Digitizing Utilities Prize Round 2

Informational Webinar
March 2024

Agenda

Office of Electricity (OE)

Overview

The Office of Electricity

Electricity Delivery System

TRANSMISSION   DISTRIBUTION

Office of Electricity

"The Office of the Grid"

Bulk Electricity Generation

Loads and Distributed Generation

EERE

NE

FE

EERE
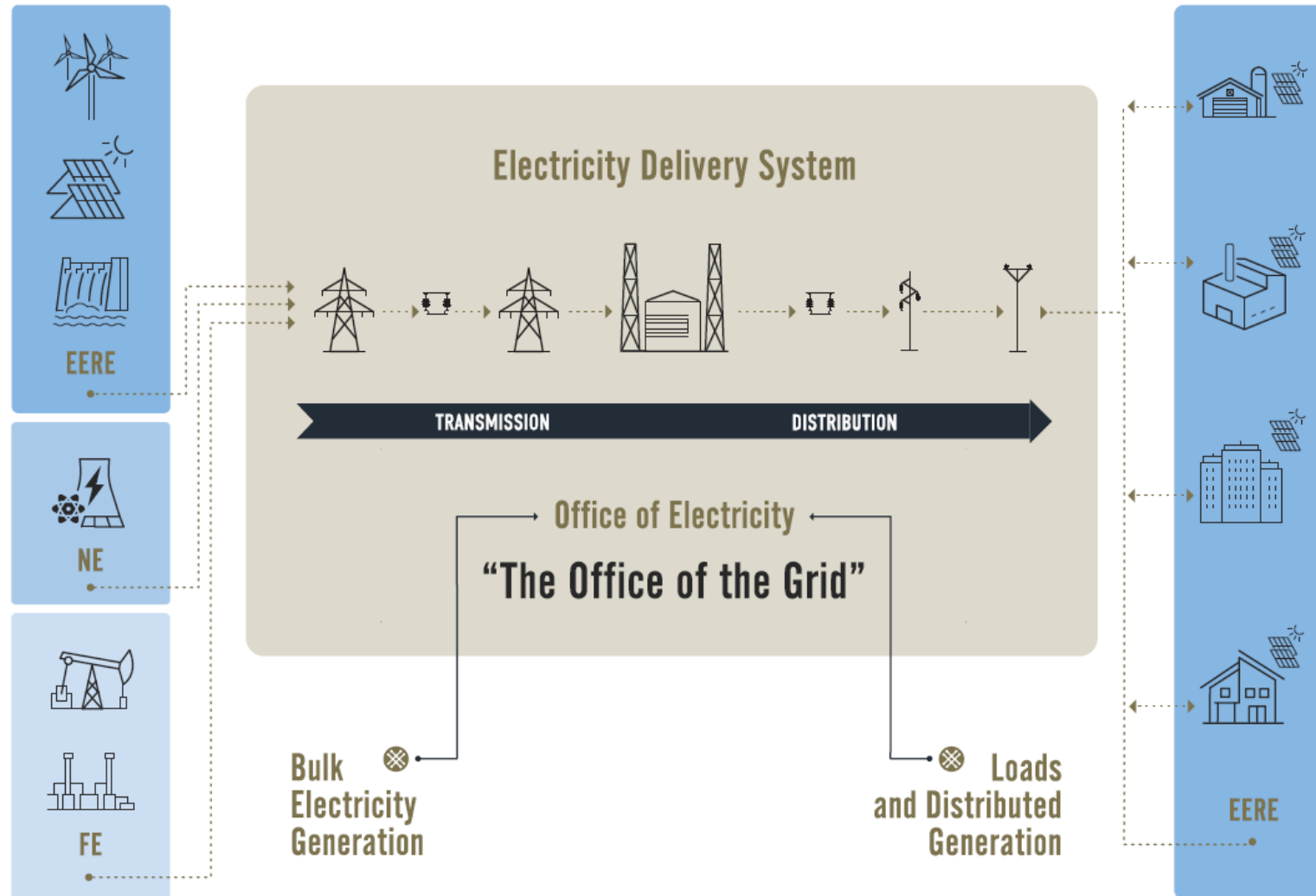
Transmission Reliability and Renewable Integration (TRRI)

Program Areas	Goal
Advanced Applications Research and Development	Improve transmission system visibility and controllability to ensure reliability and resilience given new operational challenges.
Decision Support Systems for Transmission Operations	Build sector capability to develop effective visualizations, and to provide more useful alarms and cues for grid operation, planning, and workforce development.
Reliability Metrics, Standards, and Emerging Issues	Develop new ways of measuring and characterizing the power system to ensure high quality, accurate data for model and tool development.

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Sensors and Data Analytics (SDA)

| Program Areas	Goal
Enhanced Distribution System Resilience and Control	Utilizing sensors to improve distribution system visibility and controllability to address new operational challenges
Data Integration and Event Detection	Data analytics for proactive resilience with high frequency data, ML/AI. Creating research data sets to develop applications.
Sensor Valuation, Validation and Standards	Improve system sensing through better sensor placement and improved data acquisition, consistency and validity

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CESER Mission

Strengthen the security and resilience of the U.S. energy sector from cyber, physical, and climate-based risks and disruptions.

Evolving Threats to Energy Infrastructure

Cyber Threats

Climate Risks

Physical Threats

EMP | GMD

Supply Chain
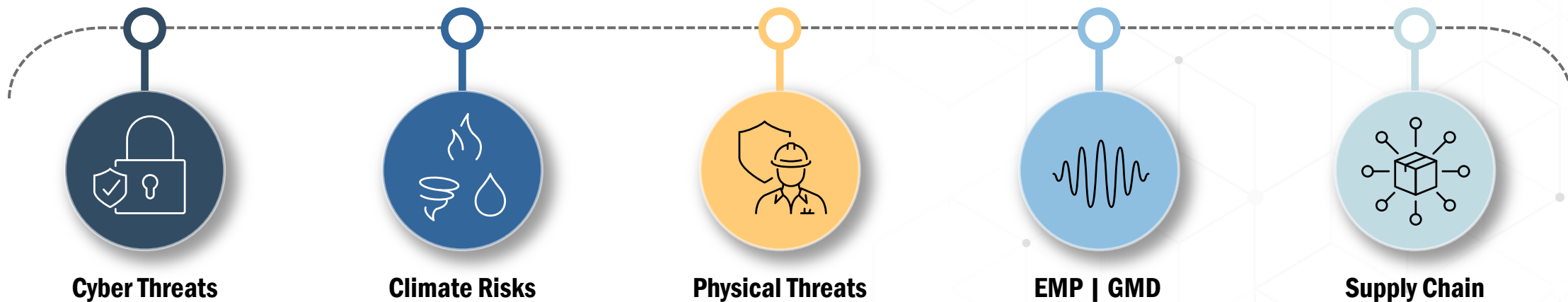
Digitizing Utilities Prize Round 2

Overview

Round 2

This $1.85M prize connects utilities with interdisciplinary teams of software developers and data experts to transform digital systems and data analytics for utilities in the energy sector.

Recent advances in sensor technologies allow utilities to access fast-streaming data sets, challenging traditional methods of data acquisition, use, and storage. To fully utilize the massive influx of data from these sensors, the electricity sector must undergo a transformation in how it manages data quality, storage, and processing.

The **Digitizing Utilities Prize** supports competitors as they develop innovative solutions to transform data analytics and system digitization for utilities, such as energy use data, synchrophasor data, weather data, fire assessment data, and more. In Round 2, innovators have the option to focus specifically on addressing cybersecurity threats and risks through demonstrated improvements in risk identification, analysis, prediction, or proactive response for enhanced protection of digital energy infrastructures.

Prize Tracks

Track 1: Utility Digitization/Data Challenge

Competitors will work with their utility partner to identify a data-related challenge and propose a thorough solution by the end of Stage 2.

Track 2: Utility Cybersecurity Challenge

Competitors will work with their utility partner to identify a cybersecurity-related challenge and propose a thorough solution by the end of Stage 2.

Competitors must identify whether their proposed solution applies to Track 1, Track 2, or **both** within the application. Applicants who choose to compete in both Track 1 and Track 2 are **eligible to receive prizes from both tracks.**

Prize Structure

Phase 1: Plan

Form teams and connect with a utility partner to identify a data challenge and propose a solution.

Prizes

Track 1 (Utility Digitization/Data Challenge): Up to 8 cash prizes of $75,000 each

Track 2 (Utility Cybersecurity Challenge): Up to 6 cash prizes of $75,000 each

Phase 2: Progress

Work with utility partners for 6 months to develop and refine a software solution that addresses the chosen challenge.

Prizes

Track 1 (Utility Digitization/Data Challenge): Up to 3 cash prizes of $200,000 each

Track 2 (Utility Cybersecurity Challenge): Up to 1 cash prize of $200,000

Phase 1: Plan – Submission Details

Materials to Submit

1. 90-second video (public)
2. Cover page
3. Narrative that answers four questions
4. One summary PowerPoint slide (public)
5. Required letters of commitment or support from utility partner

Where to Submit

- Submit all materials online on the official prize platform HeroX: https://www.herox.com/DigitizingUtilitiesRound2

- Use HeroX to review official Prize Rules, ask questions, and receive updates

Important Prize Updates

AMERICAN MADE | U.S. DEPARTMENT OF ENERGY

Digitizing Utilities Prize Round 2

TIMELINE

OCT 2023
Digitizing Utilities Prize Launch

MAY 2024
Phase 1 Submission Deadline

JULY 2024
Phase 1 Winner Announcement

NOV 2024
Phase 2 Submission Deadline

JAN 2025
Phase 2 Winner Announcement

2023 | 2024

2025

Updates to the Official Rules

Phase 2: Progress - Demo Day

- Track 1 (Utility Digitization/Data Challenge) competitors **who advance to Phase 2** will now submit a demonstration video as part of their Phase 2 submission package

- Competitors will showcase this video and a presentation to a panel of judges on the actual Demo Day, followed by a live Q&A

- This is a required event for Track 1 Phase 2 competitors

- More information/details will be provided 30 days before the event

Updates to the Official Rules (cont.)

Now Offering Vouchers

Vouchers make it possible for prize winners to gain access to the **tools, equipment, and expertise** needed to continue developing and testing their innovative solutions

- Three $75,000 vouchers will be awarded to the Phase 2 winners of Track 1 (Utility Digitization/Data Challenge) **only**

- Voucher must be used solely at a single national lab

- Read more about vouchers in the April 2024 modification of the prize's Official Rules on HeroX *(coming soon)*

Matchmaking & FAQs

Power Connector

yet2

How can I find a utility/non-utility partner?

yet2 is here to help connect utility partners with non-utility teams and individuals (and vice versa)! Reach out to amclaren@yet2.com with the following info:

1. The name and email of your team captain and any additional team members

2. LinkedIn profiles for all team members (if applicable)

3. Team areas of interest, capabilities, and experience.

How can I receive Phase 1 support?

Sign up for a 30-minute office hour slot (through the link on HeroX) with yet2 to receive support and mentorship.

FAQ

Question: Is there a template for the letter of commitment needed from a utility company?

Answer: While there is no specific template for the letter of support/commitment from your utility partner, we have put together a list of suggested items to be included in your letter, both if you are a utility submitting to the prize or partnering with a team. This list can be found under the "Resources" tab on the HeroX prize page.

Question: Can a utility be the "team lead" and the entity that receives any funds that are awarded to the team?

Answer: Yes, a utility can be the team lead on a submission. It is not required, although encouraged, for a utility to partner with an outside team. The utility can also receive the funds from the prize.

Question: Can my team compete in both Track 1 and Track 2?

Answer: Yes! A competitor may only submit a **single** submission, however, when submitting your application, you're able to select "**Both the Utility Digitization/Data Challenge and the Utility Cybersecurity Challenge**" in Section 5, which is where you will upload the rest of your submission.

Question: Can multiple teams be partnered with the same utility company?

Answer: Yes! However, each submission must support a different idea.

FAQ

Question: Can non-utilities submit more than one application?

Answer: As stated in the Official Rules document, a competitor is only allowed to submit a single application. Non-utilities may submit more than one application so long as (1) all team members are different and (2) the submission ideas are different.

Question: Can non-utility competitors partner with multiple utilities?

Answer: Competitors are encouraged to only partner with a single utility per submission.

Question: Is there any benefit to having multiple utility letters of support?

Answer: Having multiple letters of support may strengthen your submission. However, teams should be partnering with a single utility in their submission. The additional letters of support should only provide additional context.

Question: Is my idea/topic within the scope of the prize?

Answer: The Digitizing Utilities Prize Team and yet2 are unable to provide details or advice on if a submission is within the topic of the prize. Competitors are encouraged to read the Official Rules document to make that determination on their own. Potential prize submission topics can be found pages 5 and 6 of the Official Rules document.

Next Steps

1. Follow Round 2 of the Digitizing Utilities Prize on the official prize platform, [HeroX](#).

2. Read the [Official Rules](#) **April 2024 modification** *(coming soon).*

3. Submit your application through HeroX before May 7, 2024, at 5 p.m. ET.

Contact Us

Should you have any questions or need further clarification,
please contact us at: digitizingutilitiesprize@nrel.gov

Q&A

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