

AMERICAN  
**MADE**  
U.S. DEPARTMENT OF ENERGY

# Digitizing Utilities Prize Round 2



# Digitizing Utilities Prize: Round 2

Official Rules Document

Modification 5

August 2024

# Preface

The U.S. Department of Energy’s Digitizing Utilities 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 and notify registered prize participants.

Date	Modification
<p>1/5/2024</p>	<ul style="list-style-type: none"> <li>• Modification of Appendix 1: Additional Terms and Conditions: A.1 Requirements</li> <li>• Modification of 4.6.5 Letters of Support or Commitment</li> </ul> <p>The Digitizing Utilities Prize Round 2 has adjusted the submission close date for Phase 1 to May 7, 2024 at 5pm EST.</p> <p>The Digitizing Utilities Prize Round 2 has adjusted the language of 4.6.5 Letters of Support or Commitment as follows in red: “This detailed letter of support from your utility partner should document your continued relationship with your utility partner (including any solution demonstrations), describe progress and successes achieved during the Progress Phase, and highlight your utility partner’s ongoing support and their overall experience”</p>
<p>4/1/2024</p>	<ul style="list-style-type: none"> <li>• Modification of Section 1.</li> <li>• Modification of Section 1.1 Prizes</li> <li>• Modification of Section 2.1 Prize Background</li> <li>• Modification of Section 3.6.3 Narrative</li> <li>• Modification of Section 4.2 Prizes</li> <li>• Modification of Section 4.5 Progress Phase Process</li> <li>• Modification of Section 4.6.3 Narrative</li> <li>• Addition of Section 4.6.6 Virtual Demo Day</li> <li>• Addition of Section 4.8 Vouchers</li> <li>• Addition in Appendix 1: Additional Terms and Conditions: A.2 Voucher Pairing System</li> </ul> <p>The Digitizing Utilities Prize Round 2 has added up to three \$75,000 vouchers each to the Utility Data/Digitization Challenge Track for Progress Phase winners.</p> <p>The Digitizing Utilities Prize Round 2 has added a virtual demo day to the submission requirements for the Utility Data/Digitization Challenge Track Progress Phase competitors.</p> <p>The Digitizing Utilities Prize Round 2 has added the requirements and definitions of a utility.</p>

	<p>The Digitizing Utilities Prize Round 2 has added additional language requesting that competitors 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 data sets, regardless of if provided internally or from your utility partner.</p>
<p>6/27/2024</p>	<ul style="list-style-type: none"> <li>• Modification of Section 1.1 Prizes</li> <li>• Modification of Section 3.2 Prizes</li> <li>• Modification of Section 4.1 Goal</li> <li>• Modification of Section 4.2 Prizes</li> </ul> <p>The Digitizing Utilities Prize Round 2 has adjusted the Phase 1 – Plan number of winners and prize amounts for Track 2 - Utility Cybersecurity Challenge, as well as the prize amount for Track 2 - Utility Cybersecurity Challenge in Phase 2 – Progress.</p> <p>The Digitizing Utilities Prize Round 2 has adjusted the Phase 1 – Plan number of winners for Track 1 - Utility Digitization/Data Challenge.</p>
<p>7/15/2024</p>	<ul style="list-style-type: none"> <li>• Modification of Section 1.1 Prizes</li> <li>• Modification of Section 3.2 Prizes</li> <li>• Modification of Section 4.2 Prizes</li> </ul> <p>The Digitizing Utilities Prize Round 2 has adjusted the Phase 1 – Plan number of winners and prize amounts for Track 2 - Utility Cybersecurity Challenge, as well as the prize amount for Track 2 - Utility Cybersecurity Challenge in Phase 2 – Progress.</p>
<p>8/9/2024</p>	<ul style="list-style-type: none"> <li>• Modification of Section 4.3 How To Enter</li> <li>• Modification of Section 4.5 Progress Phase Process</li> <li>• Modification of Section 4.6.3 Narrative</li> <li>• Modification of Section 4.6.6 Virtual Demo Day</li> </ul> <p>The Digitizing Utilities Prize Round 2 has added additional language in Section 4.3 to indicate teams must compete within the track in which they were awarded during in the Plan Phase.</p> <p>The Digitizing Utilities Prize Round 2 has adjusted the Progress Phase Process and Virtual Demo Day Sections to require competitors in either the Utility Digitization/Data Challenge Track or the Utility Cybersecurity Challenge Track to participate in the Virtual Demo Day.</p> <p>The Digitizing Utilities Prize Round 2 has adjusted the Progress Phase Narrative to include an additional question regarding the national laboratory voucher for competitors in the Utility Digitization/Data Challenge Track and has removed the question relating to the competitors competing in both the Utility Digitization/Data Challenge Track and the Utility Cybersecurity Challenge Track.</p>

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# 1 Introduction

Following a successful Round 1 of the American-Made Digitizing Utilities Prize, the U.S. Department of Energy (DOE) Office of Electricity and the DOE Office of Cybersecurity, Energy Security, and Emergency Response (CESER) are launching the American-Made Digitizing Utilities Prize Round 2. This prize aims to incentivize utilities to connect with interdisciplinary teams of software developers and data experts to facilitate the transformation of digital systems, data analytics, and cybersecurity for electric utilities.

The cybersecurity risk posture for the energy sector is rapidly changing. CESER is looking to support innovative tools or technologies that can mitigate the most significant cybersecurity threats and risks to the United States' critical infrastructure for energy.<sup>1</sup>

The Digitizing Utilities Prize contains two tracks:

- Utility Digitization/Data Challenge
- Utility Cybersecurity Challenge.

Competitors are not restricted to a single track. If a competitor's proposed solution simultaneously addresses a utility digitization/data challenge and a cybersecurity challenge, that competitor is eligible to be selected as a winner in both tracks.

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, synchrophasor data, weather data, fire assessment data, cybersecurity, and more. DOE invites anyone, individually or as a team, 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 utility community on how to solve data- and/or cybersecurity-related challenges.

Through this prize, teams will identify a utility partner facing a digitization, data, or cybersecurity challenge and propose a solution for solving it. Proposed challenges and solutions must have an implementation path within the utility partner. Topics can include, but are not limited to:

- Addressing data quality, interoperability, and processing at the source of data generation within a utility
- Increasing a utility's resilience to cyberattacks
- Integrating data sets across different sources, including both inside and outside a utility
- Developing data analytic systems to improve resilience and system operation, including predicting asset health and maintenance needs
- Utilizing energy data to improve energy equity efforts within a utility
- Developing data analytic systems to address wildfires, earthquakes, storms, and other natural hazards
- Providing better data visualization and informational displays as well as enhanced user experience to operators and engineers at utilities
- Improving a utility's ability to evaluate and integrate new software tools
- Automating menial operational and analytical tasks within utilities in a transparent manner

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<sup>1</sup> The term "critical infrastructure" has the meaning provided in section 1016(e) of the Patriot Act of 2001 (42 U.S.C. 5195c(e)), namely, systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters. [Presidential Policy Directive – Critical Infrastructure Security and Resilience | whitehouse.gov \(archives.gov\)](https://www.whitehouse.gov/archives.gov)

- Making operational data available for use within utilities while maintaining security
- Automating data anonymization and data set creation for secure sharing with outside researchers and third parties.

For the Digitizing Utilities Prize Round 2, DOE has a specific interest in problems and solutions around cybersecurity, including mitigating the most significant cybersecurity threats and risks to U.S. critical infrastructure.

Proposed cybersecurity entries must demonstrate improvements in risk identification, analysis, prediction, or proactive response for enhanced protection of digital energy infrastructures. Proposed entries need to be adoptable by various energy stakeholders. Solutions may also have a dual-use purpose, i.e., military or government energy stakeholders. Strong entries will consider solutions that address novel challenges presented by modernization and digital interconnectivity of energy management systems, distributed energy resources, electric vehicle supply equipment, etc.

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

Competitors are not restricted to a single track. If a competitor's proposed solution simultaneously addresses a utility digitization/data challenge and a cybersecurity challenge, that competitor is eligible to be selected as a winner in both tracks. Competitors must designate whether they are competing in the Utility Digitization/Data Challenge, the Utility Cybersecurity Challenge, or both the Utility Digitization/Data Challenge and the Utility Cybersecurity Challenge. If a competitor competes in both the Utility Digitization/Data Challenge and the Utility Cybersecurity Challenge, DOE reserves the right to move the submission into a single track at its discretion.

If a submission simultaneously addresses both the Utility Digitization/Data Challenge and the Utility Cybersecurity Challenge, then a competitor only needs to submit a single submission, identifying the submission as a "both tracks submission." Additionally, competitors submitting a "both tracks submission" will need to answer the "both tracks submission" question.

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.

**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 data sets, regardless of if provided internally or from your utility partner.**

## 1.1 Prizes

The Digitizing Utilities Prize Round 2 offers a total prize pool of **\$2.150 million** across two tracks.

### Track 1 – Utility Digitization/Data Challenge

In Phase 1 – Plan, teams of developers will connect with a utility partner, identify a data challenge, and propose a solution to that problem. 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 **nine** winning teams will receive \$75,000 each in cash and will be eligible to advance to Phase 2 – Progress.

In Phase 2 – Progress, winning teams will work with their utility partners **over the course of 4** months to develop and refine their solution that addresses the issues their utility 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 will be selected as winners and will each receive a cash prize of \$200,000 **and a \$75,000 national laboratory voucher to be used at a single national laboratory.**

Phase	# Winners	Prize
Track 1: Phase 1 – Plan	Up to <b>nine</b>	\$75,000 cash prize each
Track 1: Phase 2 – Progress	Up to three	\$200,000 cash prize and <b>\$75,000 voucher each</b>

### Track 2 – Utility Cybersecurity Challenge

In Phase 1 – Plan, teams of developers will connect with a utility partner, identify a cybersecurity challenge, and propose a solution to that problem. The teams will have demonstrated a thorough understanding of the problem, 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 problem. Successful teams will have defined their approach and plan of action to solve the issue presented. Up to **two** winning teams will receive **\$175,000** each in cash and will be eligible to compete in Phase 2 – Progress.

In Phase 2 – Progress, winning teams will work **over the course of 4** months to develop and refine their solution that addresses the issues their utility partners are facing. The teams will be able to present their progress toward implementing their solution. At the end of Phase 2 – Progress, one competitor will be selected as a winner and will receive a cash prize of **\$300,000.**

Phase	# Winners	Prize
Track 2: Phase 1 – Plan	<b>Up to two</b>	<b>\$175,000 cash prize each</b>
Track 2: Phase 2 – Progress	Up to one	<b>\$300,000 cash prize</b>

Competitors are not restricted to a single track. If a competitor’s proposed solution simultaneously addresses a utility digitization/data challenge and a cybersecurity challenge, that competitor is eligible to be selected as a winner in both tracks.

## 1.2 Key Dates

Refer to the timeline on the [HeroX](#) page for relevant dates.

## 1.3 Eligibility and Competitors

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



- A competitor may only submit a single submission.
- 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.
- In the case of a private entity, shall be incorporated in and maintain a primary place of business in the United States, and in the case of an individual, whether participating singly or in a group, shall be a citizen or permanent resident of the United States.
- Academic institutions must be based in the United States.
- An individual prize competitor or group of competitors who are not competing as part of an incorporated private entity must all be United States citizens or legal permanent residents.
- Individuals competing as part of an incorporated private entity may participate if they are legally allowed to work 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.
- Entities and individuals identified as a restricted party on one or more screening lists of the U.S. Departments of Commerce, State, or the Treasury are not eligible to compete. See the [Consolidated Screening List](#).
- Individuals participating in a foreign government talent recruitment program<sup>2</sup> sponsored by a country of risk<sup>3</sup> 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.
- 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.

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<sup>2</sup> 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.

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

In keeping with the goal of growing a community of innovators, competitors are encouraged to form multidisciplinary teams while developing their concepts. 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 Background

## 2.1 Prize Background

The Digitizing Utilities Prize is part of the American-Made Challenges program, which is your fast track to the clean energy revolution. Funded by DOE, American-Made Challenges 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 data sets (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 data sets, both the ones they create and those from other sources (like weather data), to improve reliability and resilience and meet the changing system dynamics from renewable integration. 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 Electricity Advisory Committee's report, "[Big Data Analytics: Recommendations for the U.S. Department of Energy](#)," which outlines the need for DOE support in advancing data analytics for utilities' existing data sources.

For the electricity sector to fully utilize the data it is creating, it must undergo a transformation in how it manages data quality, storage, and processing. 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 reliability, resilience, and affordable operation of the power system.

The electric industry is also under constant threat of ever-evolving cyber threats. As smarter, interconnected renewable energy resources are deployed into the electric grid, the threat of cyberattacks continues to increase. In order for the electric industry to take full advantage of these newly developed and integrated resources, utilities need to ensure the resources and their systems are not susceptible to cyberattacks. DOE's CESER is committed to accelerating the research and development of cybersecurity efforts and technologies.

This prize aims to connect utilities with interdisciplinary teams of software developers, data experts, and cybersecurity specialists to facilitate the transformation of digital systems, data analytics, and cybersecurity for electric utilities. These challenges can include not only utilizing data with analytics, but also developing pipelines for processing, data quality assurance, data storage, and deletion.

**For this prize, utilities must be located in the United States and are defined as any of the following:**

- Rural electric cooperatives;
- 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 1 or more political subdivisions of a State;

- Investor-owned electric utilities (IOUs);
- Electric wire owning and/or operating entities.

## 2.2 Program Goal Requirements

Only submissions relevant to the goals of this program will be considered for a prize.

The prize administrator must conclude that all the following statements are true when applied to each competitor's submission:

- The proposed solution is related to the electric grid-scale utility industry.
- Most activities described in and supported by the submission package are performed in the United States and have the potential to benefit the U.S. electricity sector.
- 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.

## 2.3 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 Plan Phase

## 3.1 Goal

Competitors will have identified a utility partner and demonstrated a thorough understanding of the utility's presented 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 challenge. The teams will have defined their approach and plan of action to solve the issue presented by the partner utility.

## 3.2 Prizes

For Track 1 – Utility Digitization/Data Challenge, up to **nine** teams will be selected as winners and will each receive cash prizes of \$75,000.

For Track 2 – Utility Cybersecurity Challenge, up to **two** teams will be selected as winners and will each receive cash prizes of **\$175,000**.

## 3.3 How To Enter

Go to [HeroX](#) and follow the instructions for registering and submitting all required materials before the Phase 1 deadline. Competitors can also 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 Plan Phase Process

The Plan Phase consists of the following steps:

1. **Review of Utility Partner Challenge Statements:** Competitors identify a utility partner and what challenge they want to address.
2. **Activation and Submission:** Competitors complete their submission packages and submit them online before the Plan Phase closes.
3. **Assessment:** Industry experts review the submissions. Reviewers make recommendations to DOE, who is the final judge for the prize.
4. **Announcement:** DOE publicly announces the winners of each track, and winners begin to compete in the Progress Phase.

## 3.6 What To Submit

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

- Ninety-second video (public)
- Cover page
- Narrative that answers three questions
- Summary PowerPoint slide
- Required letter of commitment from a utility partner.

The following details 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
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

### 3.6.1 Online Public Video (Will Be Made Public)

Online Public Video – <i>Who is your team and what is your solution in 90 seconds?</i>
<b>Suggested content competitor provides</b>
<ul style="list-style-type: none"> <li>• Describe your team and how it is uniquely qualified to solve the selected utility’s problems.</li> <li>• Describe your proposed solution and why it is the best approach to the utility’s problem.</li> </ul> <p>Although there are no specific scoring criteria for the video, it will be evaluated as part of the entire submission package. The video serves as a first introduction of your team and solution to the reviewers.</p>

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)
- Other partners (if any)
- Your city, state, and nine-digit ZIP code.

### 3.6.3 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, unless you are competing in both tracks, in which case you must not exceed 3,250 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 data sets, regardless of if provided internally or from your utility partner.

<p><b>Narrative</b>  <i>Maximum 2,500 words and five supporting images or figures (PDF).</i></p>	
<p><b>Team</b>  <i>Question 1: What is your team’s past experience providing solutions for this or related problems?</i></p>	
<p><b>Suggested content competitor provides</b></p> <ul style="list-style-type: none"> <li>● Describe your team, the organizations that comprise your team, and the backgrounds and expertise of your team members.</li> <li>● Describe your utility partner and the team’s relationship with the utility.</li> <li>● Describe the utility partner’s challenge, its broader context, and how addressing the challenge will improve the utility’s operations.</li> <li>● Describe the unique experience or combination of capabilities your team brings to the table.</li> <li>● Describe the relevant algorithms, software models, or concepts your team has developed and can leverage for this prize.</li> <li>● Describe whether and how your approach could be applied to other utilities facing a similar problem.</li> </ul>	<p><b>A single score on a scale of 0–5 is provided, taking the following statements into consideration:</b></p> <ul style="list-style-type: none"> <li>● The team has the relevant skills and expertise to solve the proposed problem.</li> <li>● The team has a relationship with a committed utility partner.</li> <li>● The team has access to relevant resources that can be leveraged for this prize.</li> <li>● The team demonstrates a thorough understanding of the utility’s problem, its broader context, and the importance of solving this problem.</li> <li>● The team has sufficient interdisciplinary expertise to develop and integrate digital infrastructure and data analytics tools effectively.</li> <li>● The team’s past experience and capabilities indicate a high likelihood of success.</li> </ul>
<p><b>Solution</b>  <i>Question 2: What is your solution to the problem?</i></p>	
<p><b>Suggested content competitor provides</b></p> <ul style="list-style-type: none"> <li>● Describe your solution to the problem and why you chose this method.</li> <li>● Describe the specific benefits your solution will provide to the utility.</li> <li>● Describe how the benefits can be quantified and measured following deployment.</li> <li>● Describe how this work expands on your team’s prior experience and capabilities.</li> <li>● Describe what other solutions you considered and why you chose not to implement them.</li> <li>● Describe the benefits of your approach over alternatives a utility might consider.</li> </ul>	<p><b>A single score on a scale of 0–5 is provided, taking the following statements into consideration:</b></p> <ul style="list-style-type: none"> <li>● The competitor clearly describes the proposed technology, how the technology is unique and innovative, and how the technology will advance the current state of the art.</li> <li>● The team is familiar with alternative solutions and provides strong justification for the selection of their approach over others.</li> <li>● 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.</li> </ul>

<p>Cybersecurity-specific suggested content (in addition to the suggested content above):</p> <ul style="list-style-type: none"> <li>● Explain how your solution advances upon current state-of-the-art cybersecurity technology, and what makes it innovative and different.</li> <li>● Describe the impact your cybersecurity solution can have on the industry and how it can be replicated within other utilities.</li> <li>● Explain how your cybersecurity solution improves the utility’s ability to detect, deter, and mitigate cybersecurity threats.</li> <li>● If applicable, describe the certifications and/or standards that your cybersecurity solution qualifies for and/or meets.</li> </ul>	<ul style="list-style-type: none"> <li>● The competitor clearly articulates the business need, primary use case, and market potential for the solution.</li> </ul> <p>Cybersecurity-specific suggested content (in addition to the suggest criteria above):</p> <ul style="list-style-type: none"> <li>● The solution enables and improves the utility’s capability to detect, deter, and mitigate cybersecurity threats.</li> </ul>
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**Goals**  
*Question 3: What are the goals you are aiming to achieve during the Progress Phase?*

<p><b>Suggested content competitor provides</b></p> <ul style="list-style-type: none"> <li>● Define the goals you aim to achieve during the Progress Phase and their respective time frames.</li> <li>● Provide evidence that, if your team is selected to move forward, your team can successfully complete the Progress Phase.</li> </ul>	<p><b>A single score on a scale of 0–5 is provided, taking the following statements into consideration:</b></p> <ul style="list-style-type: none"> <li>● The goals show a commitment to solving the utility’s problem.</li> <li>● The goals are ambitious, yet reasonable, and the team has a high likelihood of successfully achieving all goals outlined within the Progress Phase.</li> <li>● The goals are SMART (specific, measurable, achievable, relevant and time-bound).</li> <li>● The team has the resources available to successfully achieve the goals in the next phase.</li> </ul>
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**Implementation Plan**  
*Question 4: How will you measure the success of your approach?*

<p><b>Suggested content competitor provides</b></p> <ul style="list-style-type: none"> <li>● Define your implementation plan during the Progress Phase, including tasks, milestones, timeline, and what you will deliver to the utility.</li> <li>● Identify the data sets you will need to be successful and how they will be obtained. Describe the process for obtaining data from your partner utility.</li> <li>● Describe any anticipated challenges and how they will be addressed.</li> </ul>	<p><b>A single score on a scale of 0–5 is provided, taking the following statements into consideration:</b></p> <ul style="list-style-type: none"> <li>● The plan shows a commitment to solving the utility’s problem.</li> <li>● The team has identified appropriate metrics for success.</li> <li>● The team has a well-defined plan for implementing their solution.</li> <li>● The plan is ambitious, yet reasonable, and the team has a high likelihood of successfully implementing it.</li> </ul>
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<ul style="list-style-type: none"> <li>Describe your plan for regular communication with your utility partner.</li> </ul>	<ul style="list-style-type: none"> <li>The plan is built on reasonable assumptions and lessons learned from other notable efforts in this space.</li> <li>The required data sets are likely to be available and/or the team has a credible plan to obtain the necessary data.</li> <li>Competitors have submitted a strong letter of cooperation or commitment from a partnering utility.</li> <li>The team has the resources available to successfully implement the plan in the next phase.</li> </ul>
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**Both Tracks Submission– 750 words max.**  
*Only complete this question if you are competing in both the Utility Digitization/Data Challenge and the Utility Cybersecurity Challenge.*

<p><b>Suggested content competitor provides</b></p> <ul style="list-style-type: none"> <li>Describe how your solution simultaneously addresses utility data/digitization challenges and utility cybersecurity challenges.</li> <li>Describe your team’s ability, knowledge, experience, qualifications, and available resources to make significant progress on both the utility data/digitization and utility cybersecurity aspects of your solution during the Progress Phase.</li> <li>Describe how both the utility data/digitization and utility cybersecurity aspects of your solution will be developed during the Progress Phase.</li> <li>Describe your partnership with the identified utility and how you will develop, implement, test, and validate both the utility data/digitization and utility cybersecurity aspects of your solution, in partnership with your identified utility partner.</li> </ul>	<p><b>While there are no specific scoring criteria for this additional content, it will be evaluated as part of the entire submission package.</b></p> <ul style="list-style-type: none"> <li>The team’s proposed solution adequately and simultaneously addresses both the utility data/digitization challenge and the utility cybersecurity challenge.</li> <li>The team has the knowledge, resources, qualifications, and experience to make meaningful progress on both the utility data/digitization and utility cybersecurity aspects of their solution.</li> <li>The team has a demonstrated plan to implement, test, and validate both the utility data/digitization and utility cybersecurity aspects of their solution, in partnership with their identified utility partner.</li> <li>The team should strongly be considered for both the Utility Digitization/Data Challenge and the Utility Cybersecurity Challenge.</li> </ul>
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**Reviewer Recommendation**

<ul style="list-style-type: none"> <li>There is no direct corresponding submission requirement for this score. Rather, it is an overall assessment of all materials submitted in HeroX.</li> </ul>	<p><b>A single score on a scale of 0–5 is provided, taking the following statement into consideration:</b></p> <ul style="list-style-type: none"> <li>The innovation, team, and plan should be strongly considered for a Plan Phase prize.</li> </ul>
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## 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 at least 14-point font.

## 3.6.5 Letters of Support or Commitment

It is required to include a letter of support from your utility 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 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 with expertise in areas relevant to the competition. They will review the competitors' submitted video pitches and impact plans according to the evaluation criteria described in [Section 3.6.3](#).

### 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 five criteria described in the tables in [Section 3.6.3](#).
- Reviewers will score each section on a scale from 0–5, 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, which can be up to 25 points, as described in the tables in [Section 3.6.3](#).
- The total scores from each reviewer will be averaged to produce a final score for the competing team/organization. This score will inform the judges' decisions on prize awards.

### 3.7.2 Interviews

DOE may decide to interview a subset of the 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.

### 3.7.3 Final Determination

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

### 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 the utility on the presented issue for 4 months to develop and refine a solution that addresses the issues their partner utility is facing. Teams will be able to present their progress toward implementing their solution.

## 4.2 Prizes

For Track 1 – Utility Digitization/Data Challenge, up to three teams will be selected as winners and will each receive cash prizes of \$200,000 and a \$75,000 national laboratory voucher.

For Track 2 – Utility Cybersecurity Challenge, one team will be selected as a winner and will receive a cash prize of \$300,000.

## 4.3 How To Enter

Only competitors who won the Plan Phase may compete in the Progress Phase. Competitors cannot adjust which track they are competing in and must compete in the track in which they were awarded. 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 consists of the following steps:

1. **Implementation of the Proposed Solution:** Competitors implement the solution they proposed during the Plan Phase in consultation with their utility partner.
2. **Submission:** Competitors complete their submission packages and submit them online before the Progress Phase closes.
3. **Assessment:** A panel of industry experts reviews the submissions and provides a recommendation to DOE, who is the selection official for this prize.
4. **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 are to be provided 30 days before the event.
5. **Selection:** DOE will select winners for each track, considering the written submissions, performance at the demo day, and the expert reviewer feedback.
6. **Announcement:** DOE publicly announces the winners of each track.

## 4.6 What To Submit

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

- Ninety-second video (public)
- Cover page

- Narrative that answers four questions
- Summary PowerPoint slide
- Required letters of commitment from a utility partner.

The following details 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
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

### 4.6.1 Online Public Video (Will Be Made Public)

<b>Online Public Video – <i>In 90 seconds, highlight your team’s progress during the Progress Phase.</i></b>
<b>Suggested content competitor provides</b>
<ul style="list-style-type: none"> <li>• Describe your team and how it is uniquely qualified to solve the selected utility’s problems.</li> <li>• Demonstrate your solution.</li> <li>• Describe why it is the best approach to the utility’s problem.</li> <li>• Highlight the progress your team made during the Progress Phase.</li> </ul>
<p>While there are no specific scoring criteria for the video, it will be evaluated as part of the entire submission package. The video serves as a first introduction of your team and solution to the reviewers.</p>

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
- Track
- 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.

## 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, unless you are competing in the Utility Digitization/Data Challenge Track, in which case you must not exceed 3,750 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 data sets, regardless of if provided internally or from your utility partner.**

<b>Narrative</b> <i>Maximum 3,000 words and five supporting images or figures (PDF).</i>	
<b>Team and Problem Overview</b> <i>Question 1: What problem were you trying to solve?</i>	
<p><b>Suggested content competitor provides</b></p> <ul style="list-style-type: none"> <li>Briefly describe the challenge and how it was impacting the utility.</li> <li>Describe the problem’s broader impact on the industry.</li> <li>Describe what you have learned about the problem during the Progress Phase.</li> </ul>	<p><b>A single score on a scale of 0–5 is provided, taking the following statements into consideration:</b></p> <ul style="list-style-type: none"> <li>The team understands the utility’s problem and its broader context in the industry.</li> <li>The team significantly advanced their understanding of the problem during the Progress Phase.</li> </ul>
<b>Solution Implementation</b> <i>Question 2: Did you achieve the goals identified in the Plan Phase?</i>	
<p><b>Suggested content competitor provides</b></p> <ul style="list-style-type: none"> <li>Briefly describe your solution.</li> <li>Describe the goals you outlined during the Plan Phase, and whether you achieved each of the goals identified.</li> <li>Describe how you implemented your plan to solve the problem and whether you were able to meet your planned goals.</li> <li>Highlight key activities and milestones completed during the Progress Phase.</li> <li>Describe the interactions you had with the utility during the Progress Phase.</li> <li>Explain whether and why you had to deviate from your plan.</li> <li>Describe the data sets used in your solution.</li> <li>Describe the challenges you faced and how you overcame them.</li> </ul>	<p><b>A single score on a scale of 0–5 is provided, taking the following statements into consideration:</b></p> <ul style="list-style-type: none"> <li>The team demonstrates impressive and convincing progress made toward implementing the solution.</li> <li>Activities and milestones accomplished were directly related to the implementation plan.</li> <li>The team reasonably followed the plan from the Plan Phase, and any deviations from the plan were well justified.</li> <li>The data sets used were relevant to the problem and the solution.</li> <li>The team worked closely with the utility partner.</li> <li>The team achieved their goals.</li> </ul>

**Solution Impact**  
*Question 3: What benefits were provided to the team's utility partner?*

<p><b>Suggested content competitor provides</b></p> <ul style="list-style-type: none"> <li>● Describe what you delivered to the utility.</li> <li>● Describe any feedback you received from the utility when you delivered your solution.</li> <li>● Using the metrics identified in the Plan Phase, quantify the benefits your solution is providing.</li> <li>● Describe to what extent your solution has solved the utility's problem and what additional steps are needed.</li> </ul>	<p><b>A single score on a scale of 0–5 is provided, taking the following statements into consideration:</b></p> <ul style="list-style-type: none"> <li>● The team delivered a solution to their utility partner that met the partner's needs.</li> <li>● The team integrated feedback from the utility to increase the value of the solution.</li> <li>● The benefits of the solution are clear and measurable.</li> <li>● The team effectively addressed the utility's problem.</li> </ul>
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**Solution Validation**  
*Question 4: How was your solution tested and validated?*

<p><b>Suggested content competitor provides</b></p> <ul style="list-style-type: none"> <li>● Describe how your benefits to the utility were tested and validated to ensure your solution's accuracy and performance capabilities.</li> </ul>	<p><b>A single score on a scale of 0–5 is provided, taking the following statements into consideration:</b></p> <ul style="list-style-type: none"> <li>● The team included a detailed assessment of models' accuracy and generalization performance (e.g., rigorous cross-validation and reporting out-of-sample results).</li> <li>● The team's provided assessment is comprehensive and rigorous.</li> </ul>
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**Future Plans**  
*Question 5: What is the potential impact of your work moving forward?*

<p><b>Suggested content competitor provides</b></p> <ul style="list-style-type: none"> <li>● Describe additional steps the utility is planning in response to this work.</li> <li>● Describe how your solution can be integrated into the regular operations of the utility and what resources are needed to do so.</li> <li>● Describe how the solution could be expanded to provide additional benefits.</li> <li>● Describe how other utilities could benefit from your solution.</li> <li>● Describe how your specific solution could be transferred to other utilities.</li> </ul>	<p><b>A single score on a scale of 0–5 is provided, taking the following statements into consideration:</b></p> <ul style="list-style-type: none"> <li>● The solution has the potential to be integrated into the utility's regular operations.</li> <li>● The solution has potential for broader impact moving forward.</li> <li>● Other utilities will be interested in implementing solutions based on this work.</li> </ul>
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<b>Voucher Plans – 750 words max.</b>	
<i>Only complete this question if you are competing in the Utility Digitization/Data Challenge Track.</i>	
<p><b>Suggested content competitor provides</b></p> <ul style="list-style-type: none"> <li>• What type of work do you intend to complete using the national laboratory voucher?</li> <li>• What impact will this voucher have on your solution?</li> <li>• What are the future implications for your team/company if you receive a voucher?</li> <li>• Briefly describe your potential plans and/or project scopes that you would submit if awarded a national laboratory voucher.</li> <li>• Describe how both the team and utility will partner to maximize the use of the national laboratory voucher.</li> <li>• Describe the expected cost-share to be provided by the team and/or utility.</li> </ul>	<p><b>A single score on a scale of 0–5 is provided, taking the following statements into consideration:</b></p> <ul style="list-style-type: none"> <li>• The team’s planned use of the national laboratory voucher is a good use of national laboratory resources.</li> <li>• The team’s planned use of the national laboratory vouchers is likely to have significant impact on the team’s solution.</li> <li>• The team’s proposed voucher plans are reasonable and relate to their solution.</li> <li>• Both the team’s and utility’s planned involvement in the national laboratory voucher are likely to expand the voucher’s impact on the solution.</li> <li>• The team’s planned use of the voucher is likely to improve the team’s ability to expand the solution beyond the initial utility partner.</li> <li>• The team’s described cost-share is appropriate and is in-line with the goals of this prize.</li> </ul>
<b>Reviewer Recommendation</b>	
<ul style="list-style-type: none"> <li>• There is no direct corresponding submission requirement for this score. Rather, it is an overall assessment of all materials submitted in HeroX.</li> </ul>	<p><b>A single score on a scale of 0–5 is provided, taking the following statement into consideration:</b></p> <ul style="list-style-type: none"> <li>• The innovation, team, and plan should be strongly considered for a Progress Phase prize.</li> </ul>

#### 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 at least 14-point font.

#### 4.6.5 Letters of Support or Commitment

It is required to include a letter of support from your utility 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 utility partner should not be longer than two pages.



This detailed letter of support from your utility partner should document your continued relationship with your utility partner (including any solution demonstrations), describe progress and successes achieved during the Progress Phase, and highlight your utility partner's ongoing support and their overall experience.

## 4.6.6 Virtual Demo Day Event

Competitors are required to participate in a virtual 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 public question-and-answer session. Reviewers review and score your submitted material before the virtual demo day and then, based on your demo day performance and deliberation with the other reviewers, they will finalize their recommendations for winners. At least one representative from each team must be present at the virtual demo day for the team to be considered for a Progress Phase Prize.

## 4.7 How We Determine and Award Winners

The prize administrator screens all completed submissions and ensures 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 with expertise in areas relevant to the competition. They will review the competitors' submitted video pitches and impact plans according to the evaluation criteria described in [Section 4.6.3](#).

### 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 six criteria described in the tables in [Section 4.6.3](#).
- Reviewers will score each section on a scale from 0–5, 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, which can be up to 30 points, as described in the tables in [Section 4.6.3](#).
- The total scores from each reviewer will be averaged to produce a final score for the competing team/organization. This score will inform the judges' decisions on prize awards.

### 4.7.2 Interviews

DOE may decide to interview a subset of the competitors. DOE may request interviews with utility partners. 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.

### 4.7.3 Final Determination

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

## 4.7.4 Announcement

Approximately 30 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.

The winners will provide information on their solutions, and these solutions will be publicly shared by DOE through a combination of written materials, webinars, and presentations. These materials should not contain propriety information, but should include the approach, general methodology, open-source tools, and relevant publications.

## 4.8 Vouchers

Up to three winners of the Utility Digitization/Data Challenge track Progress Phase will each receive a \$75,000 national laboratory voucher. Vouchers are to be redeemed at a **single** national laboratory. Utility Digitization/Data Challenge track Progress Phase winners will negotiate the scope of work to be performed under a voucher with national laboratory researchers. Voucher funds may not be redeemed for cash or transferred. Additional information on how the voucher program works will be made available during the Progress Phase under the HeroX Resources page.

## 4.9 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 Digitizing Utilities 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. EST on May 7, 2024, before the prize's Phase 1 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 [Section A.10](#). 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 (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 Voucher Pairing System

The Prize Administrator will coordinate with the other DOE national laboratories. Utility Digitization/Data Challenge track Progress Phase winners will then be able to negotiate specifics with their laboratory partner and begin voucher work. Voucher funds may not be redeemed for cash or transferred.

Further details about the voucher process will be provided during the Progress Phase and will be posted on the HeroX Resources page.

## A.3 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 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: (1) the person/entity does not respond to notifications, (2) the person/entity fails to sign and return the required documentation within the required time period, (3) the notification is returned as undeliverable, or (4) 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.4 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.5 Submission Rights

By making a submission and consenting to the rules of the contest, a 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 parts of the submission that are designated as "public" for government purposes. This license includes posting or linking to the public portions of the submission on the prize administrator or HeroX applications, including the contest website, DOE websites, and partner websites, and the inclusion of the submission in any other media worldwide. The submission may be viewed by DOE, the prize administrator, and judges and reviewers for purposes of the contests, including but not limited to screening and evaluation purposes. The prize administrator and any third parties acting on their behalf will also have the right to publicize competitors' names and, as applicable, the names of competitors' team members and organization who participated in the submission on the contest website, indefinitely.

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 (1) otherwise requested by the prize administrator and/or disclosed by the competitor in the submission, and (2) the competitor has either obtained the rights to use such third-party content or the content of the submission is considered in the public domain without any limitations on use.

2. Unless otherwise disclosed in the submission, the use thereof by the prize administrator, or the exercise by the prize administrator of any of the rights granted by competitor under these rules, does not and will not infringe on 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 the competitor's child, the 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.

## A.6 Copyright

Each competitor represents and warrants that the competitor is the sole author and copyright owner of the submission; the submission is an original work of the competitor or the competitor has acquired sufficient rights to use and to authorize others, including DOE, to use the submission, as specified throughout the rules; the submission does not infringe upon any copyright or any other third-party rights of which the competitor is aware; and the submission is free of malware.

## A.7 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.8 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.9 Publicity

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

Except where prohibited, participation in the contest constitutes each winner's consent to DOE 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.10 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) and (3). Competitors should assess the risks associated with their proposed activities and adequately insure themselves against possible losses.

## A.11 Records Retention and Freedom of Information Act

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

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

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

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

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

## A.12 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.13 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 failures, 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.14 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.15 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 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.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.**