



# Beyond the Meter: Energy Storage Integration Prize

AMERICAN  
**MADE**

U.S. DEPARTMENT OF ENERGY



Office of  
ELECTRICITY



# Agenda

- 1 Office of Electricity Overview
- 2 American-Made Program Overview
- 3 Beyond the Meter Prize Overview
- 4 Eligibility
- 5 Submitting to the Prize
- 6 HeroX
- 7 Questions

# DOE Office of Electricity



U.S. DEPARTMENT OF  
**ENERGY**

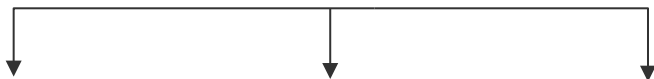
Office of  
ELECTRICITY

**Mission Statement:** The Office of Electricity (OE) provides national leadership to ensure that the Nation's energy delivery system is **Secure, Resilient, Reliable and Affordable**. OE leads a large portfolio of research, development, and demonstration programs spanning grid systems & components, grid controls & communications, and energy storage with a total annual budget of \$280 million (FY24).

## Energy Storage Division

"Propel U.S. leadership in the development, deployment, and utilization of energy storage technologies"

"Partner with and lead the community to build a storage innovation ecosystem that delivers breakthroughs from conception to adoption to end of life"



### Storage Materials and Systems

"Evaluate and advance high-potential storage technologies that incorporate safe, low-cost, and earth-abundant elements"

"Leveraging DOE and industry efforts to support key R&D, supply chain, and workforce

### Storage Validation

"Validate and integrate next generation storage technologies to be grid- and end-user ready"

"Leverage DOE and industry efforts to demonstrate innovative uses and benefits of storage"

### Storage Analysis

"Equip and expand the energy community with the ability to analyze and adopt storage"

"Provide analytical guidance throughout DOE and the industry on storage portfolio priorities to achieve deployment targets"

## LONG DURATION STORAGE SHOT TARGET



Reduce storage costs by **90%** from a 2020 Li-ion baseline...



...in storage systems that deliver **10+** hours of duration



...in **1** decade



**ENERGY STORAGE GRAND CHALLENGE**  
U.S. DEPARTMENT OF ENERGY

Innovate Here

Make Here

Deploy Everywhere

Investment,  
Commercialization,  
& Scale-Up

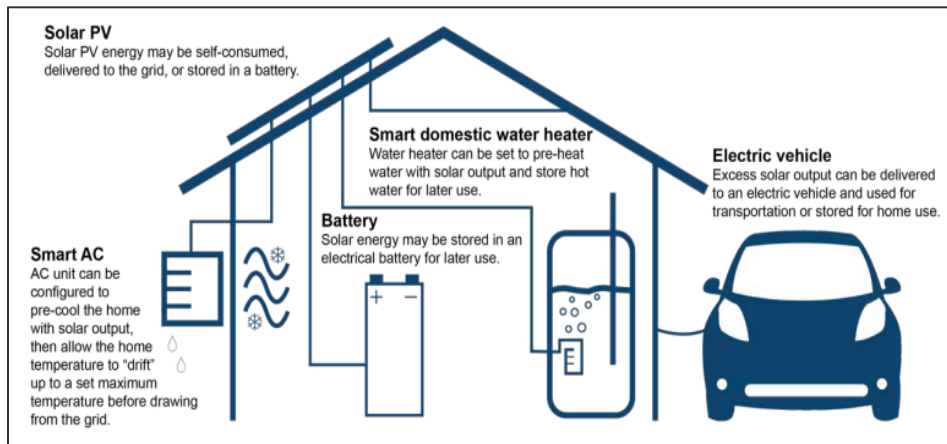
Manufacturing &  
Supply Chain &  
Workforce  
Development

Markets and  
Valuation

Technology  
Development

# Behind the Meter (BTM) Energy Storage: Current Status and Challenges

- BTM energy storage is a type of distributed energy resource (DER) that can serve as both a source of load and generation asset that is sited at the customer's side of the utility meter and connected to the electrical grid at the distribution level.
- 960 MW of BTM battery storage deployed in the U.S. as of 2020 with expected growth to 7,300 MW by 2025 ([NREL](#)).
- BTM Energy Storage by itself can provide several benefits including:
  - Electricity cost savings for the average American
  - Resiliency - Providing back up power during low frequency high impact events
  - Earning revenues by participation in an aggregation or virtual power plant (VPP)
- In addition, BTM Energy Storage can work in concert with other DERs such as rooftop solar photovoltaic (PV) and electric vehicle chargers to provide optimal value to the owner and the power system.



## Challenges for BTM Energy Storage Include:

- Technical barriers around adequately interconnecting, coordinating, and monitoring BTM storage systems
- Lack of consistent standards and procedures for interoperability and communication between different DER technologies
- Limited visibility into operation of BTM storage systems by utilities and system operators
- Potential value of BTM storage systems to the power system not being fully realized or compensated
- Regional differences in available incentives, compensation mechanisms, and regulations/processes governing deployment and use.

Source: [Solar Plus: A Holistic Approach to Distributed Solar PV \(nrel.gov\)](#)

Sources: [Standards for DER Interconnection & Interoperability \(gmlc.doe.gov\)](#)  
[Behind-the-Meter Battery Storage: Frequently Asked Questions \(nrel.gov\)](#)



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# American-Made Program Overview

# AMERICAN MADE

U.S. DEPARTMENT OF ENERGY

The American-Made program is your **fast track to the clean energy revolution**. Funded by the U.S. Department of Energy, we incentivize innovation through prizes, training, teaming, and mentoring, connecting the nation's entrepreneurs and innovators to America's national labs and the private sector.







# supercharge

A REVOLUTION OF **BOLD IDEAS**

**Fast track** your ideas for the clean energy revolution



**\$300M+**

in cash prizes  
and support



**70+**

prizes



**450+**

Network  
members

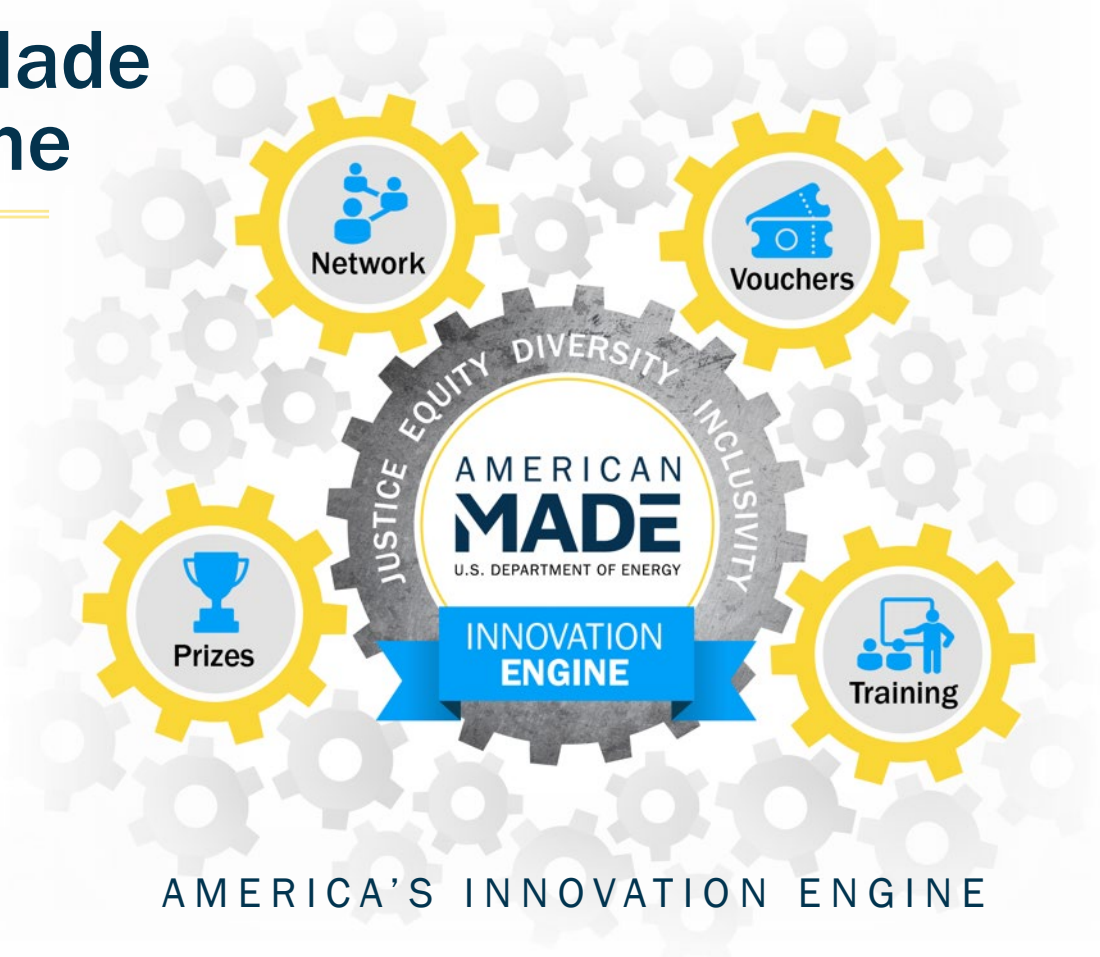
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# The American-Made Innovation Engine


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1. Prizes and Competitions
2. Network of Support
3. Vouchers and Technical Assistance
4. Training and Education





# Beyond the Meter Prize



**Beyond the Meter:  
Energy Storage  
Integration Prize**

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**ENERGY** | Office of  
ELECTRICITY



\$200,000 prize for companies and coalitions that demonstrate their grid-edge technology and plans to integrate with partners in the grid.

**Submission Deadline:** December 12, 2024 – 5 p.m. ET

# Beyond the Meter Prize

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Up to two teams will win \$100,000 each and the unique opportunity to showcase their technology at DISTRIBUTECH 2025.

In this one-phase prize, companies and coalitions will:

- Share how their behind-the-meter (BTM) grid-edge technology solution supports improved integration with different energy systems and vendors in the grid
- Outline a plan to partner and integrate with grid-edge technology vendors
- Describe their approach to demonstrate their technology and plans to collaborate with other grid industry leaders at [DISTRIBUTECH 2025](#).

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

# DISTRIBUTECH 2025

- **Event Details:** More info on event structure will be posted on the HeroX "Resources" page
- **Technology Display:** Winning teams must communicate their desired technology and demonstration plans to the prize program in advance
- **Materials Responsibility:** Teams are responsible for providing all booth and presentation materials needed for showcasing their product
- **Panel Participation:** On event day, winning teams will participate in a moderated panel session to demonstrate their product and discuss integration with BTM grid-edge technologies
- **Attendance Requirement:** All winning teams must attend DISTRIBUTECH and present at the DOE Office of Electricity booth throughout the event
- **Engagement in Events:** Winning teams must join all prize-focused activities, including:
  - ✓ Moderated panel session
  - ✓ Matchmaking session
  - ✓ "Speed dating" event for collaboration with other vendors.



# Eligibility Requirements

- The competition is open only to private entities (for-profits and nonprofits); nonfederal government entities such as states, counties, Tribes, and municipalities; and academic institutions, subject to the following requirements:
- A competitor may only submit a single submission
- A group of individuals competing as one team may win, provided that the online account holder of the submission is a U.S. citizen or permanent resident. Individuals competing as part of a team are eligible to participate if they are legally authorized to work in the United States
- Private entities must be incorporated in and maintain a primary place of business in the United States
- Academic institutions must be based in the United States
- DOE employees, members of their immediate families (e.g., spouses, children, siblings, or parents), and persons living in the same household as such persons, whether or not related, are not eligible to participate in the prize
- Individuals who worked at DOE (federal employees or support service contractors) within six months prior to the submission deadline of any contest are not eligible to participate in any prize contests in this program
- Federal entities and federal employees are not eligible to participate in any portion of the prize
- DOE national laboratory employees cannot compete in the prize
- **Refer to the Official Rules for the complete eligibility requirements.**

# Submitting to the Beyond the Meter Prize

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## Beyond the Meter: Energy Storage Integration Prize

# Read the Rules

[Official Rules for the  
Beyond the Meter Prize](#)  
are available online

<https://americanmadechallenges.org/challenges/beyond-the-meter/docs/Beyond-the-Meter-Prize-Official-Rules.pdf>



# What to Submit

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A complete submission package should include the following items:

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

Reviewers will evaluate submissions by assigning a single score for each scored submission section, based on their overall agreement or disagreement with a series of statements. The scores are as follows:

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

For more information about submission materials, please read the Official Rules.

# Phase 1 Submission Package Details

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## Cover Page

List basic information about your submission, including:

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

# Phase 1 Submission Package Details (cont.)

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## Narrative

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

**Question 1 (Challenge):** What challenge does your solution solve?

**Question 2 (Solution and Capabilities):** What is your solution, and why it is transformational?

**Question 3 (Accomplishments and Team):** What have you done to date, and what qualities give you a competitive edge?

**Question 4 (Plan):** What is your plan to achieve your goals?

**Question 5 (Demonstration):** How would you demonstrate your distributed energy resource management system product at DISTRIBUTECH if you were selected as a winner?



# Phase 1 Submission Package Details (cont.)

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## Submission Summary Slide *(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.

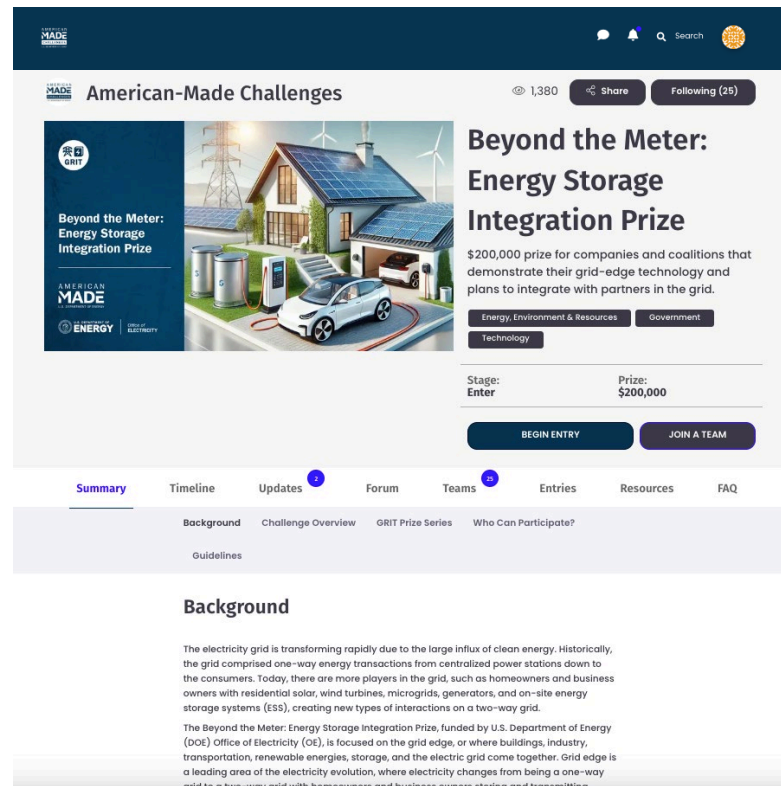
## Letters of Support or Commitment *(optional)*

Attach one-page letters (of support, intent, or commitment) from other relevant entities to provide context. Letters of support from partners or others that are critical to the success of your proposed solution will likely increase your score.

General letters of support from parties that are not critical to the execution of your solution **will likely not factor into your score**.

# How to Register and Compete on HeroX

- Go to the HeroX prize page:  
<https://www.herox.com/beyondthemeterv>
- Choose “Solve this Challenge.” This indicates your interest in competing; it is not a commitment (yet).
- Sign in or create a HeroX account
- Agree to the Terms of Use
- Confirm your email address
- Accept the Challenge-Specific Agreement
- Indicate “Would you like to compete as a team?”



The screenshot displays the HeroX website interface for the 'Beyond the Meter: Energy Storage Integration Prize' challenge. The page features a dark blue header with the 'AMERICAN-MADE' logo and navigation icons. Below the header, the challenge title is prominently displayed, accompanied by a large image of a modern house with solar panels and energy storage systems. The prize amount is listed as '\$200,000' and the stage is 'Enter'. The page includes a 'BEGIN ENTRY' button and a 'JOIN A TEAM' button. A navigation menu at the bottom includes 'Summary', 'Timeline', 'Updates', 'Forum', 'Teams', 'Entries', 'Resources', and 'FAQ'. The 'Background' section is visible, providing context on the electricity grid's evolution.

## American-Made Challenges

1,380 | Share | Following (25)

### Beyond the Meter: Energy Storage Integration Prize

\$200,000 prize for companies and coalitions that demonstrate their grid-edge technology and plans to integrate with partners in the grid.

Energy, Environment & Resources | Government | Technology

Stage: Enter | Prize: \$200,000

BEGIN ENTRY | JOIN A TEAM

Summary | Timeline | Updates | Forum | Teams | Entries | Resources | FAQ

Background | Challenge Overview | GRIT Prize Series | Who Can Participate?

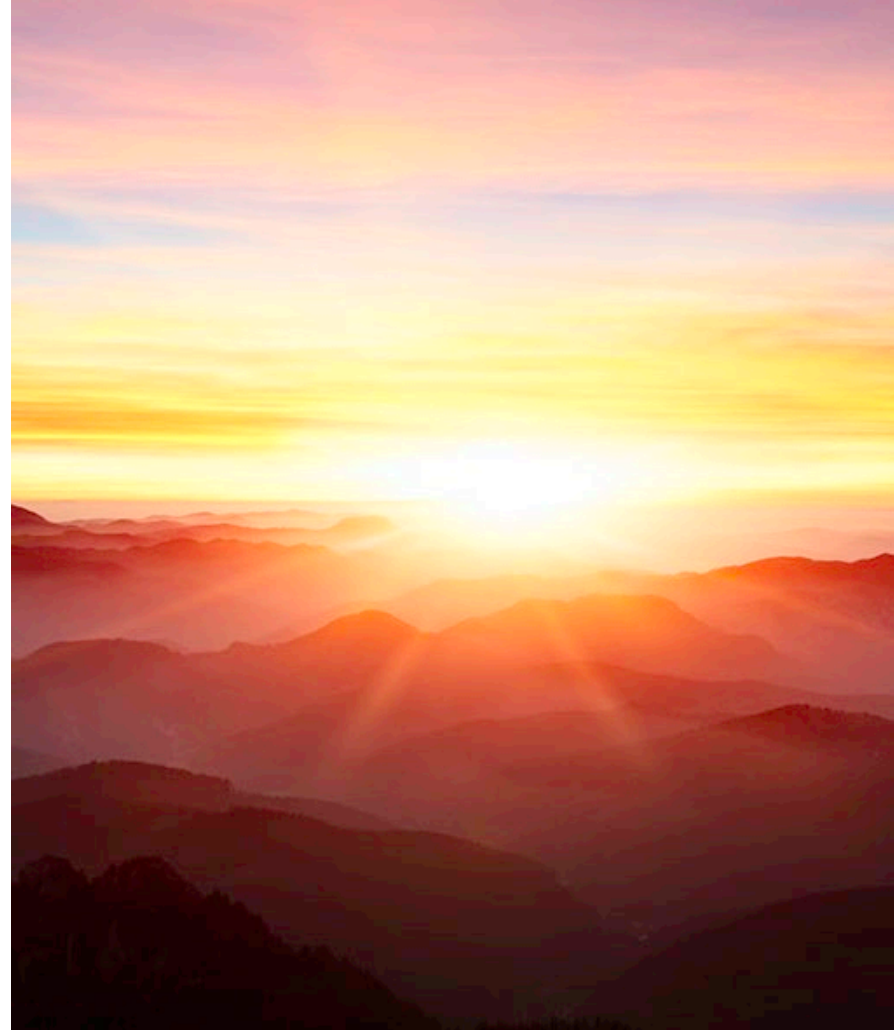
### Background

The electricity grid is transforming rapidly due to the large influx of clean energy. Historically, the grid comprised one-way energy transactions from centralized power stations down to the consumers. Today, there are more players in the grid, such as homeowners and business owners with residential solar, wind turbines, microgrids, generators, and on-site energy storage systems (ESS), creating new types of interactions on a two-way grid.

The Beyond the Meter: Energy Storage Integration Prize, funded by U.S. Department of Energy (DOE) Office of Electricity (OE), is focused on the grid edge, or where buildings, industry, transportation, renewable energies, storage, and the electric grid come together. Grid edge is a leading area of the electricity evolution, where electricity changes from being a one-way grid to a two-way grid with homeowners and business owners storing and transmitting

# What's Next?

1. Follow the challenges on HeroX  
<https://www.herox.com/beyondtheter>
2. Read the rules  
<https://americanmadechallenges.org/challenges/beyond-the-meter/docs/Beyond-the-Meter-Prize-Official-Rules.pdf>
3. Start innovating
4. Submit by December 12, 2024 at 5 p.m. ET



# Questions

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Email us at [electricityprize@nrel.gov](mailto:electricityprize@nrel.gov)

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