

PRIME Prize: Promoting Registration of Inverters and Modules with Ecolabel

OCTOBER 2024

Preface

The U.S. Department of Energy's Promoting Registration of Inverters and Modules with Ecolabel (PRIME) Prize will be governed by 15 U.S.C. §3719 and this Official Rules document. This is not a procurement under the Federal Acquisitions Regulations and will not result in a grant or cooperative agreement under 2 CFR 200. The Prize Administrator reserves the right to modify this Official Rules document if necessary and will publicly post any such notifications as well as notify registered prize participants.

The following table describes changes that may be implemented on this rules document.

Date	Modification

Contents

Preface	
1 Executive Summary	5
1.1 Prizes	5
1.2 Key Dates	5
1.3 Eligibility and Competitors	6
2 Background	8
2.1 Prize Background	8
2.2 Prize Phases	11
2.3 Prize Program Goal Requirements	11
2.4 Additional Requirements	12
3 Phase 1: Apply	13
3.1 Goal	
3.2 Prizes	13
3.3 How To Enter	
3.4 Important Dates	
3.5 Process Overview	
3.6 What To Submit	
3.6.1 Competitor Information	
3.7 How We Determine and Award Winners	
3.7.1 Announcement	
3.8 Additional Terms and Conditions	
4 Phase 2: Certify	
4.1 Goal	
4.2 Prizes	
4.3 How To Enter	
4.4 Important Dates	
4.5 Process Overview	
4.6 What To Submit	
4.6.1 Competitor Information	
4.7 How We Determine and Award Winners	
4.7.1 Announcement	
4.8 Additional Terms and Conditions	
Appendix 1: Additional Terms and Conditions	
A.1 Requirements	
A.2 Verification for Payments	
A.3 Teams and Single-Entity Awards	
A.4 Treatment of Submission Materials	
A.5 Representation and Warranties	
A.6 Contest Subject to Applicable Law	
A.7 Resolution of Disputes	
A.8 Publicity	
A.9 Liability	
A.10 Records Retention and Freedom of Information Act	
A.11 Privacy	
A.12 General Conditions	
A.13 Program Policy Factors	
A.14 National Environmental Policy Act Compliance	21

A.15 Definitions	22
A.16 Return of Funds	22

1 Executive Summary

The U.S. Department of Energy (DOE) Solar Energy Technologies Office (SETO) is launching the American-Made Promoting Registration of Inverters and Modules with Ecolabel (PRIME) Prize. This prize aims to incentivize the registration of solar photovoltaic (PV) module and inverter products through the Global Electronics Council's (GEC's) Electronic Product Environmental Assessment Tool (EPEAT)¹ ecolabel for sustainable electronic technology products. With a greater number of products listed in the EPEAT ecolabel's online registry, the federal government will be better equipped to meet procurement requirements for the adoption of solar energy in construction and power purchase agreements to meet sustainability goals. In addition, a greater number of products in the EPEAT Registry will indicate to the market at large that the positive product life cycle and impact attributes contained in EPEAT criteria should be seriously considered when purchasing PV modules and inverters.

The PRIME Prize consists of two phases. In Phase 1 ("Apply"), manufacturers will demonstrate their intent to register up to four eligible PV module or inverter products through EPEAT and will provide proof of participation from GEC. Phase 1 will last 6 months from the launch of the prize. In Phase 2 ("Certify"), manufacturers will validate that their products meet all required EPEAT criteria and will submit proof of EPEAT product registration from GEC. Phase 2 will last 2 years from the completion of Phase 1, and submissions will be accepted on a 3-month rolling basis beginning 1 year after the completion of Phase 1.

Applicants to the PRIME Prize must be U.S.-based manufacturing organizations of solar PV modules or inverters. Additionally, applicants must not have any PV module or inverter products registered with EPEAT at the time of submission.

1.1 Prizes

The PRIME Prize offers a total prize pool of \$2,700,000 in cash across the two phases.

In Phase 1, manufacturers who submit a letter of intent to register up to four eligible PV module or inverter products with EPEAT and provide proof of participation from GEC will win \$50,000 in cash.

In Phase 2, winning manufacturers from Phase 1 will validate that their products meet all required EPEAT criteria and will submit proof of EPEAT product registration from GEC. At the end of Phase 2, manufacturers will win \$100,000 in cash for each of the products identified in their Phase 1 submission that achieve an EPEAT Registry listing, up to \$400,000 in cash total.

1.2 Key Dates

Dates below are anticipated and subject to change. Please check <u>HeroX</u> for the most up-to-date information on specific deadlines.

- Phase 1 Submission Opens: Tuesday, October 15, 2024
- Phase 1 Submission Closes: April 17, 2025
- Phase 1 Winner Announcement: April/May 2025
- Phase 2a Submission Period: May 2026

¹ EPEAT is a registered word mark owned by the Green Electronics Council (doing business as the Global Electronics Council).

- Phase 2a Winner Announcement: June 2026
- Phase 2b Submission Period: August 2026
- Phase 2b Winner Announcement: September 2026
- Phase 2c Submission Period: November 2026
- Phase 2c Winner Announcement: December 2026
- Phase 2d Submission Period: February 2027
- Phase 2d Winner Announcement: March 2027.

1.3 Eligibility and Competitors

All-Phase Eligibility

The competition is open only to for-profit business entities, such as corporations or other organizations that are formed in and maintain a place of business in the United States, subject to the following requirements:

- Competing entities must be U.S.-based manufacturers of solar PV module and/or solar PV inverter products that are eligible for listing on the EPEAT Registry, as defined in NSF/ANSI 457-2019, "Sustainability Leadership Standard for Photovoltaic Modules and Photovoltaic Inverters," Section 1.2.
- Competing entities must not have any products listed on the <u>EPEAT Registry of Photovoltaic</u> <u>Modules and Inverters</u> as of the close of Phase 1 submissions designated in HeroX.
- Products submitted by competing entities are subject to the following eligibility requirements:
 - A "product" is defined for the purposes of this prize as a discrete offered model or family of models sharing a set of identifying characteristics, including but not limited to production identification numbers and data sheets. Final determination of product eligibility for this prize is left to the discretion of the Prize Administrator (see Section 3.7).
 - Products must complete final assembly in the United States. For module products, this means all operations involved in the transformation of individual solar cells and all other module components into a fully functional encapsulated module, including deposition of electrically active PV absorber material. For inverter products, this means that the product's last substantial transformation must take place in the United States, including population of the printed circuit board or fabrication of the inverter housing. "Screwdriver" assembly of foreign components or firmware loading, programming, or flashing do not qualify.
 - Products must be available for sale in the United States as of the submission date for Phase 2 designated in HeroX, including maintaining all required safety certifications for the United States market.
- Private entities must be incorporated in and maintain a primary place of business in the United States.
- DOE employees, employees of sponsoring organizations, members of their immediate families (e.g., spouses, children, siblings, or parents), and persons living in the same household as such persons, whether or not related, are not eligible to participate in the prize.
- Individuals who worked at DOE (federal employees or support service contractors) within 6 months prior to the submission deadline of any contest are not eligible to participate in any prize contests in this program.
- Federal entities and federal employees are not eligible to participate in any portion of the prize.
- DOE national laboratory employees cannot compete in the prize.

- Entities and individuals publicly banned from doing business with the U.S. government, such as entities and individuals debarred, suspended, or otherwise excluded from or ineligible for participating in federal programs, are not eligible to compete.
- Individuals participating in a foreign government talent recruitment program² sponsored by a country of risk³ and teams that include such individuals are not eligible to compete.
- Entities owned by, controlled by, or subject to the jurisdiction or direction of a government of a country of risk 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.

Phase 2 Eligibility

- Only winners of Phase 1 are eligible to compete in Phase 2.
- Competitors must be a for-profit business entity, such as a corporation or other organization that is formed in and maintains a primary place of business in the United States. A for-profit business entity is eligible to compete only if it includes a winner of Phase 1 as an employee or owner. Individuals or groups of individuals are not eligible to compete.
- Only products submitted and awarded during Phase 1 are eligible for submission and award in Phase 2.

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

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

2 Background

2.1 Prize Background

Although the proliferation of domestic manufacturing and deployment has increased the percentage that solar PV technology contributes to U.S. energy production, the PV industry must not lose sight of the potential environmental impacts of PV modules and inverters. PV manufacturing's contributions to materials extraction, waste, energy use, negative effects on human health, and pollution, including embodied carbon, are less than those of the extraction and refining of fossil fuels, but it is still important to understand and reduce these impacts wherever possible. In addition, consideration must be given to the end-of-life management of PV systems. Although few PV systems are entering the waste stream right now, more systems will come to the end of their life in the next few decades. A proactive approach to addressing the recycling and disposal of these systems will lessen future impacts on the waste stream.

One tactic to address the environmental impacts and end-of-life management of PV products is the application of ecolabels. Ecolabels are marks placed on product packaging or in e-catalogs that can help consumers and institutional purchasers quickly and easily identify which products meet specific environmental performance criteria and are therefore "environmentally preferable." Ecolabels can be owned or managed by government agencies, nonprofit environmental advocacy organizations, or private sector entities. The U.S. government is a major institutional purchaser of many product categories, and the U.S. Environmental Protection Agency (EPA) maintains a database of recommended specifications, standards, and ecolabels to help federal purchasers identify and procure environmentally preferable products and services. Per Federal Acquisition Regulation 23.108, federal purchasers shall purchase "to the maximum extent practicable products and services that meet EPA purchasing program requirements," including EPA's recommended specifications, standards, and ecolabels. For three relevant product categories (Photovoltaic Modules and Inverters, Energy Savings Performance Contracts, and Power Purchase Agreements), EPA currently only lists one applicable specification, standard, and/or ecolabel: EPEAT.

EPEAT is an ecolabel for sustainable electronic technology products that is operated and maintained by the GEC. Besides PV modules and inverters, other product categories eligible for EPEAT registration include computers and displays, imaging equipment, servers, televisions, network equipment, and mobile phones. EPEAT criteria identify leadership for multiple sustainability issues across the product life cycle for each product category, including climate change, sustainable use of resources, chemicals of concern, and supply chain due diligence. EPEAT criteria are developed using a voluntary consensus process with a cross section of diverse stakeholders, including industry representatives, and are reviewed every 3 years to ensure they still represent leadership levels of performance.

EPEAT uses Bronze, Silver, and Gold tiers to recognize a product's performance against EPEAT criteria. The criteria are identified as either required or optional. Required criteria represent baseline leadership in sustainability performance and must be met for a product to become EPEAT-registered (identified as Bronze tier). Optional criteria represent further achievements in sustainability

⁴ U.S. Environmental Protection Agency. 2023. "Introduction to Ecolabels and Standards for Greener Products." Last updated August 23, 2023. https://www.epa.gov/greenerproducts/introduction-ecolabels-and-standards-greener-products.

performance and highlight a company's commitment and innovation in these areas. Depending on the number of optional criteria met, a product may achieve the EPEAT silver or gold tier.

Products that meet EPEAT criteria are identified on the public-facing <u>EPEAT Registry</u> website. Before becoming EPEAT-registered, an independent third-party organization known as a Conformity Assurance Body (CAB) must verify the product's conformance with EPEAT criteria. All CABs must be audited and approved by GEC. GEC confirms ongoing manufacturer conformance with EPEAT criteria through an ongoing surveillance process called continuous monitoring, which is implemented by GEC-approved CABs.



Figure 1. Overview of EPEAT process (provided courtesy of Global Electronics Council).

Since 2020, GEC has offered EPEAT registration of PV module and inverter products according to the criteria set forth in NSF/ANSI 457 - 2019, "Sustainability Leadership Standard for Photovoltaic Modules and Photovoltaic Inverters." In 2023, GEC added EPEAT – ULCS – 2023, "Criteria for the Assessment of Ultra-Low Carbon Solar Modules," to the requirements for PV modules. Together, these documents provide a range of sustainability criteria across the life cycle of these products, including:

- Management of hazardous substances
- Elimination of substances of concern
- Recycled content
- Life cycle assessment
- Energy use and related management systems
- Water use and wastewater discharges
- End-of-life management and design for recycling
- Product packaging
- Corporate responsibility to include environmental health and safety (EHS) management systems, social performance, and conflict minerals
- Corporate EHS reporting
- Embodied carbon (PV modules only)
- Labor standards, including consideration of forced labor.

GEC maintains a <u>Verification Overview</u> for manufacturers interested in registering their module or inverter products with EPEAT.

EPEAT Verification for Solar Category



- · For the EPEAT Solar Category, GEC-Approved CABs assess conformance to both NSF 457 Criteria and EPEAT Ultra-Low Carbon Solar Criteria.
- For Low Carbon Solar (criterion 4.1) and Ultra-Low Carbon Solar (criterion 4.2), additional layers of verification
 must be performed by different Verification
 Entities (i.e., organizations that are not GEC-Approved CABs).

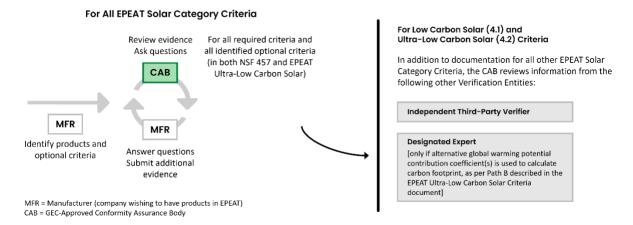


Figure 2. Overview of EPEAT Verification for the Solar Category (provided courtesy of Global Electronics Council).

As of the launch of this prize, only four products have achieved any level of listing for purchase and/or use in the United States according to the EPEAT Registry.⁵ All four of those products are PV modules; no inverter products have been registered. SETO conducted informal interviews with module and inverter manufacturers to understand their interest in registering products with EPEAT. Manufacturers cited various barriers to their ability to do so, including a focus on other aspects of business, including establishing domestic manufacturing; the high bar for meeting EPEAT criteria, even at the Bronze tier; and high competition in customer priorities for product designations, including Buy American Act and Trade Agreements Act requirements, Uyghur Forced Labor Prevention Act requirements, and the general matching of product fit to customer needs. The limited number of registered products as a result of these barriers hinders the ability of federal purchasers to meaningfully engage with Federal Acquisition Regulation 23.108 requirements for PV modules and inverters, and generally curtails the impact of the EPEAT ecolabel in the PV module and inverter market as a whole. As federal agencies ramp up their adoption of solar energy in construction and power purchase agreements over the next few years, a robust list of EPEAT-registered products will be essential to meeting government sustainability goals.

SETO is working with other federal agencies, including EPA, the Department of Defense, and the General Services Administration, to ensure that the federal government is aligned on incorporating sustainability principles into demand for solar systems. On the other side of the market, this PRIME Prize intends to address and incentivize the supply side of solar systems by encouraging manufacturers to adopt the sustainability principles embodied in the EPEAT ecolabel for PV modules and inverters.

⁵ These module products are Q.PEAK DUO XL-G11S.3/BFG, manufactured by Qcells; Q.TRON BLK M-G2+, manufactured by Qcells; Series 6 Plus, manufactured by First Solar; and Series 7, manufactured by First Solar. Of these four products, two products have separate registry listings based on their location of manufacture, necessitating different life cycle analysis calculations: Q.PEAK DUO XL-G11S.3/BFG, manufactured by Qcells; and Series 7, manufactured by First Solar.

2.2 Prize Phases

The PRIME Prize will be awarded in two phases over a 2.5-year period from prize launch (see <u>Section 1.2: Key Dates</u> for further details).

Phase 1: Apply – Manufacturers who submit a letter of intent to register up to four eligible PV module or inverter products through EPEAT and provide proof of participation from GEC will win \$50,000 in cash. This phase will take place over 6 months from prize launch.

Phase 2: Certify – Winning manufacturers from Phase 1 will validate that their products meet all required EPEAT criteria and will submit proof of EPEAT product registration from GEC. Manufacturer submissions will be reviewed and awarded on a rolling 3-month basis beginning 1 year after the opening of Phase 2. Manufacturers may submit during any of the open periods for Phase 2 (Phases 2a–2d). At the end of each Phase 2 subphase, manufacturers will win \$100,000 in cash for each of the products identified in their Phase 1 submission that achieve an EPEAT Registry listing in that subphase, up to \$400,000 in cash total.

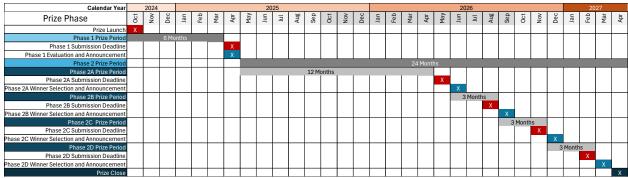


Figure 3. Overview of PRIME phases and timeline

2.3 Prize Program Goal Requirements

Only submissions relevant to the goals of this program are eligible to compete. The Prize Administrator must conclude that all the following statements are true when applied to your submission:

- The proposed solution is related to the U.S. solar PV industry, and in particular, solar PV modules and/or inverters.
- The submission package provides sufficient evidence that the manufacturer has successfully engaged with GEC for participation in EPEAT, including completion of required forms, payments, and verifications.
- The proposed products for registration in Phase 1 are solar PV modules or inverters that conform to the definition of such products in NSF/ANSI457-2019, "Sustainability Leadership Standard for Photovoltaic Modules and Photovoltaic Inverters," Section 1.2.
- The <u>CAB</u> selected for review and verification of the products in Phase 2 is headquartered in the United States.
- The majority of activities that are described in and support the submission package are performed in the United States and have the potential to benefit the U.S. market.

- The proposed solution is not dependent on new, pending, or proposed federal, state, or local government legislation, resolutions, appropriations, measures, or policies.
- The proposed solution does not involve the lobbying of any federal, state, or local government office.

2.4 Additional Requirements

Please read and comply with the additional requirements in Appendix 1.

COMPETITORS WHO DO NOT COMPLY WITH THESE REQUIREMENTS MAY BE DISQUALIFIED.

3 Phase 1: Apply

3.1 Goal

The goal of Phase 1: Apply is to demonstrate manufacturer intent to participate in EPEAT and to register their PV module or inverter product(s) with the EPEAT Registry.

3.2 Prizes

Winners of Phase 1 will receive \$50,000 in cash.

3.3 How To Enter

Go to <u>HeroX</u> and follow the instructions for registering and submitting all required materials before the phase deadline.

3.4 Important Dates

Refer to the timeline on HeroX and in Section 1.2: Key Dates for relevant dates and deadlines.

3.5 Process Overview

Phase 1 consists of the following steps:

- Submission Competitors engage with GEC to become participating manufacturers, including signing the <u>EPEAT License and Participating Manufacturer Agreement</u> and paying EPEAT participation fees, available on the <u>"About EPEAT" page</u> of the EPEAT Registry. Competitors designate up to four products intended for EPEAT registration. Competitors complete their submission packages (see <u>Section 3.6</u>) and submit online before Phase 1 closes.
- **Assessment** The Prize Administrator screens submissions for eligibility and completion. A DOE federal employee will make the final determination of winners.
- Announcement After the winners are publicly announced, the Prize Administrator notifies them and requests the necessary information to distribute cash prizes. After winning Phase 1, competitors develop their solutions in accordance with their plan to compete in Phase 2.

3.6 What To Submit

A complete submission package for Phase 1 requires the following items:

- Competitor information (certain items will be made public; see <u>Section 3.6.1</u>)
 - Proof of EPEAT participation in the form of a confirmation letter from GEC. This confirmation letter must identify an eligible CAB (see <u>Section 2.3</u>) for the intended product review(s).
- Data sheets for the up to four products intended to be listed on the EPEAT Registry. These data sheets may be preliminary (pending safety certifications) or published for commercial sale.

Incomplete submission packages will not be assessed.

3.6.1 Competitor Information

List basic information about your submission on the HeroX submission form. Elements marked with an asterisk (*) will be made public.

- Competitor organization name*
- Organization address (street, city, state, and nine-digit zip code)
- Organization URL*
- Key project members (names, email addresses, and phone numbers)
- Declaration of eligibility as a U.S.-based manufacturer of solar PV modules and/or inverters
- Number of products intended to be listed on the EPEAT Registry
- List of product names intended to be listed on the EPEAT Registry
- Declaration of eligibility for each listed product completing final assembly in the United States
- Intended EPEAT registration date of each listed product
- Intended EPEAT tier of each product (Bronze, Silver, or Gold)
- For PV modules, intended embodied carbon level (Low Carbon Solar or Ultra Low Carbon Solar)

3.7 How We Determine and Award Winners

The Prize Administrator screens all submissions and ensures that they are eligible and complete with all necessary materials. DOE will designate a federal employee as the judge to make the final determination of the winners. Complete and eligible submissions comprising up to 21 total products for certification will be designated as Phase 1 winners and awarded a Phase 1 prize. If complete and eligible submissions are received above this 21 total product amount, DOE may consider adding additional Prize funding to award additional winners, pending future appropriations.

3.7.1 Announcement

Approximately 30–60 days after the contest closes, the Prize Administrator will notify the winners and request the necessary information to distribute the prizes. The Prize Administrator will then publicly announce the winners.

3.8 Additional Terms and Conditions

See Appendix 1 for additional requirements.

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

4 Phase 2: Certify

4.1 Goal

The goal of Phase 2: Certify is to demonstrate completion of manufacturer verification of their PV module and/or inverter products by a GEC-approved CAB and listing on the EPEAT Registry.

4.2 Prizes

Winners of Phase 2 will receive \$100,000 in cash for each product successfully verified and listed on the EPEAT Registry. Up to four products identified in Phase 1 may be listed, to receive up to \$400,000 in cash total.

4.3 How To Enter

Go to <u>HeroX</u> and follow the instructions for registering and submitting all required materials before the phase deadline.

4.4 Important Dates

Refer to the timeline on HeroX and Section 1.2: Key Dates for relevant dates and deadlines.

4.5 Process Overview

Phase 2 consists of the following steps:

- Submission Competitors follow the EPEAT product verification and registration process set out by GEC to have the up to four products designated in Phase 1 identified in the EPEAT Registry. Competitors complete their submission packages (see Section 4.6) and submit online before the phase closes. Phase 2 will have rolling submissions every 3 months; competitors may submit any number of their designated products during any of the open submission periods.
- **Assessment** The Prize Administrator screens submissions for eligibility and completion. A DOE federal employee will make the final determination of winners.
- Announcement After the winners are publicly announced, the Prize Administrator will notify them and request the necessary information to distribute cash prizes.

4.6 What To Submit

A complete submission package for Phase 2 requires the following items:

- Competitor information (certain items will be made public; see Section 4.6.1)
- Proof of listing on the public EPEAT Registry for each of the up to four designated products from Phase 1, including:
 - o Notice(s) from GEC of successful product registration
 - Affidavit of product validation from selected eligible CAB (see Section 2.3)
- Data sheets for the up to four products receiving an EPEAT listing. These data sheets must be published for commercial sale.

Incomplete submission packages will not be assessed.

4.6.1 Competitor Information

List basic information about your submission on the HeroX submission form. Elements marked with an asterisk (*) will be made public.

- Competitor organization name*
- Organization address (street, city, state, and nine-digit zip code)
- Organization URL*
- Key project members (names, email addresses, and phone numbers)
- Declaration of eligibility as a U.S.-based manufacturer of solar PV modules and/or inverters
- List of product name(s) receiving EPEAT registration with current submission*
- Declaration of eligibility for each listed product completing final assembly in the United States
- EPEAT registration date of each listed product*
 - EPEAT tier of each product (Bronze, Silver, or Gold)*
 - For PV modules, embodied carbon level (Low Carbon Solar or Ultra Low Carbon Solar)*
- Link to relevant product details on the public <u>EPEAT Registry for Photovoltaic Modules and</u> Inverters.*

4.7 How We Determine and Award Winners

The Prize Administrator screens all submissions and ensures that they are eligible and complete with all necessary materials. DOE will designate a federal employee as the judge to make the final determination of the winners. All complete and eligible submissions will be designated as Phase 2 winners and awarded the Phase 2 prize.

4.7.1 Announcement

Approximately 30–60 days after the contest closes, the Prize Administrator will notify the winners and request the necessary information to distribute the prizes. The Prize Administrator will then publicly announce the winners.

4.8 Additional Terms and Conditions

See Appendix 1 for additional requirements.

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

Appendix 1: Additional Terms and Conditions

A.1 Requirements

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

- You must post the final content of your submission or upload the submission form online by 5 p.m. ET
 on prize deadline date, before the prize's phase submission period closes. 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 the National Renewable Energy Laboratory (NREL), is indecent, obscene, defamatory, libelous, and/or lacking in professionalism, or demonstrates a lack of respect for people or life on this planet.
- If you click "Accept" on the HeroX platform and proceed to register for any of the prizes described in this document, these rules will form a valid and binding agreement between you and DOE and are in addition to the existing HeroX Terms of Use for all purposes relating to these contests. You should print and keep a copy of these rules. These provisions only apply to the prize described here and no other prize on the HeroX platform or anywhere else.
- The Prize Administrator, when feasible, may give competitors an opportunity to fix nonsubstantive mistakes or errors in their submission packages.
- As part of your submission to this prize, you will be required to sign the following statement:

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

A.2 Verification for Payments

The Prize Administrator will verify the identity and role of all competitors before distributing any prizes. Receiving a prize payment is contingent upon fulfilling all requirements contained herein. The Prize Administrator will notify winning competitors using provided email contact information for the individual or entity that was responsible for the submission. Each competitor will be required to sign and return to the Prize Administrator, within 30 days of the date on the notice, a completed NREL Request for ACH Banking Information form and a completed W9 form (). In the sole discretion of the Prize Administrator, a winning competitor will be disqualified from the competition and receive no prize funds if: (i) the person/entity does not respond to notifications; (ii) the person/entity fails to sign and return the required documentation within the required time period; (iii) the notification is returned as undeliverable; (iv) the submission or person/entity is disqualified for any other reason.

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

A.3 Teams and Single-Entity Awards

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

A.4 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, for evaluation purposes only, any properly marked trade secrets, business-sensitive, proprietary, privileged or otherwise confidential information provided with the submission.

A.5 Representation and Warranties

By entering, the competitor represents and warrants that:

- 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.
- 1. 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.
- 2. All persons who were engaged by the competitor to work on the submission or who appear in the submission in any manner have:
 - 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;
 - a. Provided written permission, to the satisfaction of the Prize Administrator, 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
 - b. 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.
- 3. The submission is free of malware.

A.6 Contest Subject to Applicable Law

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

A.7 Resolution of Disputes

DOE is solely responsible for administrative decisions, which are final and binding in all matters related to the contest.

Neither DOE nor the Prize Administrator will arbitrate, intervene, advise on, or resolve any matters between team members or among competitors.

A.8 Publicity

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

Except where prohibited, participation in the contest constitutes each winner's consent to DOE's and its agents' use of each winner's name, likeness, photograph, voice, opinions, and/or hometown and state information for promotional purposes ("Publicity Rights") through any form of media worldwide, without further permission, payment, or consideration. Each winner agrees to provide written authorization that is satisfactory to the DOE and Prize Administrator, sufficient to allow use of the Publicity Rights, upon request.

A.9 Liability

Upon registration, all participants agree to assume any and all risks of injury or loss in connection with or in any way arising from participation in this contest. Upon registration, except in the case of willful misconduct, all participants agree to and, thereby, do waive and release any and all claims or causes of action against the federal government and its officers, employees, and agents for any and all injury and damage of any nature whatsoever (whether existing or thereafter arising, whether direct, indirect, or consequential, and whether foreseeable or not), arising from their participation in the contest, whether the claim or cause of action arises under contract or tort.

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

A.10 Records Retention and Freedom of Information Act

All materials submitted to DOE as part of a submission become DOE records and are subject to the Freedom of Information Act. Where necessary, materials should be marked as noted in . Such information will be withheld from public disclosure to the extent permitted by law. 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.

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

A.11 Privacy

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

A.12 General Conditions

DOE reserves the right to cancel, suspend, and/or modify the prize, 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 prize, as determined by DOE in its sole discretion, DOE may cancel the prize. Any performance toward prize goals is conducted entirely at the risk of the competitor, and DOE shall not compensate any competitors for any activities performed in furtherance of this prize.

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

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

A.13 Program Policy Factors

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

- Geographic diversity and potential economic impact of projects.
- Whether the use of additional DOE funds and provided resources are non-duplicative and compatible
 with the stated goals of this program and the DOE mission generally.
- The degree to which the submission exhibits technological or programmatic diversity when compared to the existing DOE project portfolio and other competitors.
- The degree to which the submission is likely to lead to increased employment and manufacturing in the United States or provide other economic benefits to U.S. taxpayers.
- The degree to which the submission will accelerate transformational technological, financial, or workforce advances in areas that industry by itself is not likely to undertake because of technical or financial uncertainty.
- The degree to which the submission supports complementary DOE-funded efforts or projects, which, when taken together, will best achieve the goals and objectives of DOE.
- The degree to which the submission expands DOE's funding to new competitors and recipients who have not been supported by DOE in the past.
- The degree to which the submission enables new and expanding market segments.
- Whether the project promotes increased coordination with nongovernmental entities toward enabling a just and equitable clean energy economy in their region and/or community.

A.14 National Environmental Policy Act Compliance

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

While NEPA compliance is a federal agency responsibility and the ultimate decisions remain with the federal agency, all participants in the PRIME 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 fabrication and testing of their device such that DOE can conduct a meaningful evaluation of the potential environmental impacts.

A.15 Definitions

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

A.16 Return of Funds

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

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