# Critical Infrastructure Microgrid, Community Resilience Center Pilot Grant Program Webinar

July 14, 2021

1:00pm -2:00pm

Wisconsin Office of Energy Innovation

# Agenda

- Introduction to the Wisconsin Office of Energy Innovation
- Background on the Critical Infrastructure Microgrid, Community Resilience Center Pilot Grant Program
- Strategic Objectives
- Definitions
- Eligible Applicants
- Eligible Project Activities
- Program Timeline
- Application Format and Account Creation Procedures
- Application and Merit Review Criteria
- Reporting Requirements
- Questions?

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# Office of Energy Innovation

## Vision

Securing Wisconsin's energy future and improving its economy and environment.

## Mission

The Wisconsin Office of Energy Innovation promotes innovative and effective energy policies and programs that benefit Wisconsin's citizens and businesses.

## Programs

- Focus on Energy
- State Energy Office Programs: EIGP (Energy Innovation Grant Program), EIC (Energy Independent Communities), SHOPP (State Heating Oil and Propane Program), Wisconsin Energy Statistics, MEETAP (Municipal Energy Efficiency Technical Assistance Program), SAFER2 (Statewide Assistance for Energy Resilience and Reliability)

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# Office of Energy Innovation

VALUES:

- Open Communication and Transparency
- Collaboration and Teamwork
- Being Forward Looking and Solutions Oriented
- Building and Maintaining Expert-Level Knowledge
- Economic Viability

WHO WE SERVE:

- Hospitals
- Political Subdivisions
- Non-profit Organizations
- Public and Private Universities
- Public or Privately-owned Businesses
- Residential Customers
- State Agencies
- Tribes



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# Pilot Grant Program Background

- The **Pilot Grant Program** (CIMCRC) design details were established by the Public Service Commission in an open meeting on April 15, 2021

- **Federally Funded** through U.S. Department of Energy by the State Energy Program



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# Strategic Objectives

- **Energy Security:** Foster critical infrastructure security and resilience, improving the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions. Resilience includes the ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats or incidents.
- Prioritize reliability and resilience benefits (during outages not caused by events beyond a utility's control) and benefits of avoiding major power outages (i.e. outages caused by major storms or other events beyond a utility's control).
- **Clean Energy Equity:** Help provide equitable access to the benefits of clean energy, efficiency, and preparedness by reaching broad applicant types. This includes applicants who may traditionally face barriers to adopting clean energy solutions and the benefits they provide, or whose communities may be disproportionately impacted by the negative effects of traditional fossil fuel and inefficient energy systems.

# Definitions

- **Critical Infrastructure:** Those facilities, systems, and other assets deemed vital to the public confidence and to Wisconsin. Loss or incapacity of critical infrastructure would have a debilitating impact on the state's security, public health, economy, safety, or well-being.
- **Microgrid:** A group of interconnected loads and distributed energy resources within clearly defined electrical boundaries that acts as a single controllable entity with respect to the grid. A microgrid can connect and disconnect from the grid to enable it to operate in both grid-connected or island- mode.
- **Lifelines:** A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security. Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function.

# Definitions Continued

- **Level 1 or single customer:** a single Distributed Energy Resource (DER) or multiple DERs serving one customer through one meter. Example: a single facility (such as a hospital) using an on-site microgrid to provide backup power.
- **Level 2 or single customer or campus setting (partial feeder microgrid):** a single DER or multiple DERs serving multiple facilities, controlled by one meter at the interconnection point (also known as Point of Common Coupling or PCC). Example: a microgrid sited on a University campus connected to multiple buildings.
- **Level 3 or multiple customers (advanced or full feeder microgrid):** a single DER or multiple DERs serving multiple facilities or customers on multiple meters. The DER(s) may be located on a different site from the facilities or customers. While the advanced microgrid has one PCC, the individual facilities or customers within the advanced microgrid may have their own individual connections to the distribution grid.
- **Community Resilience Centers (CRC):** Facilities designed to provide emergency heating and cooling capability; refrigeration of temperature-sensitive medications, vaccines and milk from nursing mothers; plug power for durable medical equipment (to include dialysis equipment and continuous positive airway pressure machines); plug power for charging of cell phone and computer batteries; and/or emergency lighting. A CRC may also be a designated location (by the city, county, or State of Wisconsin) for the distribution of emergency services during extended grid outages. This center would not necessarily be a replacement for an emergency shelter, and should not be required to have food service capabilities, showers, or locker rooms; however, an emergency shelter that does provide these services would still be eligible to apply. A CRC can be a Level 1, 2, or 3 Microgrid (see definition of Microgrid above).

# Eligible Applicants

► Municipalities, Universities, Schools, Hospitals, and Like Entities (MUSH Market): cities, villages, towns, counties, K-12 school districts, tribes, municipal water and wastewater utilities, municipal electric utilities, municipal natural gas utilities, University of Wisconsin System campuses and facilities, Wisconsin Technical College System, public or nonprofit hospitals. 501(c)(3) nonprofits

► The Commission approved the staff identified option to **establish a partnership approach for eligible applicants, wherein a Lead Applicant engages Target Partners.** The Commission establishes the MUSH Market as **"Lead Applicant"** eligible entities; responsible for partnering **with "Target Partners"** described as appropriate public, private, and non-profit entities, or their subunits, with unique oversight or expertise in sectors appropriate to the project such as housing authorities, municipal utilities, and engineering firms.

# Eligible Project Activities and Funds Available

- **Activity 1:** Feasibility Study of Critical Infrastructure Microgrid Deployment Level 1 and 2 (per definitions in section 1.2.2.)
  - Available funds: up to $50,000
- **Activity 2:** Feasibility Study of Critical Infrastructure Microgrid Deployment Level 3
  - Available funds: up to $100,000
- **Activity 3:** Feasibility Study of Community Resilience Center Deployment (Applicant indicates whether the CRC is a Level 1, 2, or 3 Microgrid).
- **Total Available Funds for Pilot Program $985,000**

# Program Timeline/ Schedule of Events

| DATE | EVENT |
|---|---|
| June 28, 2021 | Date of issue of the Application Instructions |
| July 14, 2021 1:00pm | Webinar for interested parties<br>https://us02web.zoom.us/j/86871876433?pwd=Q2k0VkREQkRySWJvWXJ3bStlTjRTQT09<br>Connect to webinar on 7/14/21 using link above |
| August 6, 2021 | Applications due by 12:00 pm CT on Friday August 6, 2021 |
| August 2021 (TBD) | Screening committee evaluation |
| September 2021 (TBD) | PSC determination of awards |
| October 2021 (TBD) | Contract negotiations |
| October 2021 – June 30, 2022 (TBD) | Project performance period |

# Required Accounts – START TODAY!

- Applications will be submitted using the Commission's Electronic Records Filing System (ERF)
  - You must register for an account before you apply
    - "Individual" account type is preferred and fastest). **Create an ERF Account Today!**
  - You must file by NOON on the due date (August 6, 2021). **File early** if possible!
  - Avoid Confidential Filing unless absolutely necessary! See Section 2.3 of the Application Instructions **in advance** for Notary Public Requirements.

- DUNS Number is a unique identifier for recipients of Federal funds
- SAM.gov Registration provides us with data on your organization and its ability to receive Federal funds

# Application Content

- **Application Cover Sheet** (Attachment A)
- **Application Budget Sheet** (Attachment B)
- **Application Narrative** (15 page limit, excluding reference materials)
  - Project Description
  - Reference Materials List (not included in page limit)
  - Merit Review Criteria

# Project Proposal Cover Sheet (Attachment A)

**Public Service Commission of Wisconsin**
**Office of Energy Innovation**
**Energy Innovation Grant Program**
**ATTACHMENT A - Application Cover Sheet**

| **SECTION I - Provide information summarizing the project proposal.** | | | |
|---|---|---|---|
| **Project Title:** | | | |
| **PSC Grant Request ($):** | **Applicant Cost Share ($):** | **Project Total ($):** | |
| | | | |
| **Choose one Eligible Activity** | | | |
| ☐ Renewable Energy & Energy Storage | ☐ Energy Efficiency & Demand Response | ☐ Electric & RNG Vehicles & Infrastructure | ☐ Comprehensive Energy Planning |
| **Acknowledgement of ARRA Applicability. Check all that apply.** (see Section 1.3 of Application Instructions) | | | |
| ☐ Buy American: Project: Alteration, maintenance or repair of a public building or public work. | | | |
| ☐ Davis Bacon and Related Acts: Use of laborers or mechanics employed by contractors and subcontractors. | | | |
| ☐ Historic Preservation: Project involves historical (over 50 years old), archeological or cultural resources. | | | |
| ☐ National Environmental Policy Act (NEPA): Project activity is NOT covered by the list shown in Section 1.3.3. | | | |

| **SECTION II - Provide information for your organization, signatory, and primary contact for the project.** | | | | |
|---|---|---|---|---|
| **Applicant Type:** | ☐ City | ☐ Village | ☐ Town | ☐ County |
| ☐ Tribal Nation | ☐ Manufacturer | ☐ K-12 School District | | |
| ☐ University of Wisconsin System | ☐ Wisconsin Technical College System | ☐ 501(c)(3) nonprofit | | |
| ☐ Municipal Utility (water, wastewater, electric, natural gas) | ☐ Hospital (public or nonprofit) | | | |
| **Name** (on W-9): | | | | |
| **Address** (on W-9): | | | | |
| **County or Counties Served by Project:** | | | | |
| **DUNS Number or CAGE Code:** | | | | |
| **NAICS Code:** | | | | |

| **Authorized Representative/Signatory** (Person authorized to submit applications and sign contracts) | | **Primary Contact** (if different from Authorized Representative) | |
|---|---|---|---|
| **Name:** | | **Name:** | |
| **Title:** | | **Title:** | |
| **Phone:** | | **Phone:** | |
| **E-mail:** | | **E-mail:** | |
| **Signature of the Authorized Representative** | | | |

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# Application Narrative (15 Page limit)

- **Project Description:** Provide a description of the proposed project, the focus or motivation behind microgrid feasibility investigation, include details about the population and lifelines served.
- Reference Materials List. Provide a list of any reference materials included. (Reference materials, such as maps, technology specifications, etc. are not included in page limit).

**Merit Review Criteria**

- [Activities 1 and 2 Only]. Identification of Critical Infrastructure: Explain and provide justification for the facilities considered "critical infrastructure" in the feasibility study. Applicant must detail all proposed populations and lifelines served. See the definitions in Section 1.2.2.

- **Key Partners and Stakeholders** Identify and provide the roles and responsibilities of all project partners including any key stakeholder groups. A letter of support from the local distribution utility and participating facilities (if multiple owners) must be provided. If a letter of support from the local distribution utility was not obtainable, please explanation and provide any other acknowledgement by the utility. Applicants may choose to demonstrate equitable engagement of and benefit to communities of color, low-income communities, and other impacted communities that may be historically left out or disproportionately negatively affected by climate change and inefficient or traditional energy systems due to race, ability, income level, age, geographic region, language, or other factors. Impact may be demonstrated through response to a particular need, direct engagement, jobs created, emissions avoided or other metric.

# Merit Review Criteria continued

- **Project Resilience Objectives and Metrics.** Provide specific, measurable resilience objectives that describe the desired results of the project. For each objective, identify metrics to measure its progress and success.
- **Evaluation of Site-specific information.** Identification of site constraints and opportunities. Applicant must include a description of the facility or geographic boundaries of the anticipated project. Include a map, satellite photo, or other representation indicating the scope and boundaries of the anticipated project. List all existing self-generation assets (rooftop PV, battery storage, backup generators, CHP etc.). Applicant must communicate an understanding of anticipated project permitting requirements, and discuss any impact on project's potential feasibility
- **Technologies under consideration.** Include a brief justification for the chosen technology. Include information regarding emissions profiles, fuel costs, operations and maintenance assumptions (if known). Technologies may include, for example: Solar Photovoltaics (PV), Wind Turbines, Battery Storage, Thermal Storage, Electrolysis (Hydrogen Storage), Backup Diesel Generators, Reciprocating Gas/Biogas Engine, Gas or Steam Turbine/Microturbine, Fuel Cell, Anaerobic Digestion (Biogas from organic waste), or Heat Recovery Steam Generator (HRSG).
- **Cost Match.** Provide a description of the Applicant's (including partners) share of the total project cost (cash, in-kind, incentives, etc.) to demonstrate the applicant's commitment to the project. Describe why grant funding is needed to move forward with the project, including the likelihood of the project to move forward with and/or without it. **Match** is encouraged, but optional, and **cannot** include other federal funding. Matching fund sources should be identified, e.g. Focus on Energy funding, state, local, or private funds, tax incentives, etc.
- **Data Collection Plan** (including utility data, eligibility evaluation, initial analysis, site audits, 15 minute demand information, etc.). Discuss availability of data in relation to the ability to complete the study within the grant period (ending June 30, 2022).

# More Merit Review Criteria

- **Systems Sizing Analysis** (including project cost estimates and financial projections, critical load definition and back-up duration, controls strategy, island-ability, etc.). Include the maximum period of time for operating without replenishing fuel supply. Anticipated ability to provide ancillary services such as frequency or real power support, voltage/reactive power support, and Black Start of System Restoration Support. Particular emphasis should be paid to resilience and reliability analysis. Project must be able to operate in island mode during a grid outage. Project must provide a minimum of 2 to 4 hours of self-generated electricity to support the identified lifelines and designated population (i.e. phone charging, electric cook stoves, space heating/AC, food/medicine, refrigeration, etc.).
- **Financial Analysis (including cost/benefit analysis, financing options).** Applicants must describe in detail, the proposed financial analysis, including whether the Microgrid or Community Resilience Center will provide peak load support or allow its users to participate in a demand response program. If applicable, discuss the economic impact of the project in terms of cost savings, job creation (direct or potential for future), overall stimulus to the local or state economy, etc.
- **Environmental Impact.** Describe the effectiveness of the project in saving or producing clean energy in terms of kilowatts, kilowatt hours, therms, gallons of gasoline, etc. Applicants may access the EPA Greenhouse Gas (GHG) Equivalencies Calculator here: https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator to quantify emissions reductions (carbon, other GHGs, etc.) associated with estimated project energy savings. Assertions of energy savings and emissions savings will be vetted through this platform by the screening committee. Technologies chosen for consideration should be justified within the context of the potential environmental impact. Applicants should explain methodology for technology selection, detail any organizational goals or other policy drivers that contributed to this decision.

# Project Budget (Attachment B)

Enter the Applicant Name

Enter the Project Title

**Summary of Project Budget**

| Line | Description | PSC Grant Request | Applicant Cost Share | Total Project Cost |
|---|---|---|---|---|
| 1 | Personnel | | | $0 |
| 2 | Fringe | | | $0 |
| 3 | Equipment | | | $0 |
| 4 | Supplies | | | $0 |
| 5 | Travel | | | $0 |
| 6 | Contractual | | | $0 |
| 7 | Other | | | $0 |
| 8 | Indirect | | | $0 |
| | **Totals** | $0 | $0 | $0 |
| | **% of Total** | **#DIV/0!** | **#DIV/0!** | |

Page 1

**Applicant Comments:** Enter budget information into the gray fields of the Summary Project Budget. Fields are formatted to display whole numbers. This document is formatted to print on 8.5"x11" paper. Include it as directed in your PDF application. Definitions of each line item are provided on the Definitions Tab. (Use this space to add additional budget information.)



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# Application Selection Process and Reporting Requirements

## APPLICATION SELECTION AND AWARD PROCESS

- A screening committee will conduct an initial review for eligibility, project merit evaluation and ranking for consideration by the PSC. The PSC will consider the applications and committee evaluation for the final award determination at one of its regularly scheduled open meetings. However, the PSC is not bound by the screening committee's merit evaluation and ranking. PSC staff expects the screening committee process to conclude in August, 2021 for award determinations by the PSC in September, 2021
- **State and Federal reporting requirements.** Applicants will be expected to submit quarterly, final, and on request, reports to the PSC on the activities, progress of the project, and grant costs to satisfy state and federal reporting requirements. Certain reporting requirements shall continue to be required post-disbursement.

# Resources to Prepare your Application

- Focus on Energy: https://focusonenergy.com/


## Business Offerings

Schools & Government

Business & Industry

New construction modeling

Emerging technologies

Renewable Energy Competitive Incentive Program (RECIP)

Small Business

Strategic Energy Management

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# Resources to Prepare your Application

- Energy Independent Communities (EIC) more information here: https://psc.wi.gov/Pages/Programs/OEI/EnergyIndependentCommunities.aspx and here: https://energyonwi.extension.wisc.edu/
- EIC Plans are available via links above
- Watch this short YouTube video: “Power Through  Partnerships: Brown County and the Oneida Nation” https://www.youtube.com/watch?v=UpVsz4LWURk
- Other resources for Local Governments: ICLEI (International Council for Local Environmental Initiatives) Local Governments for Sustainability
- US DOE hub for State, Local, Tribal Governments https://www.energy.gov/energy-economy/state-local-government
- EPA Portfolio Manager free software for benchmarking: https://portfoliomanager.energystar.gov/pm/login.html and free calculator for measuring Green House gas equivalencies https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator

# Questions?

- Questions can be submitted to oei@wisconsin.gov

- Answers to those questions will be posted at our website: https://psc.wi.gov/Pages/Programs/OEI/Energy-Security.aspx



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