the team's efforts in the Business Plan Challenge, Technical Design Challenge, and Build and Test Challenge is required for each Megawatt League team. The poster does not need to include a summary of the Community Connections Challenge. Teams will bring their poster to the final event. Attendees at the final event will vote for the best poster through an online survey tool. The team with the most votes will win a trophy for "Best Poster."

Poster dimensions should be 36 inches by 48 inches.

5.5.4 Final Event Quick Pitch (Unscored)

Teams will give a Quick Pitch presentation to the attendees of the final event during one of the conference sessions. Teams will have up to 90 seconds and may show one slide during their elevator-pitch-style presentation. The pitch should describe the team's concept and feasibility.

Attendees at the final event will vote on the winning Quick Pitch through an online survey tool. The team with the most votes will win a trophy for "Best Quick Pitch."

Key Terms

Term	Definition
Commercialization Plan	Process of bringing your product or service to the market. Typically involves production, distribution, marketing, sales, customer support and other key functions critical to achieving commercial success.
Competition	The competition is all aspects and activities leading up to and through the final event. It is collectively referred to for a given year as the U.S. Department of Energy Marine Energy Collegiate Competition: Powering the Blue Economy™.
End Users	The individuals or organization who will ultimately be using your product or service. These are the people your products or services are designed for.
Final Event	The final event is when and where the teams compete in the challenges.
Marine Energy	The term "marine energy" means energy from: (A) waves, tides, and currents in oceans, estuaries, and tidal areas (B) free-flowing water in rivers, lakes, streams, and man-made channels (C) differentials in salinity and pressure gradients (D) differentials in water temperature, including ocean thermal energy conversion.[9]
Stakeholder	A person, group, or organization with a vested interest, or stake, in the decision-making and activities of a business, organization, or project. This can include customers, employees, suppliers, regulators, competitors, communities, and the environment.
Submissions	Submissions are what the team builds, writes, submits, and brings to compete in the final event. These include Mid-Year submissions, final reports, public-facing presentations, and a poster.
Team Booth	Each team is provided an assigned area during the final event, known as a team booth, to use as a central location to practice their presentation, regroup, and showcase their hard work throughout the year to the public. There will be electrical outlets available in the team booth area to allow students to access computers and other equipment that the teams deem necessary.

[9] (Pub. L. 110–140, title VI, §632, as added Pub. L. 116–260, div. Z, title III, §3001(a), Dec. 27, 2020, 134 Stat. 2479.)

Appendix A: Additional Terms and Conditions

COMPETITORS THAT DO NOT COMPLY WITH THE ADDITIONAL REQUIREMENTS IN APPENDIX 1 MAY BE DISQUALIFIED.

Your submission for the Marine Energy Collegiate Competition is subject to the following terms and conditions:

- You must post the final content of your submission or upload the submission form online by the deadlines provided in this rules document and listed on the HeroX website. Late submissions or any other form of submission may be rejected.
- 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 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, the applicant will be required to sign the following statement:

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

A.1 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.

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

A.2 Treatment of Submission Materials

The elements of the submission that are designated public will become publicly available as part of this prize. Therefore, these elements must not include trade secrets or business-sensitive, proprietary, or otherwise confidential information.

If it is necessary to share trade secrets or business-sensitive, proprietary, or otherwise confidential information, it should only be done in an element that is NOT designated as public. Any 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 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.

DOE, the Prize Administrator, and any other third-party supporting DOE in the contest assume no liability for the public disclosure of any information in the elements designated public and for any unmarked information any element NOT designated as public.

Furthermore, by making a submission and consenting to the rules of the prize the 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 elements of the submission that are designated as public and any unmarked information in the elements of the submission that are NOT designated as public for government purposes, including posting or linking elements on websites or publicizing the submissions and competitors in the media and other announcements. The competitor is granting to DOE, the Prize Administrator, and other third parties a limited license to use or disclose any properly marked information for evaluation purposes only.

A.3 Representation and Warranties

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 or disclosed by the competitor in the submission, and (ii) the competitor acquired the necessary rights to use and to authorize others, including DOE, to use the submission, as specified throughout the rules.
2. To the best of the competitor's knowledge, the use of the submission in the prize, including any use by DOE or the Prize Administrator 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.
4. The submission is free of malware.

A.4 Use of Artificial Intelligence in Competition Deliverables

The following are requirements regarding the use of artificial intelligence in competition deliverables:

- Teams must indicate if generative artificial intelligence (AI) was used in any part of their deliverables, including which tool and prompts.
- Teams are not allowed to use verbatim text from a generative AI chatbot as part of their competition deliverables. Chatbots may reuse text from other sources, causing inadvertent plagiarism.
- All human authors of a deliverable are responsible for all of its content. ChatGPT and similar tools cannot be held accountable.

- Citations recommended by any generative AI chatbot must be verified with the original literature because chatbots are known to generate citations that are inaccurate and/or don't exist.
- AI-generated images and/or multimedia used in competition deliverables will not be accepted.
- The organizers may decline to move a deliverable forward in the competition if AI is used inappropriately according to the requirements outlined above.
- Teams should adhere to their school's AI policies.

A.5 Challenge Subject to Applicable Law

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

A.6 Resolution of Disputes

The U.S. Department of Energy is solely responsible for administrative decisions, which are final and binding in all matters related to the challenge.

Neither the U.S. Department of Energy nor the Prize Administrator will arbitrate, intervene, advise on, or resolve any matters between team members or among competitors.

A.7 Publicity

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

Except where prohibited, participation in the challenge constitutes each of the winning competitor's (including all persons appearing in the winning submissions) winner's consent to DOE's and its agents' use of each winning competitor's name, likeness, photograph, voice, opinions, and/or hometown and state information for promotional purposes through any form of media worldwide, without further permission, payment, or consideration.

A.8 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). It is the responsibility of the competitors to assess the risks associated with their proposed activities and adequately insure themselves against possible losses.

A.9 Records Retention and Freedom of Information Act

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

Submissions containing confidential, proprietary, or privileged information must be marked as described below. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under the Freedom of Information Act or otherwise. The U.S. Government is not liable for the disclosure or use of unmarked information and may use or disclose such information for any purpose.

The submission must be marked as follows and identify the specific pages containing trade secrets, confidential, proprietary, or privileged information: "Notice of Restriction on Disclosure and Use of Data: Pages [list applicable pages] of this document may contain trade secrets, confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes. [End of Notice]"

The header and footer of every page that contains confidential, proprietary, or privileged information must be marked as follows: "Contains Trade Secrets, Confidential, Proprietary, or Privileged Information Exempt from Public Disclosure." In addition, each line or paragraph containing proprietary, privileged, or trade secret information must be clearly marked with double brackets.

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

A.10 Privacy

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

A.11 General Conditions

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

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

All applications submitted to DOE are subject to a due diligence review.

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

A.12 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 challenge 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 heterogeneity 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 variety when compared to the existing DOE project portfolio and other competitors.
- The level of industry involvement and demonstrated ability to accelerate commercialization and overcome key market barriers.
- The degree to which the submission is likely to lead to increased employment and manufacturing in the United States or provide other economic benefit 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 for the demonstration of technologies and research applications to facilitate technology transfer.

A.13 National Environmental Policy Act (NEPA) Compliance

DOE's administration of this prize may be subject to NEPA (42 USC 4321, et seq.). NEPA requires Federal agencies to consider the environmental effects of certain proposed actions as part of an agency's decision-making processes. NEPA does not apply to a proposed action is not a "major Federal action," which includes an action with no or minimal Federal involvement where a Federal agency cannot control the outcome of the project (42 U.S.C. § 4336e(10)(B)(i)). In such circumstances, there is no legal requirement nor any practical reason for DOE to conduct a NEPA analysis because DOE could not influence the outcome of its action to address the environmental effects of the proposal.

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

A.14 Definitions

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

A.15 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 CHALLENGE.

Appendix B. Roles and Responsibilities

Table B-1 shows the competition roles, who is performing in each role, and what the role entails.

Table B-1. Roles and Responsibilities

Role	Individual(s) Assigned	Responsibilities
Collegiate Team	Multiple	Team carries out work on the project within the rules and requirements of the competition, based on direction and advice from their fellow team members, Student Leader(s), and Faculty Advisor(s).
Collegiate Team Student Leader(s)	Minimum of one and maximum of two per team	The student leader(s) attends informational sessions with the Faculty Advisor, represents the team when communicating with the Prize Administrator and other teams, and disseminates information received from the Prize Administrator over the course of the entire project, including monitoring communications. A minimum of one and maximum of two student leaders per team is allowed, but at least one must be an undergraduate. These names shall be reported to the Prize Administrator prior to the Team Student Leader kickoff meeting expected to occur in September 2025.
Collegiate Team Faculty Advisor(s)	Minimum of one per team	The Faculty Advisor serves as the lead faculty member and primary representative of a participating institution in the competition. This person also engages with the Prize Administrator and provides guidance to the team throughout the project and ensures that the Student Leader(s) disseminates information received from the Prize Administrator. The Faculty Advisor advises, provides input to, and coaches the students on the skills necessary to compete in the various aspects of the competition. Some teams may specify multiple Faculty Advisors who contribute to the team. The name(s) shall be reported to the Prize Administrator prior to the Faculty Advisor kickoff meeting expected to occur in September 2025.
Collegiate Team Co-Advisors(s) or Supporting Faculty	Multiple	Supports the Faculty Advisor and Student Leader(s) in the above duties but typically does not directly engage with the Prize Administrator.

Prize Administrator		The Prize Administrator leads correspondence with the collegiate teams regarding contracts, challenge questions, and team expectations. During the competition, the Prize Administrator is the primary point of contact for questions related to engagement with the reviewers, logistics, and protocol. Tasks include developing team schedules, coordinating/collating scores and team feedback from the challenges in time for the awards ceremony, and supporting the collegiate teams, reviewers.
Challenge Reviewers	To be announced prior to the final event	The Challenge Reviewers conduct and evaluate each individual challenge.
Competition Judge	Director, WPTO	The director of WPTO is the judge of the competition and will make all final determinations.
Industry Mentor	One mentor will be assigned to each team	These hand-selected industry mentors will play a critical role throughout the competition, providing teams with real-world experience, technical insight, and other important support.

Appendix C. Safety and Conduct

C.1 Safety

The competition is a forum for students with an interest in marine energy to showcase innovative ideas and further develop their knowledge. The event is designed to be safe, fair, and competitive as well as a fun learning experience and a professional growth opportunity. Each team is responsible for the safety of its operations in accordance with the subcontract agreement. Participants are expected to conduct themselves in the spirit of the competition by being team players both within their own teams and among competitor teams.

C.2 Conduct

While teams work on their submissions, faculty advisors, faculty co-advisors, graduate student advisors, and members of industry secured by each team for support can provide feedback about the team's design so the students can identify fatal flaws, prove technical rigor, or demonstrate feasibility of their concept. Only student team members may take an active role in any competition event. It is the role of the non-student team members to provide a supportive environment and the educational background necessary for the students to achieve success in the competition.

In addition, teams are encouraged to bring to the Prize Administrator's attention rules that are potentially unclear or in potential need of improvement. The Prize Administrator will seriously consider suggestions that are feasible, within their constraints, and are intended to improve the competition, its rules, fairness, measurable outcomes, or precision.

Appendix D. Communications and Challenge Details

D.1 External Communications

The MECC website will showcase the various elements of the competition, ongoing collegiate team engagement, and information about how to participate in future competitions. The website will also feature important documents, such as this manual and the MECC application template.

D.2 Internal Communications

It is each team's responsibility to stay abreast of the latest competition communications from the Prize Administrator. Communication between the teams and the Prize Administrator occurs via one or more of the following:

- HeroX Forum: Official communications suitable for viewing by all team members and the Prize Administrator will be posted on the competition's HeroX Forum.
- HeroX Resources: All MECC resources, templates, and meeting recordings will be uploaded to the HeroX Resources page.
- Virtual meetings: Teams are strongly encouraged to participate in scheduled virtual meetings with the Prize Administrator. Invitations and instructions for participation in these meetings are provided by the Competition Operations Manager(s) via email and the HeroX Forum.
- Meetings during the final event: An opening ceremony will be held during the final event week.
- Email: The official email address for the competition is Water.Competition@nrel.gov. Questions should be sent directly to this email address, and answers that may be of interest to all teams will be posted on the competition's HeroX Forum. For expediency and to protect confidentiality, the Prize Administrator may choose to communicate with teams via team members' email addresses as listed in the HeroX database; however, most official communications occur via the HeroX Forum.

D.3 Branding

Teams are encouraged to develop an online presence and branding platform for their team to showcase their work throughout the year, and this platform should be shared as part of the Community Connections Challenge portion of the competition.

This platform may include webpages, social media, outreach material, and team T-shirts. Regular updates and engagement with the team's school and external media are recommended, and efforts will be shared by NREL and the U.S. Department of Energy (DOE) channels as allowed. In addition, teams will be asked to report on these efforts through the scored Community Connections Challenge component. Teams must receive permission to use the competition logo or name as part of individual school/team branding and platform; requests should be sent to Water.Competition@nrel.gov.

Teams are expected to set up a professional space in their team booths to highlight the team's branding. This can include the concept design, posters, team logo, and school information. The team booths are the teams' chance to showcase all the work they have put into their project over the course of the year and are the best way to communicate their efforts to the industry.

D.4 Reviewing and Scoring

A panel of reviewers is responsible for scoring team performance in each challenge and for each submission. The reviewers will have expertise related to the content they are responsible for evaluating. The panel will include varied backgrounds that allow the reviewers to evaluate performance from a variety of angles.

The Prize Administrator will ensure that, to the extent possible, Reviewers will not:

- Have personal or financial interests in, or be an employee, officer, director, or agent of any entity that is a registered participant in the competition.
- Have a familial or financial relationship with an individual who is a registered participant.
- Provide advice to teams, although they can provide clarification on the reviewing process.
- Discuss team performance with other teams or their advisors.

Names of the selected reviewers will be announced prior to the Final Event. Reviewers for Mid-Year submissions may be different than those providing reviews at the final event. The director of WPTO is the Judge of the competition and will make the final determination.

D.5 Team Feedback

In an effort to provide as much feedback as possible, teams will receive their scores following completion of the competition. Teams will also receive a short narrative derived from the reviewers' deliberations after each team's presentation.

D.6 Submissions and Submission Locations

Go to HeroX and follow the instructions for registering and submitting all required materials before the deadline in Table 5 and as displayed on the HeroX website.

The HeroX platform provides a space where parties interested in collaboration can post information about themselves and learn about others who are also interested in competing. Teams can submit early copies and updated revisions until the deadline. If a team wants to submit after a deadline, you must contact the Prize Administrator and points will be deducted according to what is identified in the evaluation criteria.

D.7 Submission Requirements

PDF Requirements

Submitted PDFs must meet the following criteria:

- Have embedded fonts.
- Have all images be a minimum resolution of 300 dpi.
- Creating a PDF:
    - From scans or by outputting the content into a raster image format (e.g., .jpg, .tiff, .png, or .gif) is not acceptable.
    - That is an all-raster PDF should be avoided because, despite being large files at 300 dpi, they are of unacceptable quality at lower resolutions and are not scalable without degradation.

Audiovisual Presentation Requirements

Audiovisual presentation format requires that:

- Videos, if used, are in a .MOV or H.264 compressed .MP4 (MPEG-4) file type with a resolution of 720 × 480.
- Presentations should be in a 16:9 aspect ratio.
- No background music that violates U.S. copyright laws is included; all incorporated music must be an original or royalty-free composition and proof of licensing must be submitted with the final file and transcript.

Electronic File-Naming Instructions

The required file-naming convention for all electronic files is:

[TEAM ABBREVIATION] _[SUBMISSION]_[SUBMISSION DATE (YYYY-MM-DD)].[EXTENSION]

For example, a report submitted by California Maritime Academy on April 24, 2024, would have the following file name: MARITIME_Report_202-04-23.PDF

Appendix E. Alternative Competition Structure

If the in-person MECC final event cannot be held due to the cancellation of the co-located industry event or other unforeseen circumstances, this document will be updated to reflect changes resulting in the cancellation. All of the required submissions will remain unchanged, but the event and submissions schedule may be updated. Should there be extenuating circumstances for some but not all teams, a hybrid solution combining a standard in-person event and virtual participation will be developed and further communicated to the teams with as much advanced notice as feasible.

The primary goal of the competition is to maximize learning, and the Prize Administrator will work with each team to determine what is possible.

The following best practices are highly recommended for remote participation in any event.

E.1 Prior to the Final Event

Prior to the final event, a team should:

- **Know the competition schedule**. Teams are responsible for keeping track of the final event schedule and confirming their meeting point of contact.
- **Test their technology**. Teams should explore the virtual meeting platform and test their audio and video capabilities. The Prize Administrator has built in transition time, but it is limited.
- **Check their Internet connection**. Teams are encouraged to use a hard-wired internet connection (i.e., ethernet cord). Wi-Fi connections can be used but are not ideal because they are prone to more connection issues.

E.2 Day of the Final Event

On the day of the final event, a team should:

- **Note their audio settings**. Teams are responsible for muting their audio connection (phone or computer) when they are not intending to speak. The Prize Administrator will mute participants with excessive background noise. Ensure team members are only using one audio connection, connecting to audio via their phone or computer but not both. Connecting with two audio connections results in electrical feedback that is very uncomfortable for all involved.
- **Verify their video preferences**. Teams are encouraged (but not required) to use their webcam when presenting. Audio narration of slides is also acceptable. Ensure team members have a clean background while streaming their video (e.g., no inappropriate or offensive images in the background or people walking around) and avoid window backdrops because of lighting.
- **Be prepared**. Teams should look professional in their dress and speak professionally during their presentation. Refrain from distracting behavior while sharing their video and/or audio, such as drinking or eating.

Appendix F. Marine Energy Resource Library

Students can refer to some of the following resources to better understand marine energy, desalination technologies, and additional information about the Marine Energy Collegiate Competition or U.S. Department of Energy (DOE) Water Power Technologies Office (WPTO) within the Office of Energy Efficiency and Renewable Energy (EERE).

F.1 High-Level Overviews and Supporting Materials

For general informational and educational materials on marine energy, explore:

- DOE's Energy 101: Marine and Hydrokinetic Energy video for a broad introduction to marine energy.
- Student Energy's Tidal power 101 video for an introduction to tidal power.
- DOE's Powering the Blue Economy™ Appendix, developed as part of the recently published Powering the Blue Economy Report, this appendix provides an overview of marine energy technology types, resource potential, energy costs, laboratories, testing facilities, industry standards, and more.
- DOE's Marine and hydrokinetic energy device types glossary of the some of the known device types for wave, current, tidal, and ocean thermal energy converters.
- NREL publication on Marine Hydrokinetic Energy Site Identification and Ranking Methodology Part I: Wave Energy.
- NREL publication on Marine Hydrokinetic Energy Site Identification and Ranking Methodology Part 2: Tidal Energy.
- NREL tool Marine Energy Atlas.
- NREL publication on Marine Hydrokinetic Resource Assessment for Domestic Army, Air Force, and Coast Guard Facilities.
- The European Marine Energy Center Ltd's List of Worldwide Wave Developers.
- The European Marine Energy Center Ltd's List of Worldwide Tidal Developers.
- Ocean Energy Systems Annual Report 2018.
- NPS Physics video on Fundamentals of Wave Energy Lecture 1.
- NPS Physics video on Fundamentals of Wave Energy Lecture 2.

F.2 Desalination

For informational and educational materials on desalination, explore:

- Powering the Blue Economy—Chapter 7: Desalination.
- Numerical Modeling and Dynamic Analysis of a Wave-Powered Reverse-Osmosis System.
- The cost of water from an autonomous wave-powered desalination plant.

F.3 Technical Deep Dives

For technical materials, explore:

- DOE publication on marine energy online resources, including quick links for information on marine and hydrokinetic energy, a central data repository, interactive mapping tools, and an environmental data site.

- DOE documentation on levelized cost of electricity guidance and supporting information.
- Ocean Energy Systems news article on "International Levelized Cost of Energy for Ocean Energy Technologies" from May 29, 2015.
- Sandia National Laboratories Reference Model Project funded by DOE, a partnered effort to develop open-source marine and hydrokinetic energy point designs as reference models to benchmark technology performance and costs and an open-source methodology for design and analysis of technologies, including models for estimating capital costs, operational costs, and levelized cost of energy. This project contains detailed reports for six types of marine energy devices.
- A publication on the capture-width ratio of wave energy converters.
- A publication on a selection of wave energy converters.

F.4 Literature for Further Reading

For more extensive education, participants can read the following books:

- *Fundamentals of Ocean Renewable Energy*, which presents the basic concepts of mechanics and introduces the various technical aspects of marine energy.
- *Handbook of Ocean Wave Energy*, which offers state-of-art research and applications in the two related and interdependent areas of ocean engineering and oceanography.
- *Ocean Wave Energy*, which gives a comprehensive description of marine energy conversion devices.
- *Ocean Waves and Oscillating Systems*, which examines the interaction between ocean waves and oscillating systems.
- *Market Study on Ocean Energy*, which estimates the financial needs of the ocean energy sector in the European Union, identifies and analyzes potential financing gaps and possible financing solutions and analyzes recommendations of the ocean energy roadmap in that context.

F.5 Additional Links

The following are additional resources that may prove useful:

- DOE WPTO website.
- DOE WPTO Project Map, which lists all projects funded by WPTO and high-level descriptions.
- Funding opportunities and where you can get DOE news:
    - EERE Funding Opportunity Exchange
    - Small Business Innovation Research/Small Business Technology Transfer solicitations
    - Advanced Research Projects Agency–Energy funding opportunity announcements.
- WPTO's newsletters, which provide updates and notices for funding opportunities, program activities, events, and publications.
- WPTO Semiannual Stakeholder Webinars are organized by WPTO staff to provide information on WPTO's hydropower and marine energy programs along with ways to partner and get involved in new initiatives.
- PacWave Test Site, which describes the first grid-connected, full-scale test facility for wave energy conversion technologies.
- WPTO's standards site.

F.6 Build and Test Challenge Resources

Resources documenting past marine energy testing projects may be helpful for teams to review when designing their experimental testing campaign:

- Telesto Marine Energy Development Pathway.

F.7 Community Connections Challenge Resources

Students should research the current state of these topics in the industry before meeting with industry professionals. Resources include but are not limited to:

- Marine Energy Science, Technology, Engineering, and Mathematics Portal
- NREL Marine Energy Program News
- U.S. Department of Energy Water Power Technologies Office Marine Energy Program

AMERICAN MADE
U.S. DEPARTMENT OF ENERGY

Marine Energy Collegiate Competition (MECC)

OFFICIAL RULES

DECEMBER 2025