

Beyond the Meter: Energy Storage Integration Prize

September 2024

Preface

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

Date	Modification
9/12/2024	Modification of Appendix 1: Additional Terms and Conditions: A.10 Records Retention and Freedom of Information Act The Beyond the Meter: Energy Storage Integration Prize has added additional language stating DOE's rights to information for evaluation purposes.

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1 Executive Summary

The U.S. Department of Energy (DOE) Office of Electricity is launching the American-Made Beyond the Meter: Energy Storage Integration Prize. This prize is for companies or coalitions to demonstrate their existing product at DISTRIBUTECH, with the goal of highlighting their capabilities and plans for product integration and management of behind-the-meter (BTM) grid-edge technologies¹ around an energy storage system (ESS). This prize aims to showcase the central role played by ESSs in integrating BTM technologies and maximizing the overall value of these assets for consumers. Furthermore, these teams will outline a plan of collaboration with grid-edge technology vendors around battery energy storage, toward an eventual goal of creating a turnkey solution for consumers. The Beyond the Meter: Energy Storage Integration Prize is part of the Grid Resource Integration Technology (GRIT) Prize Series.

As the electricity grid undergoes rapid transformation, driven by trends such as increased electrification and penetration of inverter-based resources, both electricity end users and providers must consider how different distributed energy resources (DERs), including BTM batteries, electric vehicles (EVs), and rooftop solar photovoltaic (PV) systems, can be optimally managed and controlled to provide value and flexibility to both the consumer and the electric distribution system (grid).

The Office of Electricity's Energy Storage Division supports the development of tools and methods that help integrate ESSs into the grid and activities that validate both the operational characteristics and value proposition of these technologies across generation, transmission, distribution, and consumer-level use cases. This prize opportunity will help the Energy Storage Division identify technology- and vendoragnostic DER control, integration, and communication solutions that can improve integration and interoperability between BTM battery technologies, other consumer-sited DERs, distributed energy resource management systems, and/or advanced distribution management systems.

Winning submissions will demonstrate a BTM grid-edge technology solution and will highlight a plan of collaboration with BTM grid-edge technology vendors toward the goal of integration. Winning teams will receive \$50,000 after the announcement of Phase 1 winners and \$50,000 after their attendance and participation at the DOE Office of Electricity booth at DISTRIBUTECH, which will take place March 2025 in Dallas, Texas.

In addition to prize funds, this prize will provide winners with the opportunity to have their companies highlighted as a part of the DOE Office of Electricity booth at DISTRIBUTECH 2025. Winning teams will be given booth space within the DOE Office of Electricity booth.

The winning teams will participate in a DOE-hosted panel and other DOE-hosted events. These events will include a matchmaking session and a "speed dating" event, which will connect winners with meter gridedge technology vendors toward the goal of integration.

¹ Behind-the-meter (BTM) grid-edge technologies refer to energy solutions that are located on the consumer's side of the electricity meter, enabling end users to manage and optimize their energy consumption and generation. These technologies include distributed energy resources (DERs) such as rooftop solar panels, battery storage systems, electric vehicles, and smart home devices. By integrating BTM technologies, consumers can reduce their reliance on the grid, lower energy costs, and contribute to grid stability by providing services like demand response and peak load shaving. Additionally, BTM technologies empower consumers with greater control over their energy usage, contributing to a more resilient and decentralized energy system.

1.1 Prizes

Up to two winning teams will receive up to \$100,000 each in cash. Winning teams will receive \$50,000 each after the announcement of Phase 1 winners and \$50,000 each after their attendance and participation at the DOE Office of Electricity booth at DISTRIBUTECH, which will take place March 2025 in Dallas, Texas.

This is a one-phase prize with a total prize pool of \$200,000 in cash. Applicants will describe their BTM grid-edge technology solution and how it could support improved integration, communication, and control of grid-edge ESSs with different types of energy resources and systems that span different technologies, vendors, and manufacturers. Applicants will also outline a plan of collaboration with grid-edge technology vendors toward the goal of integration. Applicants will also describe their approach for demonstration of their BTM grid-edge technology solution and their plans toward collaborative integration at DISTRIBUTECH 2025.

Winners	Prizes
Up to two winners	\$100,000 (\$200,000 total prize pool)

1.2 Key Dates

Refer to the timeline on the **HeroX page** for relevant dates.

1.3 Eligibility and Competitors

Only submissions relevant to the technical areas laid out in <u>Section 2</u> of this document will be considered for award. The prize administrator has the right to refuse any submission for incompleteness or unresponsiveness to the technical topic areas.

Prize Eligibility

The competition is open only to private entities (for-profits and nonprofits); nonfederal government entities such as states, counties, tribes, and municipalities; and academic institutions, subject to the following requirements:

- A competitor may only submit a single submission.
- A group of individuals competing as one team may win, provided that the online account holder
 of the submission is a U.S. citizen or permanent resident. Individuals competing as part of a
 team are eligible to participate if they are legally authorized to work in the United States.
- Private entities must be incorporated in and maintain a primary place of business in the United States.
- Academic institutions must be based in the United States.
- DOE employees, members of their immediate families (e.g., spouses, children, siblings, or parents), and persons living in the same household as such persons, whether or not related, are not eligible to participate in the prize.
- Individuals who worked at DOE (federal employees or support service contractors) within six months prior to the submission deadline of any contest are not eligible to participate in any prize contests in this program.
- Federal entities and federal employees are not eligible to participate in any portion of the prize.
- DOE national laboratory 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.

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.

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

The Beyond the Meter: Energy Storage Integration Prize is part of the American-Made Challenges program, which is your fast track to the clean energy revolution. Funded by DOE, we incentivize innovation through prizes, training, teaming, and mentoring, connecting the nation's entrepreneurs and innovators to America's national labs and the private sector.

This prize will be a part of the Office of Electricity's Grid Resource Integration Technology (GRIT) Prize Series and will highlight innovative BTM grid-edge technology solutions that enable integration and interoperability of grid-edge technologies. Energy storage is an integral component of grid-edge management, providing multiple benefits that enhance grid stability, enable higher integration of renewable energy, and improve the overall efficiency and reliability of the power system. By strategically deploying energy storage within the consumers' premises, utilities can optimize the management of DERs and facilitate the transition to a more resilient and sustainable energy future.

BTM storage represents a market potential with the capability to unlock significant value for the grid, customers, and the overall decarbonization objectives that will meet federal and state mandates/goals. As the world shifts toward cleaner energy, the integration of DERs, such as PV solar panels, EVs, and ESSs, is becoming increasingly critical. These technologies, when effectively harnessed, can contribute to a more resilient, efficient, and sustainable energy ecosystem. However, the current state of their deployment often lacks the necessary coordination, resulting in missed opportunities to maximize their potential benefits.

The proliferation of DERs like PV, EVs, and energy storage has been accompanied by numerous challenges. Among them is the challenge of uncoordinated control, operation, and integration of these resources. Without a unified approach, the benefits of these technologies will not be fully realized, leading to inefficiencies in energy management and grid stability. A coordinated effort is essential to optimizing the performance of these systems and ensuring they work together seamlessly to provide a reliable energy supply, reduce consumer costs, and enhance the grid's flexibility. Addressing this issue can fully unlock the potential of BTM storage, offering substantial value to all stakeholders involved.

For many Americans, the benefits of these emerging technologies remain difficult to access. The average consumer is often unaware of how to effectively manage and benefit from DERs, such as solar panels or ESSs. This knowledge gap creates a barrier to the widespread adoption and optimal use of these technologies. A well-coordinated product offering that simplifies the complexities of energy management could bridge this gap, empowering consumers to make informed decisions that align with their energy consumption needs and financial goals.

Such a product offering would not only address the immediate needs of consumers, but also contribute to the broader objective of decarbonization. By enabling customers to better understand and use BTM storage and other DERs, we can create a more distributed and resilient energy system that reduces reliance on fossil fuels. This would have a significant impact on reducing carbon emissions, advancing national and global climate goals, and promoting a cleaner, more sustainable future.

Additionally, a well-coordinated product offering will significantly simplify the process of deploying DERs by reducing the number of contracts and vendors customers need to engage with. Instead of navigating multiple agreements and service providers for each component—such as solar panels, energy storage, and EVs—customers would benefit from a single, unified offering. This streamlined approach means that customers would only have to interact with one counterparty for the entire process, from purchase to

operation and maintenance. This not only eases the burden on customers, but also ensures more seamless and efficient integration of these technologies into their homes and businesses.

In conclusion, the potential of BTM storage lies in its ability to unlock significant value for the grid, customers, and decarbonization efforts. The rising adoption of DERs like PV, EVs, and ESSs demands a coordinated approach to control, operation, and integration. Consumers who may not fully understand these technologies would greatly benefit from a coordinated product offering that meets their consumption and energy monetization needs while contributing to the overarching goal of a decarbonized energy future.

2.2 Prize Phases

The Beyond the Meter: Energy Storage Integration Prize contains one phase to incentivize the integration and management of BTM grid-edge technologies around an ESS.

Phase 1 – In this first and only phase, competitors will submit applications with the information and materials described in Sections 3.6–3.6.5 of this document. Submissions will be evaluated on the basis of merit, the innovation the proposed solution has, and the quality of the approach for demonstration of this solution at the DISTRIBUTECH 2025 event.

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 energy system integration, energy storage, or DER industry.
- 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 represents an innovation that will move the industry beyond its current state.
- 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.
- The proposed solution is based on fundamental technical principles and is consistent with a basic understanding of the U.S. market economy.
- The submission acknowledges that it intends to participate in a demonstration at the DISTRIBUTECH event in March 2025 if chosen as a winner.
- Those chosen as winners will receive registration badges for DISTRIBUTECH. They are, however, responsible for all other costs, including but not limited to travel, lodging, food, shipping costs for booth materials, and any other associated costs. Winners are encouraged to fund the conferencerelated expenses from their winnings from this prize.

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

3.1 Goal

Applicants will describe their BTM grid-edge technology solution as well as their interoperability solution and how it can support improved integration, communication, and control of ESSs with different types of DERs that span different technologies, vendors, and manufacturers. Applicants will also describe their approach for demonstration of their BTM grid-edge technology solution and plan for integration of grid-edge technologies at DISTRIBUTECH.

3.2 Prizes

Up to two winners will receive \$100,000 each. Winning teams will receive \$50,000 each at the time of winner announcements and \$50,000 each after their attendance and participation at the DOE Office of Electricity booth at DISTRIBUTECH, which will take place March 2025 in Dallas, Texas.

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. Competitors also have the ability to form teams and find partners through the HeroX platform.

3.4 Important Dates

Refer to the timeline on HeroX for relevant dates and deadlines.

3.5 Process Overview

Phase 1 consists of the following steps:

- 1. Activation and Submission Applicants will describe their BTM grid-edge technology solution and their interoperability solution and how it can support improved integration, communication, and control of ESSs with different types of energy resources and systems that span different technologies, vendors, and manufacturers. Applicants will also describe their approach for demonstration of their BTM grid-edge technology solution and plan for integration of grid-edge technologies at DISTRIBUTECH. Competitors complete their submission packages and submit online before the phase closes.
- 2. **Assessment** The prize administrator screens submissions for eligibility and completion and assigns subject-matter-expert reviewers to independently score the content of each submission.
- 3. **Announcement** After the winners are publicly announced, the prize administrator notifies them and requests the necessary information to distribute cash prizes.
- 4. Attendance and participation of selected winners at DISTRIBUTECH 2025 The selected winners will demonstrate their BTM grid-edge technology solution and outline their plans for integration of the different types of energy resources and systems that span different technologies, vendors, and manufacturers at DISTRIBUTECH 2025.

3.6 What To Submit

A complete submission package for Phase 1 should include the following items:

- Cover page (not public)
- Narrative (not public)
- Summary PowerPoint slide (public)
- Letters of commitment or support (optional) (not public).

The following sections provide more guidance on what information to provide and how reviewers will evaluate and score your submission. Reviewers will evaluate your submission by assigning a single score for each scored submission section, based on their overall agreement or disagreement with a series of statements.

0	1	2	3	4	5	6
Non- Responsive	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

3.6.1 Cover Page Content

List basic information about your submission, including:

- Project title
- Team name
- Short description
- Key project members (names, contacts, and links to their professional online profiles)
- Other partners (if any)
- Your city, state, and nine-digit zip code.

3.6.2 Narrative

You should answer each of the following five questions. The content bullets are only suggestions to guide your responses. You decide where to focus your answers. The individual answers to the five questions do not have a word limit; however, the aggregate response to these five questions must not exceed 2,500 words, not including captions, figures/graphs, and references. A word count must be included at the end of your submission (see template for details). You may also include up to 10 supporting images, figures, or graphs. The reviewers will score the questions based on the content you have provided.

Narrative				
Max 2,500 words and ten supporting images or figures (PDF)				
Template:				
Question 1 – Challenge				
What challenge does your solution solve?				
Suggested content competitor provides:	A single score on a scale of 0–6 is provided for each of the following statements:			
What problems does your BTM grid-edge				

- technology solution solve?
- Explain why existing solutions/products are inadequate. Be as technically specific as possible to your innovation area, providing examples where possible.
- Describe the most important technology to incorporate in a fully integrated, consumerready BTM solution to maximize value for consumers.
- The competitor quantifies a critical problem using important metrics and provides a compelling analysis of why now is the right time to address it.
- The competitor's assessment of current solutions and their limitations shows a comprehensive understanding of the problemsolution space.
- The competitor has presented a mature understanding of the necessary technologies needed to create a fully integrated, consumer-ready BTM solution for consumers.

Question 2 - Solution and Capabilities

What is your solution, and why it is transformational?

Suggested content competitor provides:

- Provide photographic evidence that demonstrates your testing facility, software, or pilot project.
- Describe how your product is or could be incorporated into a fully integrated, consumer-ready BTM solution for consumers.
- Describe your product's capabilities in as much detail as possible.

A single score on a scale of 0–6 is provided for each of the following statements:

- The competitor provided proof of an existing product that is ready for demonstration at DISTRIBUTECH.
- The solution represents an innovative approach built on reasonable assumptions, valid technical foundations, and lessons learned from other notable efforts in this space.
- The competitor is pursuing an innovative and compelling solution.

Question 3 - Accomplishments and Team

What have you done to date, and what qualities give you a competitive edge?

Suggested content competitor provides:

- Describe your team, the organizations and technology vendors that comprise your team, and the backgrounds, expertise, and experience of your team members.
- Describe the resources available to your team to further develop your solution into

A single score on a scale of 0–6 is provided for each of the following statements:

- The team has the relevant skills and expertise to solve the proposed problem.
- The team has access to relevant resources that can be leveraged for this prize.
- The competitor's description of projects

- a fully integrated, consumer-ready BTM solution.
- Describe the current and future state of projects, pilot demonstrations, number of customers, and funding outlook.
- Highlight your team's diversity and experience and its track record that makes it likely to succeed in the prize competition. What experience do you have trying new things, solving difficult problems, and overcoming barriers to bring ideas to reality?

- conveys a plausible path to a viable customer base and funding.
- This team is diverse in their expertise and has the knowledge, experience, and determination to transform their proposed solution into a commercially available product.

Question 4 - Plan

What is your plan to achieve your goals?

Suggested content competitor provides:

- Describe your roadmap toward collaboration with grid-edge technology and software vendors toward the goal of an integrated product.
- Provide a description of how you intend to commercialize your solution and what the impact would be in the energy marketplace.
- Describe list of grid-edge technology vendors you have worked with who can provide a letter confirming the same (e.g., solar, energy storage, smart thermostat).
- Describe how you plan to partner with other grid-edge technology vendors to maximize the impact of your solution.

A single score on a scale of 0–6 is provided for each of the following statements:

- The identified roadmap demonstrates a comprehensive understanding of the path toward incorporation and integration of gridedge technologies.
- The team has demonstrated a sufficient understanding of their current status of development and has outlined an ambitious path forward.
- The stated goals are ambitious, reduce risks, and show a commitment to an accelerated development cycle.
- The team has demonstrated a comprehensive plan to work with current vendors and partner with new vendors to achieve a fully integrated, consumer-ready BTM solution.

Ouestion 5 - Demonstration

How would you demonstrate your distributed energy resource management system product at DISTRIBUTECH if you were selected as a winner?

Suggested content competitor provides:

A single score on a scale of 0–6 is provided for each of the following statements:

- Describe how you would demonstrate the functionality of this solution in a scaled-down and/or simulated format that could be showcased at DISTRIBUTECH.
- What partnerships would you highlight at DISTRIBUTECH? Would they be willing to attend and present alongside your solution?
- If your team was to win and participate in the matchmaking and "speed dating" events, what types of companies and partnerships would you like to foster?
- Would your team be able to bring a displayready battery storage system, smart thermostat, or solar PV system/module?
- How would your team present your solution if provided a 10-foot by 10-foot booth inside of DOE's booth space at DISTRIBUTECH?
- Does your team have booth materials that it would provide to help promote your solution?

- The team has demonstrated that they are capable of presenting their solution to the public in a sophisticated and impressive manner.
- The team has the necessary resources to successfully demonstrate their solution's capabilities.
- The team recognizes the need for partnerships with industry and has an informed grasp of the types of partnerships that are needed to create a fully integrated, consumer-ready BTM solution.

Reviewer Recommendation

 There is no direct corresponding submission requirement for this score. Rather, it is an overall assessment of all materials submitted in HeroX. A single score of either 0 or 6 is provided, taking the following statements into consideration

 The innovation, team, and plan should be strongly considered for a Phase 1 prize.

3.6.3 Submission Summary Slide (Will Be Made Public)

Make a public-facing, one-slide submission summary that introduces your team and/or organization and your mission. There is no template, so competitors are free to present the information in any format. Any text must be readable in a standard printed page and a conference room projection and should be in at least 14-point font.

3.6.4 Letters of Support or Commitment (Optional)

Attach one-page letters (of support, intent, or commitment) from other relevant entities to provide context. Letters of support from partners or others that are critical to the success of your proposed solution will likely increase your score. General letters of support from parties that are not critical to the execution of your solution will likely not factor into your score.

3.7 DISTRIBUTECH Conference for the Two Winners

Your team, if selected as a winner, must attend the DISTRIBUTECH conference and showcase your BTM grid-edge technology solution, as described below:

- 1. More details on the structure of events at DISTRIBUTECH and the DOE Office of Electricity booth build-out will be added to our <u>"Resources" page</u> on HeroX.
- 2. The winning teams should communicate what technology they want to be displayed and what the demonstration would look like to the prize program ahead of time. Winners will receive an email about DISTRIBUTECH planning from electricity.prize@nrel.gov.
- 3. The winning teams are responsible for providing all the booth and presentation materials that their team will require to showcase their product.
- 4. On the day of the DISTRIBUTECH conference, the winning teams should be able to participate in a moderated panel session dedicated to demonstrating their existing product and highlighting their ability or plan for product integration and management of BTM grid-edge technologies around an ESS.
- 5. Winning teams will be required to attend DISTRIBUTECH and present their winning solution and company at the DOE Office of Electricity booth for the entirety of the event.
- 6. Winning teams will also be required to participate in all prize-focused events at DISTRIBUTECH, including but not limited to a moderated panel session, a matchmaking session, and a "speed dating" event. The matchmaking and "speed dating" events will be focused on connecting the winning teams with other grid-edge technology vendors that want to work together on integrating toward a turnkey solution for consumers.

3.8 How We Determine and Award Winners

The prize administrator screens all completed submissions and ensures that the teams are eligible. Then, the prize administrator, in consultation with DOE, assigns subject-matter-expert reviewers who independently score the content of each submission. The reviewers will be composed of federal and nonfederal subject-matter experts and representatives from the utility partners with expertise in areas relevant to the competition. They will review the competitors' submission packages according to the criteria above.

3.8.1 Reviewer Panel Scoring

The scoring of submissions will proceed as follows:

- Experts will review each submission individually and assess the response from the competitor to each statement in the six criteria described in the tables in <u>Section 3.6.2</u>.
- Reviewers will score each section from 0–6, depending on the degree to which the reviewer agrees that the submission reflects the statements for consideration.
- Each section score will be added together to generate a total score for the submission.
- The total scores from each reviewer will be averaged to produce a final score for the competing team/organization. This score will inform the judge's decisions on prize awards.

3.8.2 Interviews

DOE may decide to interview a subset of competitors. The interviews would be held prior to the announcement of the winners and would serve to help clarify questions the reviewers may have. Participating in interviews is not required, and interviews are not an indication of a competitor's likelihood of winning.

3.8.3 Final Determination

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

3.8.4 Announcement

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

3.9 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.
- All submissions that you wish to protect from public disclosure must be marked according to the
 instructions in <u>Section 4 of Appendix 1 (Section A.4)</u>. Unmarked or improperly marked
 submissions will be deemed to have been provided with unlimited rights and may be used in any
 manner and for any purpose whatsoever.
- You must include all the required elements in your submission. The Prize Administrator may
 disqualify your submission after an initial screening if you fail to provide all required submission
 elements. Competitors may be given an opportunity to rectify submission errors due to technical
 challenges.
- Your submission must be in English and in a format readable by Microsoft Word or Adobe PDF. Scanned handwritten 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 W-9 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.

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 must identify the specific pages containing trade secrets or 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 in 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.5 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, likenesses 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.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 through any form of media worldwide, without further permission, payment, or consideration.

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 <u>Section A.4</u>. 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."

However, as outlined in Sections A.1 and A.10, DOE has unlimited rights in unmarked or improperly marked information and rights to use properly marked information for evaluation purposes.

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 nonduplicative 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 Beyond the Meter: Energy Storage Integration 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 Office of Electricity. When the Prize Administrator is referenced in this document, it refers to staff from both the Alliance for Sustainable Energy and the Office of Electricity. Ultimate decision-making authority regarding prize matters rests with the Director of Office of Electricity.

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.