Digitizing Utilities Prize Round 3: Resilient Grid Innovation

JANUARY 2025

Preface

The U.S. Department of Energy's Digitizing Utilities Prize Round 3: Resource Integration 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

Contents

1 Executive Summary

Following a successful Round 1 and Round 2 of the American-Made Digitizing Utilities Prize, the U.S. Department of Energy's (DOE's) Office of Electricity is launching the American-Made Digitizing Utilities Prize Round 3: Resilient Grid Innovation. This prize aims to incentivize technology development partnerships with interdisciplinary teams of software developers and data experts to facilitate the transformation of digital systems, data analytics, and grid resource integration for the electric sector. DOE has specific interest in finding solutions to problems regarding extreme events affecting the power sector.

This prize is a part of the Grid Resource Integration Technologies (GRIT) Prize Series. More information about the series can be found here: https://www.energy.gov/oe/grid-resource-integration-technologies-grit-prize-series.

1.1 Introduction

New resources and loads are being connected to distribution systems, challenging how they have traditionally operated. Understanding and harnessing grid edge devices is critical for a more resilient electric grid. These devices are often driven by power electronics and digital systems, which react differently to system conditions than traditional loads. Harnessing the vast amounts of data being generated by grid-sensing devices and the energy sector is key to improving power reliability, resilience, security, and affordability. Implementing models and tools for energy sector stakeholders to incorporate grid edge resources into planning and investment strategies will help improve grid resilience and reliability.

The Digitizing Utilities Prize Round 3: Resilient Grid Innovation aims to accelerate the development and integration of grid edge resources and facilitate the transformation of the electric sector by advancing digital systems and data analytics.

The Digitizing Utilities Prize Round 3: Resilient Grid Innovation contains two tracks:

- Resource integration under uncertainty
- Sensors and datasets for integration of inverter-based resources (IBRs) and large loads.

Competitors are not restricted to a single track. Competitors who choose to submit to both tracks must submit different innovations/solutions to each track. A competitor who chooses to submit to both tracks is eligible to be selected as a winner in both tracks. **Teams who won any phase in a previous round of the Digitizing Utilities Prize should not submit the same or a similar idea to a future round of the prize.**

Each track will have two phases—plan and progress—to incentivize competitors to develop innovative solutions to help transform data analytics and system digitization at utilities, such as energy use data, supervisory control and data acquisition (SCADA) data, synchro phasor data, weather data (both "blue sky" and extreme conditions), wildfire vulnerability and risk data, cybersecurity, and more. New tools can address novel challenges presented by digital interconnectivity of energy management systems, distributed energy resources, electric vehicle supply equipment, and so on. DOE invites teams to compete to work with utilities to build solutions for the identified digital transformation needs. DOE intends for the solutions developed under this prize to be shared as examples with the broader energy sector community on how to solve data and/or resource integration challenges.

For the Digitizing Utilities Round 3, DOE has a specific interest in addressing problems related to improving energy sector resilience to extreme events.

Through this prize, teams will identify an energy sector partner facing a digitization, data, or resource integration challenge and propose a solution for solving it. Proposed challenges and solutions must have an implementation path that can be carried out by the energy sector partner.

Competitors must demonstrate active engagement with their energy sector partner through documentation, such as a detailed letter of support, as well as a description of the partnership in the narrative.

Additionally, **competitors should not include any of the following in their submissions**: (1) critical infrastructure information (CII), (2) specifically identify cybersecurity vulnerabilities, (3) any proprietary business information, and (4) real datasets, regardless if provided internally or from your energy sector partner.

1.2 Prizes

The Digitizing Utilities Prize Round 3 offers a total prize pool of $2.50 million across two tracks and a bonus prize.

Track 1 – Resource Integration Under Uncertainty

Energy resource integration is challenged because of various sources of uncertainties including but not limited to:

- Technological uncertainties, such as lack of information about behind-the-meter assets
- Economic factors, demographic shifts, electrification-driven demand changes, lack of information sharing across the transmission and distribution boundary, and impact of extreme weather and climate events (e.g., hurricanes, tornados, wildfires).

Systematic approaches for capturing, prioritizing, communicating, and visualizing key sources of uncertainty are essential for decision makers. Uncertainty-informed advanced analytics can reduce the energy sector's risks due to intermittency of renewable resources and enable more effective, risk-informed decision-making.

In Phase 1 – Plan, teams will connect with an energy sector partner to identify a challenge or opportunity and propose a plan on systematic characterization and communication of uncertainties to improve energy resource utilization, adequacy, and integration for operations and planning. Teams of scientists, engineers, and stakeholders will be formed using rigorous team science (cross-disciplinary) approaches. The teams will then identify a key challenge in integrating energy resources into the grid under uncertainty and *co-produce* a viable solution(s) implementation plan. Teams must demonstrate a deep understanding of the challenge and propose how they will collaboratively identify and address the problem with stakeholders. Up to eight winners will each receive $75,000 and will move on to Phase 2 – Progress.

In Phase 2, teams further their solution(s) and demonstrate their technologies that addresses the identified challenge. Teams also demonstrate how their methods and process could be used by other key stakeholders in the future. At the end of Phase 2 – Progress, up to three competitors will be selected as a winner and will receive a cash prize of $200,000.

Contest	Winners	Prizes
Plan Phase	Up to eight	$75,000 each ($600,000 total prize pool)
Progress Phase	Up to three	$200,000 each ($600,000 total prize pool)

Track 2 – Sensors and Datasets for Integration of Inverter-Based Resources and Large Loads

IBRs, including battery energy storage systems and large loads that interface with the grid via power electronics, present utilities with both challenges and opportunities. Effective use of grid measurements and other data sources can help utilities mitigate challenges and unlock the full potential of power electronics.

In Phase 1 - Plan, teams will connect with an energy sector partner to identify a challenge or opportunity and propose a plan to validate an approach that utilizes new grid-sensing capabilities. The proposed approach should use measurements from sensors deployed in a power grid and their correlation with additional data sources. The additional data sources may be drawn from outside the power grid (e.g., weather, behavior models). The team's plan should specify how research datasets will be made publicly available if the team is selected to participate in Phase 2. This plan may include anonymizing the data, creating subsets, and so on to make it suitable for public release. Plans that include contributing data from multiple sources to existing public repositories, such as the Grid Event Signature Library[1] (GESL) and Open Energy Data Initiative[2] (OEDI), are of particular interest. Up to eight winning teams will receive $75,000 each in cash and will be eligible to compete in Phase 2.

In Phase 2, winning teams will work with their energy sector partner to implement their solution and contribute to public repositories of grid data, such as the Grid Event Signature Library or Open Energy Data Initiative. Datasets should not be submitted directly, but a link to the data on an open repository should be included in the application. At the end of Phase 2, up to three winning teams that successfully present their progress toward implementing their solution will receive $200,000 each in cash.

Contest	Winners	Prizes
Plan Phase	Up to eight	$75,000 each ($600,000 total prize pool)
Progress Phase	Up to three	$200,000 each ($600,000 total prize pool)

Bonus Prize – Extremes Applications

Extreme events include but are not limited to hydro-climatological events such as wildfires, tornados, ice- and snowstorms, hurricanes, floods, heatwaves, and droughts. Moreover, considerations of "compound

[1] https://gesl.ornl.gov/
[2] https://data.openei.org/

events" that assess the combination of interacting extremes across multiple spatial and temporal scales are encouraged.

Competitors who have won the Plan phase of either Track 1 or Track 2 may be eligible to be awarded the extremes applications bonus prize.

Contest	Winners	Prizes
Bonus Prize	Up to one	$100,000 total prize pool

1.3 Key Dates

Refer to the timeline on the HeroX[3] page for relevant dates.

1.4 Eligibility and Competitors

All Phase 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 per track. Competitors who choose to submit to both tracks must submit using different innovations/solutions.
    - Multiple submissions from the same entity or institution can be summitted as long as there are no overlapping team members.
- 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, 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.

[3] https://www.herox.com/DigitizingUtilitiesPrizeRound3

- Individuals participating in a foreign government talent recruitment program[4] sponsored by a country of risk[5] 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.

Phase 1 Eligibility

Phase 2 Eligibility

- Only winners of Phase 1 are eligible to compete in Phase 2.

[4] A 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.

[5] 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 Digitizing Utilities Prize Round 3: Resilient Grid Innovation is part of the American-Made Challenges program. Funded by DOE, the program incentivizes innovation through prizes, training, teaming, and mentoring, connecting the nation's entrepreneurs and innovators to America's national labs and the private sector.

The electric industry sector is facing an explosion of data coming from a variety of sources. New types of sensors have been deployed with fast-streaming datasets (one such example is data from phasor measurement units), challenging utilities' traditional methods of data acquisition, use, and storage. Meanwhile, big data analytics products and related services for the utility industry are limited; most of the available products having only modest electricity domain expertise. Electric sector stakeholders are facing an emerging need to capitalize on large datasets, both internally generated data and externally generated data (e.g., weather data, topographic data, information related to vegetation), to improve reliability and resilience and meet the changing system dynamics from renewable integration, which is another key emerging challenge area. Utilities are beginning to leverage information and communication technologies and automation techniques to create new business opportunities and manage market-driven change. Many of these challenges are outlined in the following Electricity Advisory Committee's reports:

- *Big Data Analytics: Recommendations for the U.S. Department of Energy*[6], which outlines the need for DOE support in advancing data analytics for utilities' existing data sources.
- *Urgent Needs to Reliably Facilitate the Energy Transition*[7], which outlines the need for DOE support in grid reliability and resilience to meet growing demands for electricity.

For the electricity sector to fully utilize the data it is creating and address barriers to resource integration to meet growing demands, it must undergo a transformation in how it manages data quality, storage, and processing and how it harnesses risk-informed decision-making under uncertainty. Often, before a new tool can be utilized, infrastructure operators and engineers must first ensure that their underlying digital infrastructure is conducive to the new types of analytics being developed. Traditional data storage and management tools in utilities may not be well-suited to the large volume, variety, and velocity of the data.

DOE's Office of Electricity is committed to accelerating research, development, and demonstration of new technologies and tools within the electricity sector to advance reliable, resilient, secure, and affordable operation of the power system.

This prize aims to connect utilities and other energy sector partners with interdisciplinary teams of software developers, data experts, and risk and decision scientists to facilitate the transformation of digital systems, data analytics, and risk-informed resource integration for electric utilities. These challenges can include not only using data with analytics, but also developing pipelines for processing, data quality assurance, data storage, and deletion.

For this prize, an energy sector partner must be located in the United States and could include any of the following:

- Rural electric cooperatives

[6] https://www.energy.gov/sites/prod/files/2021/02/f83/EAC Big Data Analytics Work Product_Final.pdf
[7] https://www.energy.gov/sites/default/files/2023-10/EAC Recommendations - Urgent Needs to Reliably Facilitate the Energy Transition October 2023_0.pdf

- Utilities owned by a political subdivision of a state, such as a municipally owned electric utility
- Utilities owned by any agency, authority, corporation, or instrumentality of one or more political subdivisions of a state
- Investor-owned electric utilities
- Regional transmission operators/independent system operators
- Electric aggregator
- Electric wire owning and/or operating entities.

2.2 Prize Phases

The Digitizing Utilities Prize Round 3: Resilient Grid Innovation contains two phases: the "Plan" phase and the "Progress" phase. The phases aim to incentivize energy sector partners to connect with interdisciplinary teams of software developers and data experts to help transform digital systems, data analytics, and risk-informed resource integration for the electric grid. Teams should review Section 1.2 for specific details of expectations for each phase in each track.

Phase 1 – Plan

Teams of developers, scientists, engineers, and stakeholders will connect with an energy sector partner, identify a challenge or opportunity relating to new grid-sensing capabilities or integration of energy resources into the grid under uncertainty, and propose a solution to address that challenge or opportunity. These teams must demonstrate a thorough understanding of the problem, as well as their ability to access relevant resources that can be leveraged for this prize. Teams should include examples of their applicable skills and expertise to solve the proposed problem. In their submissions, teams must define their approach and plan of action to solve the issue presented. Up to eight winning teams from each track will receive $75,000 each in cash and will be eligible to advance to Phase 2 – Progress.

Phase 2 – Progress

Winning teams will work with their energy sector partners to develop and refine their solution that addresses the opportunities or challenges their energy sector partner(s) are facing. In their submission, teams must present their progress toward implementing their solution. At the end of Phase 2 – Progress, up to three competitors from each track will be selected as winners and will each receive a cash prize of $200,000.

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 electric-grid-scale utility industry.
- Most of the 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 content sufficiently confirms the competitor's intent to commercialize early-stage technology and establish a viable, U.S.-based business in the near future with revenues that do not solely depend on licensing fees of intellectual property.

2.4 Find Help – the American-Made Network

The American-Made Network cultivates resources and builds connections that enhance, accelerate, and amplify competitors' efforts. The objective is to link participants with the people, resources, financing, perspectives, and industry expertise necessary for long-term success.

The network comprises the following elements:

1. **Prize and network administrator.** As the prize administrator, the National Renewable Energy Laboratory (NREL) will host a prize informational webinar, monitor the prize HeroX forum page, and be available to competitors through the prize email.
2. **Power connectors**. Power connectors play a more substantial role in the competition by receiving funds to expand and amplify DOE's and NREL's efforts. They are deeply involved with prize program execution, recruitment, and support. These organizations are contracted to perform a variety of tasks for specific prizes that advance program successes, thereby extending the reach and improving the diversity and inclusivity of the network overall.

2.6 Additional Requirements

Please read and comply with additional requirements in Appendix 1.

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

3 Plan Phase

3.1 Goal

Competitors will have identified an energy sector partner and demonstrated a thorough understanding of their partner's presented opportunity or challenge, as well as their ability to access relevant resources that can be leveraged for this prize. They will have given examples of their applicable skills and expertise to solve the proposed opportunity or challenge. The teams will have defined their approach and plan of action to solve the issue presented by the partner.

3.2 Prizes

For Track 1 – Resource Integration Under Uncertainty, up to eight teams will be selected as winners and will each receive cash prizes of $75,000.

For Track 2 – Sensors and Datasets for Integration of IBRs and Large Loads, up to eight teams will be selected as winners and will each receive cash prizes of $75,000.

3.3 How to Enter

Go to HeroX and follow the instructions for registering and submitting all required materials before the phase deadline. Competitors also have the ability to form teams or 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

The Plan phase includes the following steps:

1. **Activation and submission.** Competitors connect with an energy sector partner, identify an opportunity or challenge, build a team, and identify a solution and plan with their energy sector partner. Competitors complete their submission packages and submit online before the Plan 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. The reviewer criteria assess the following competitor activities:

    - **Problem-solution fit**. Develop a credible solution concept to a real-world problem facing the industry. Perform substantive due diligence to gather feedback and validate that the proposed solution addresses a real-world problem and is technically feasible.

    - **Team capabilities**. Form an exceptional and committed team to accomplish the stated goals of the proposed solution.

    - **Network engagement.** Cultivate relationships with members of the American-Made Network and/or other entities to maximize the likelihood of creating a viable business based on the proposed solution and enhance the quality of the submission package.

3. **Announcement.** After the winners are publicly announced, the prize administrator notifies them and requests the necessary information to distribute cash prizes. After winning the Plan phase, competitors develop their solutions in accordance with their plan to compete in the Progress phase.

3.6 What to Submit

A complete submission package for the Plan phase should include the following items:

- A 90-second video (public)
- A cover page and narrative
- A summary PowerPoint slide
- Team biographies
- Letters of commitment or support from your energy sector partner.

The following details provide more guidance on what information to provide and how reviewers evaluate and score your submission. Reviewers will evaluate your submissions 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
Nonresponsive	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

3.6.1 Online Public Video (Will Be Made Public)

Online Public Video – *What's your team and solution in 90 seconds?*
Suggested content competitor provides: • The real-world problem you are solving • Your solution and why it is transformational • Who you are (your organization and key team members) and why you have a competitive edge.

Post your publicly accessible video online (e.g., YouTube, Vimeo). Be creative and produce a video that conveys the required information in exciting and interesting ways, but do not focus on time-consuming activities that only improve production values (i.e., technical elements such as décor, lighting, and cinematic techniques). Assistance from others with experience in this area may be helpful. Members of the American-Made Network may be able to help you create your video.

3.6.2 Cover Page Content

List basic information about your submission, including:

- Project title
- Team name
- Track
- Short description

- Key project members (names, contacts, and links to their professional online profiles)
- Link to your online public video
- Other partners (if any)
- Your city, state, and nine-digit zip code.

3.6.3 Narrative

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

Additionally, **competitors should not include any of the following in their submissions**: (1) critical infrastructure information (CII), (2) specifically identify cybersecurity vulnerabilities, (3) any proprietary business information, and (4) actual datasets, regardless if provided internally or from your energy sector partner.

<table>
<tr><td colspan="2">Narrative
Max 2,500 words and five supporting images or figures (PDF)
Template[8]: https://www.herox.com/DigitizingUtilitiesPrizeRound3/resource/2222</td></tr>
<tr><td colspan="2">Team
Question 1: What is your team's past experience providing solutions for this or related problems?</td></tr>
<tr><td>Suggested content competitor provides a description of:
Your team, the organizations that comprise your team, and the background and expertise of your team members.
Your energy sector partner and your team's relationship with them.
The energy sector partner's challenge, its broader context, and how addressing the challenge will improve their operations.
The unique experience or combination of capabilities your team brings to the table.
The relevant algorithms, software models, or concepts your team has developed and can leverage for this prize.</td><td>A single score on a scale of 0–6 is provided, taking the following statements into consideration:
The team has the relevant skills and expertise to solve the proposed problem.
The team has a relationship with a committed energy sector partner.
The team has access to relevant resources that can be leveraged for this prize.
The team demonstrates a thorough understanding of the partner's problem, its broader context, and the importance of solving this problem.
The team has sufficient interdisciplinary expertise to develop and integrate digital infrastructure and data analytics tools effectively.</td></tr>
</table>

[8] To assist teams, DOE is providing an elective template to illustrate the types of information needed to evaluate whether teams meet minimum requirements in the associated critical success factors. Teams are not required to use this template and may submit using any form or format of their choosing. All submissions should address the substantive measures outlined in the template outlines and described in this rules document.

• Whether and how your approach is generalizable beyond the energy sector partner you worked with.	• The team's past experience, bandwidth, and capabilities indicate a high likelihood of success.
Solution Question 2: What is your solution to the problem?	
Suggested content competitor provides a description of: • Your solution to the problem and why you chose this method. • The specific benefits your solution will provide to your energy sector partner. • How the benefits can be quantified and measured following deployment. • How this work expands on your team's prior experience and capabilities. • What other solutions you considered and why you chose not to implement them. • The benefits of your approach over alternatives.	**A single score on a scale of 0–6 is provided, taking the following statements into consideration:** • The competitor clearly describes the proposed technology, how the technology is unique and innovative, and how the technology will be validated and advance the current state of the art. • The team is familiar with alternative solutions and provides strong justification for selecting their approach over others. • The entry demonstrates the impact that the solution will have on the relevant field and application and shows that the competitor is well-positioned for the next phase of commercialization. • The competitor clearly articulates the business need, primary use case, and market potential for the solution.
Goals Question 3: What are the goals you are aiming to achieve during the Progress phase?	
Suggested content competitor provides: • A definition of the goals you aim to achieve during the Progress phase and their respective time frames. • Evidence that, if your team is selected to move forward, your team can successfully complete the Progress phase.	**A single score on a scale of 0–6 is provided, taking the following statements into consideration:** • The goals show a commitment to solving the energy sector partner's problem. • The goals are ambitious, yet reasonable, and the team has a high likelihood of successfully achieving all goals outlined within the Progress phase. • The goals are specific, measurable, achievable, relevant, and time-bound. • The team has the resources available to successfully achieve the goals in the next phase.
Implementation Plan Question 4: How will you measure the success of your approach?	
Suggested content competitor provides: • Your implementation/demonstration plan during the Progress phase, including tasks,	**A single score on a scale of 0–6 is provided, taking the following statements into consideration:** • The plan shows a commitment to solving the energy sector partner's problem.

milestones, timeline, and what you will deliver your energy sector partner. • Identification of the datasets you will need to be successful and how they will be obtained. Describe the process for obtaining data from your partner. • A description of any anticipated challenges and how they will be addressed. • A description of your plan for regular communication with your partner. Track-2-specific suggested content (in addition to the suggested content mentioned earlier): • A description of how data will be made publicly available and how it will positively impact industry, academia, and so on.	• The team has identified appropriate metrics for success. • The team has a well-defined data management plan as well as a scientifically grounded approached for implementing their solution. • The plan is ambitious, yet reasonable, and the team has a high likelihood of successfully implementing it. • The plan is built on reasonable assumptions, which are clearly communicated, and lessons learned from other notable efforts in this space. • The required datasets are likely to be available and/or the team has a credible plan to obtain the necessary data. • Competitors have submitted a strong letter of cooperation or commitment from an energy sector partner. • The team has the resources available to successfully implement the plan in the next phase. Track-2-specific consideration (in addition to the suggested considerations mentioned earlier): • The team has a plan for making data publicly available that will benefit industry, academia, etc.
Reviewer Recommendation	
• There is no direct corresponding submission requirement for this score. Rather, it is an overall assessment of all materials submitted to HeroX.	**A single score of either 1 or 6 of 1 - 6 is provided, taking the following statements into consideration:** • The innovation, team, and plan should be strongly considered for a Plan phase prize.

3.6.4 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.

3.6.5 Team Biographies

All team members must each include an up to half-page biography stating their previous and current experiences relating to the energy sector as well as any additional professional background information that would help highlight their experience and knowledge. A template[9] has been made available on HeroX: https://www.herox.com/DigitizingUtilitiesPrizeRound3/resource/2237.

3.6.6 Letters of Support or Commitment

It is required to include a letter of support from your energy sector partner. 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. Please do not submit multipage letters.

3.7 How We Determine and Award Winners

The prize administrator screens all completed submissions and ensures that the teams are eligible. Then, the prize administrator, in consultation with DOE, assigns subject-matter-expert reviewers who independently score the content of each submission. The reviewers will comprise federal and nonfederal subject-matter experts with expertise in areas relevant to the competition. They will review the competitor's submission package according to the criteria mentioned earlier.

3.7.1 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 criteria described in the tables in Section 3.6.3.
- Reviewers will score each section 1–6, 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.

3.7.2 Interviews

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

3.7.3 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).

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[9] To assist teams, DOE is providing an elective template to illustrate the types of information needed to evaluate whether teams meet minimum requirements in the associated critical success factors. Teams are not required to use this template and may submit using any form or format of their choosing. All submissions should address the substantive measures outlined in the template outlines and described in this rules document.

3.7.4 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.

3.8 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 Progress Phase

4.1 Goal

Competitors will have worked side by side with their energy sector partner on the presented issue to develop and refine a solution that addresses the issues their partner is facing. Teams will be able to present their progress toward implementing their solution.

4.2 Prizes

For Track 1 – Resource Integration Under Uncertainty, up to three teams will be selected as winners and will each receive cash prizes of $200,000.

For Track 2 – Sensors and Datasets for Integration of IBRs and Large Loads, up to three teams will be selected as winners and will each receive cash prizes of $200,000.

4.3 How to Enter

Only competitors who won the Plan phase may compete in the Progress phase. Go to HeroX and follow the instructions for submitting all required materials before the phase deadline.

4.4 Important Dates

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

4.5 Progress Phase Process

The Progress phase includes the following steps:

1. **Progress and submission.** Winning competitors from the Plan phase will work with their energy sector partner to develop, refine, and validate their solution. Competitors complete their submission packages and submit online before the Progress 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. The reviewer criteria assess the following competitor activities:

    - **Problem-solution fit.** Develop a credible solution concept to a real-world problem facing the industry. Perform substantive due diligence to gather feedback and validate that the proposed solution addresses a real-world problem and is technically feasible.

    - **Team capabilities.** Form an exceptional and committed team to accomplish the stated goals of the proposed solution.

    - **Network engagement.** Cultivate relationships with members of the American-Made Network and/or other entities to maximize the likelihood of creating a viable business based on the proposed solution and enhance the quality of the submission package.

3. **Virtual demo day.** Competitors will participate in a virtual demo day event with a panel of expert reviewers and members of the public. The details and agenda for the event will be provided 30 days before the event.

4. **Selection.** DOE will select winners for each track, considering the written submissions, performance at the demo day, and the expert reviewer feedback.

5. **Announcement.** After the winners are publicly announced, the prize administrator notifies them and requests the necessary information to distribute cash prizes.

4.6 What to Submit

A complete submission package for the Progress phase should include the following items:

- A 90-second video (public)
- A cover page
- A narrative that answers the five questions
- A summary PowerPoint slide
- Team biographies
- Required letters of commitment from an energy sector partner.

The following details provide more guidance on what information to provide and how reviewers evaluate and score your submission. Reviewers will evaluate your submissions 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
Nonresponsive	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

4.6.1 Online Public Video (Will Be Made Public)

Online Public Video – *What's your team and solution in 90 seconds?*
Suggested content competitor provides: • Describe your team and how it is uniquely qualified to solve the selected energy sector partner's problems. • Demonstrate your solution. • Describe why it is the best approach to the energy sector partner's problem. • Highlight the progress your team made during the Progress Phase.

Post your publicly accessible video online (e.g., YouTube, Vimeo). Be creative and produce a video that conveys the required information in exciting and interesting ways, but do not focus on time-consuming activities that only improve production values (i.e., technical elements such as décor, lighting, and cinematic techniques). Assistance from others with experience in this area may be helpful. Members of the American-Made Network may be able to help you create your video.

4.6.2 Cover Page Content

List basic information about your submission, including:

- Project title
- Team name

- Short description
- Link to your online public video
- Link to your publicly accessible repository (only if you are participating in Track 2 - Sensors and Datasets for Integration of IBRs and Large Loads)
- Key project members (names, contacts, and links to their professional online profiles)
- Other partners (if any)
- Your city, state, and nine-digit zip code.

4.6.3 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 3,000 words,** not including captions, figures/graphs, or references. A word count must be included at the end of your submission (see template for details). You may also include **up to five supporting images, figures, or graphs**. The reviewers will score the questions based on the content you have provided.

<table>
<tr><th colspan="2">Narrative
Max 3,000 words and five supporting images or figures (PDF)
Template[10]: https://www.herox.com/DigitizingUtilitiesPrizeRound3/resource/2223</th></tr>
<tr><th colspan="2">Team and Problem Overview
Question 1: What problem were you trying to solve?</th></tr>
<tr><td>Suggested content competitor provides:
A brief description of the challenge and how it was impacting your energy sector partner.
A description of the problem's broader impact on the industry.
A description of what you have learned about the problem during the Progress phase.</td><td>A single score on a scale of 0–6 is provided for each of the following statements:
The team understands their energy sector partner's problem and its broader context in the industry.
The team significantly advanced their understanding of the problem during the Progress phase.</td></tr>
<tr><th colspan="2">Solution Implementation
Question 2: Did you achieve the goals identified in the Plan phase?</th></tr>
<tr><td>Suggested content competitor provides:
A brief description of your solution.
the goals you outlined during the Plan phase, and whether you achieved each of the goals identified.
How you implemented your plan to solve the problem and whether you were able to meet your planned goals.
Key activities and milestones completed during the Progress phase.</td><td>A single score on a scale of 0–6 is provided for each of the following statements:
The team demonstrates impressive and convincing progress made toward implementing the solution.
Activities and milestones accomplished were directly related to the implementation plan.
The team reasonably followed the plan from the Plan phase, and any deviations from the plan were well-justified.</td></tr>
</table>

[10] To assist teams, DOE is providing an elective template to illustrate the types of information needed to evaluate whether teams meet minimum requirements in the associated critical success factors. Teams are not required to use this template and may submit using any form or format of their choosing. All submissions should address the substantive measures outlined in the template outlines and described in this Rules document.

• The interactions you had with your energy sector partner during the Progress phase. • An explanation of whether and why you had to deviate from your plan. • The data-sets used in your solution. • The challenges you faced and how you overcame them. Track-2-specific suggested content (in addition to the suggested content mentioned above): • A description of the data that you made publicly available and where it is located.	• The data-sets used were relevant to the problem and solution. • The team worked closely with their energy sector partner. • The team achieved their goals. Track-2-specific consideration (in addition to the suggested considerations mentioned above): • Data were made publicly available in a meaningful and enduring way.
Solution Impact Question 3: What benefits were provided to the team's energy sector partner?	
Suggested content competitor provides: • What you delivered to your energy sector partner. • Any feedback you received from your partner when you delivered your solution. • Quantification of the benefits your solution is providing by using the metrics identified in the Plan phase. • What extent your solution has solved your partner's problem and what additional steps are needed. Track-2-specific suggested content (in addition to the suggested content mentioned above): • A description of the potential positive impact of the data you made publicly available on industry, academia, and so on.	**A single score on a scale of 0–6 is provided for each of the following statements:** • The team delivered a solution to their energy sector partner that met their needs. • The team integrated feedback from their partner to increase the value of the solution. • The benefits of the solution are clear and measurable. • The team effectively addressed their energy sector partner's problem. Track-2-specific consideration (in addition to the suggested considerations mentioned above): • The data made publicly available will have an enduring positive impact on others in industry, academia, and so on.
Solution Validation Question 4: How was your solution tested and validated?	
Suggested content competitor provides: • How your benefits to your energy sector partner were tested and validated to ensure your solution's accuracy and performance capabilities.	**A single score on a scale of 0–6 is provided, taking the following statements into consideration:** • The team included a detailed assessment of their solution's accuracy and generalization performance (e.g., cross validation and reporting out-of-sample results). • The team's provided assessment is comprehensive and rigorous.

Future Plans Question 5: What is the potential impact of your work moving forward?	
Suggested content competitor provides a description of: • Additional steps your partner is planning in response to this work. • How your solution can be integrated into the regular operations of other industry partners and what resources are needed to do so. • How the solution could be expanded to provide additional benefits. • How other industry partners could benefit from your solution. • How your specific solution could be transferred to other industry partners.	**A single score on a scale of 0–6 is provided for each of the following statements:** • The solution has the potential to be integrated into the team's energy sector partner's regular operations. • The solution has potential for broader impact moving forward. • Other industry partners will be interested in implementing solutions based on this work.

Reviewer Recommendation	
• There is no director corresponding submission requirement for this score. Rather, it is an overall assessment of all materials submitted to HeroX.	**A single score of either 1 or 6 of 1–6 is provided, taking the following statements into consideration:** • The innovation, team, and plan should be strongly considered for a Progress phase prize.

4.6.4 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.

4.6.5 Team Biographies

All team members must each include an up to half-page updated biography stating their previous and current experiences highlighting any changes from your Plan Phase submission. **Teams must include any additional team members or changes in their team.** A template[11] has been made available on HeroX: https://www.herox.com/DigitizingUtilitiesPrizeRound3/resource/2238.

[11] To assist teams, DOE is providing an elective template to illustrate the types of information needed to evaluate whether teams meet minimum requirements in the associated critical success factors. Teams are not required to use this template and may submit using any form or format of their choosing. All submissions should address the substantive measures outlined in the template outlines and described in this rules document.

4.6.6 Letters of Support or Commitment

It is required to include a letter of support from your energy sector partner. 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.

The letter of support from your energy sector partner should not be longer than two pages. This detailed letter of support from your energy sector partner should document your continued relationship with your partner (including any solution demonstrations), describe progress and successes achieved during the Progress phase, and highlight your partner's ongoing support and their overall experience.

4.6.6 Virtual Demo Day Event

Competitors are required to participate in a demo day event with a panel of expert reviewers in which competitors will present their demonstration video and additional presentation slides about progress made and solutions developed, followed by a question-and-answer session. Reviewers review and score your submitted material before the demo day and then, based on your demo day performance and deliberation with the judge, they will finalize their recommendations for winners. At least one representative from each team must be present at the demo day for the team to be considered for Progress phase prize.

4.7 How We Determine and Award Winners

The prize administrator screens all completed submissions and ensures that the teams are eligible. Then, the prize administrator, in consultation with DOE, assigns subject-matter-expert reviewers who independently score the content of each submission. The reviewers will comprise federal and nonfederal subject-matter experts with expertise in areas relevant to the competition. They will review the competitor's submission package according to the criteria mentioned earlier.

4.7.1 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 criteria described in the tables in Section 4.6.3.
- Reviewers will score each section on a scale 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.

4.7.2 Interviews

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

4.7.3 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).

4.7.4 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.

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 A. 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. Eastern Time 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 (DOE) 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 (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 identify the specific pages containing trade secrets, confidential, proprietary, or privileged information: “Notice of Restriction on Disclosure and Use of Data: Pages [list applicable pages] of this document may contain trade secrets, confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes. [End of Notice]”

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

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

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

A.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, likeness of any third party, musical recordings, clips of videos, television programs or motion pictures) in or in connection with the submission, unless (i) otherwise requested by the prize administrator or disclosed by the competitor in the submission, and (ii) the competitor acquired the necessary rights to use and to authorize others, including DOE, to use the submission, as specified throughout the rules.
2. To the best of the competitor's knowledge, the use of the submission in the prize, including any use by DOE or the prize administrator does not and will not infringe or violate any rights of any third party or entity, including, without limitation, patent, copyright, trademark, trade secret, defamation, privacy, publicity, false light, misappropriation, intentional or negligent infliction of emotional distress, confidentiality, or any contractual or other rights.
3. All persons who were engaged by the competitor to work on the submission or who appear in the submission in any manner have:
    a. Given the competitor their express written consent to submit the submission for exhibition and other exploitation in any manner and in any and all media, whether now existing or hereafter discovered, throughout the world;
    b. Provided written permission to include their name, image, or pictures in or with the submission (or, if a minor who is not competitor's child, competitor must have the permission of the minor's parent or legal guardian) and the competitor may be asked by the prize administrator to provide permission in writing; and
    c. Not been and are not currently under any union or guild agreement that results in any ongoing obligations resulting from the use, exhibition, or other exploitation of the submission.
4. The submission is free of malware.

A.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 Section A.4. 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 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 Digitizing Utilities Prize Round 3 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 DOE's Office of Electricity. When the prize administrator is referenced in this document, it refers to staff from both the Alliance for Sustainable Energy and Office of Electricity staff. Ultimate decision-making authority regarding prize matters rests with the 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.