Office of Clean Energy Demonstrations

THE OFFICE OF

CLEAN ENERGY DEMONSTRATIONS

Energy Improvements in Rural or Remote Areas (ERA) Program
Eastern Regional Briefing

Office of Clean Energy Demonstrations

U.S. Department of Energy

March 21, 2024

Welcome!

Meeting Objectives

Describe the **three Energy Improvements in Rural or Remote Areas (ERA) projects** selected for award negotiations by the Office of Clean Energy Demonstrations (OCED) in the Eastern region of the US.

Provide transparency on the award process and opportunities to implement clean energy projects.

Create an opportunity for participants to engage with DOE and selectees.

Introductions

Emmanuel Taylor

Facilitator

Regina Galer
ERA
Program Manager,
OCED

Toniqua Hay
ERA
Stakeholder
Engagement Specialist,
OCED

Agenda

- Welcome
- Energy Improvements in Rural or Remote Areas Program Overview
- Regional Project Overview
  - Microgrids for Community Affordability, Resilience, and Energy Decarbonization (CARED)
  - Solar+Storage Microgrids for Rural Community Health Centers
  - Heat Pump Solutions for Mobile/Manufactured Homes
- Community Benefits and Engagement
- Next Steps & Resources
- Feedback Session
- Wrap-up & Close

Opening Remarks

Energy Improvements in Rural or Remote Areas (ERA) Program

ERA Program Overview

The Bipartisan Infrastructure Law (BIL) authorizes DOE to invest **$1 billion in Energy Improvements in Rural or Remote Areas.** The DOE Energy Improvements in Rural or Remote Areas (ERA) Program is managed by the Office of Clean Energy Demonstrations.

Purpose

To provide financial assistance to improve, in rural or remote areas of the United States, the resilience, safety, reliability, and availability of energy and environmental protection from adverse impacts of energy generation.

Program Goals

1. **Deliver measurable benefits to households in rural or remote areas** by funding replicable energy projects that lower energy costs, improve energy access and resilience, and/or reduce environmental harm;
2. **Support new rural or remote energy system models** using climate-resilient technologies, business structures that promote economic resilience, new financing mechanisms, and/or new community engagement practices; and
3. **Build clean energy knowledge, capacity, and self-reliance in rural America**.

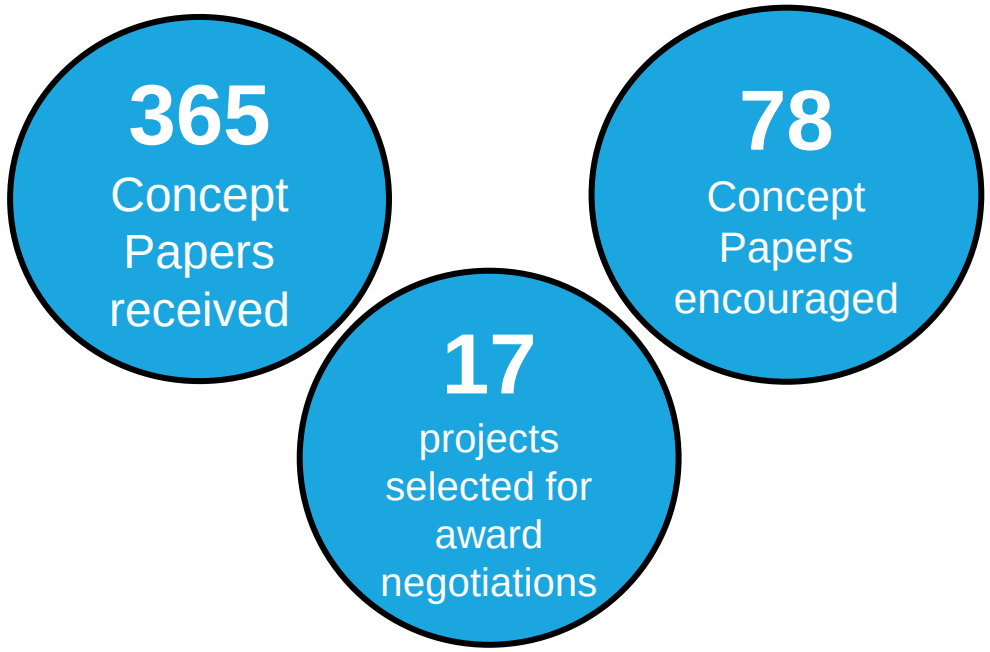
ERA $300M Funding Opportunity

In March 2023, DOE announced **$300 million** in total funding opportunity to increase energy affordability and promote climate resilience with an anticipated federal cost share ranging from **$5 to $100** million per project for single or multi-site demonstration project(s).

Program Outcomes

1. Uses clean energy technologies that improve **reliability and/or resilience of energy systems**
2. **Reduces energy poverty**
3. Improves environmental performance of **energy generation** in rural or remote communities

Status to Date



Project Overviews

Microgrids for Community Affordability, Resilience, and Energy Decarbonization (CARED)

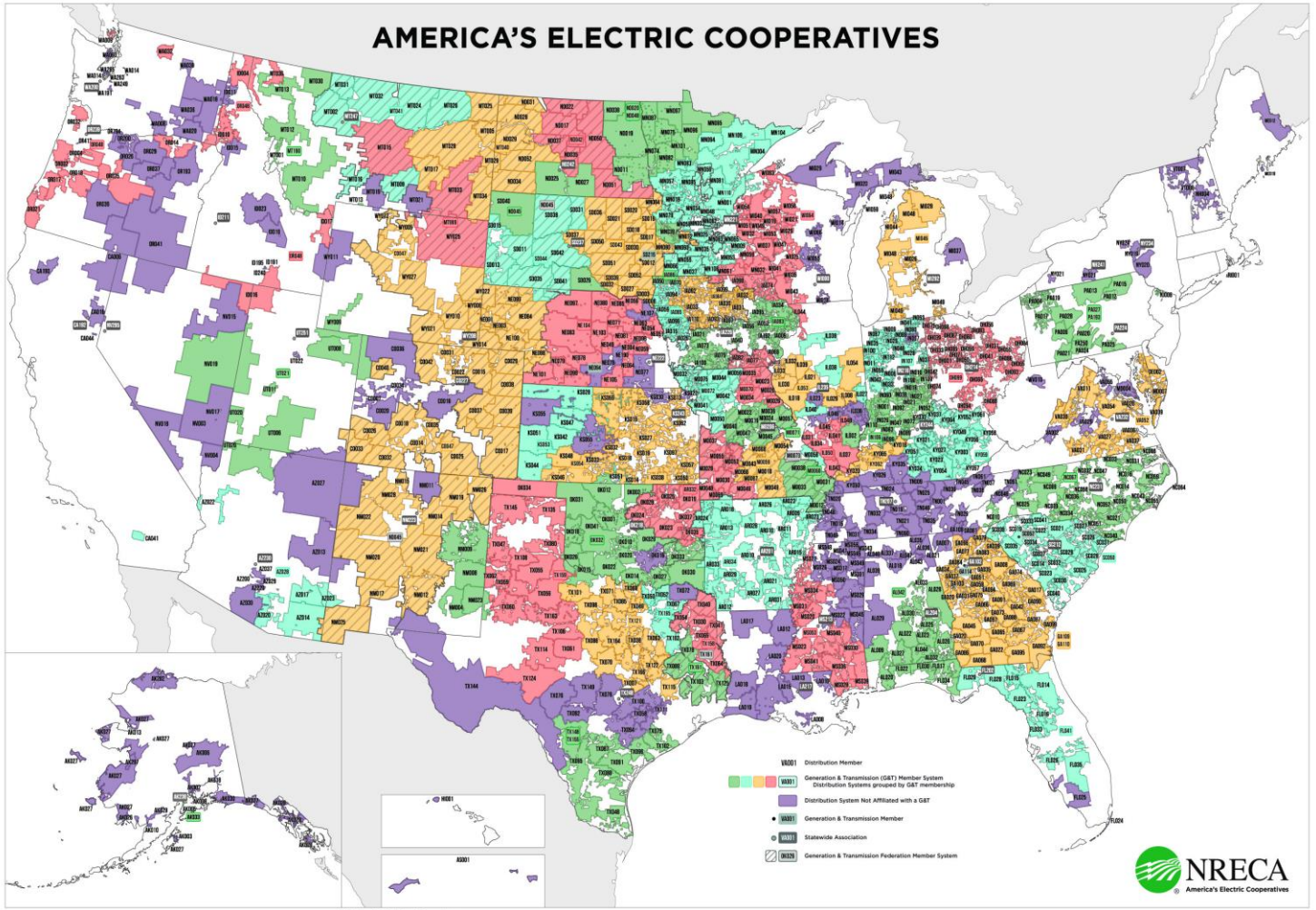
Tolu Omotoso, Director of Energy Solutions
National Rural Electric Cooperative Association (NRECA)

Rajeena Shakya, Program Manager - Community Energy Programs
National Rural Electric Cooperative Association (NRECA)

NRECA and Not-for-Profit Electric Cooperatives

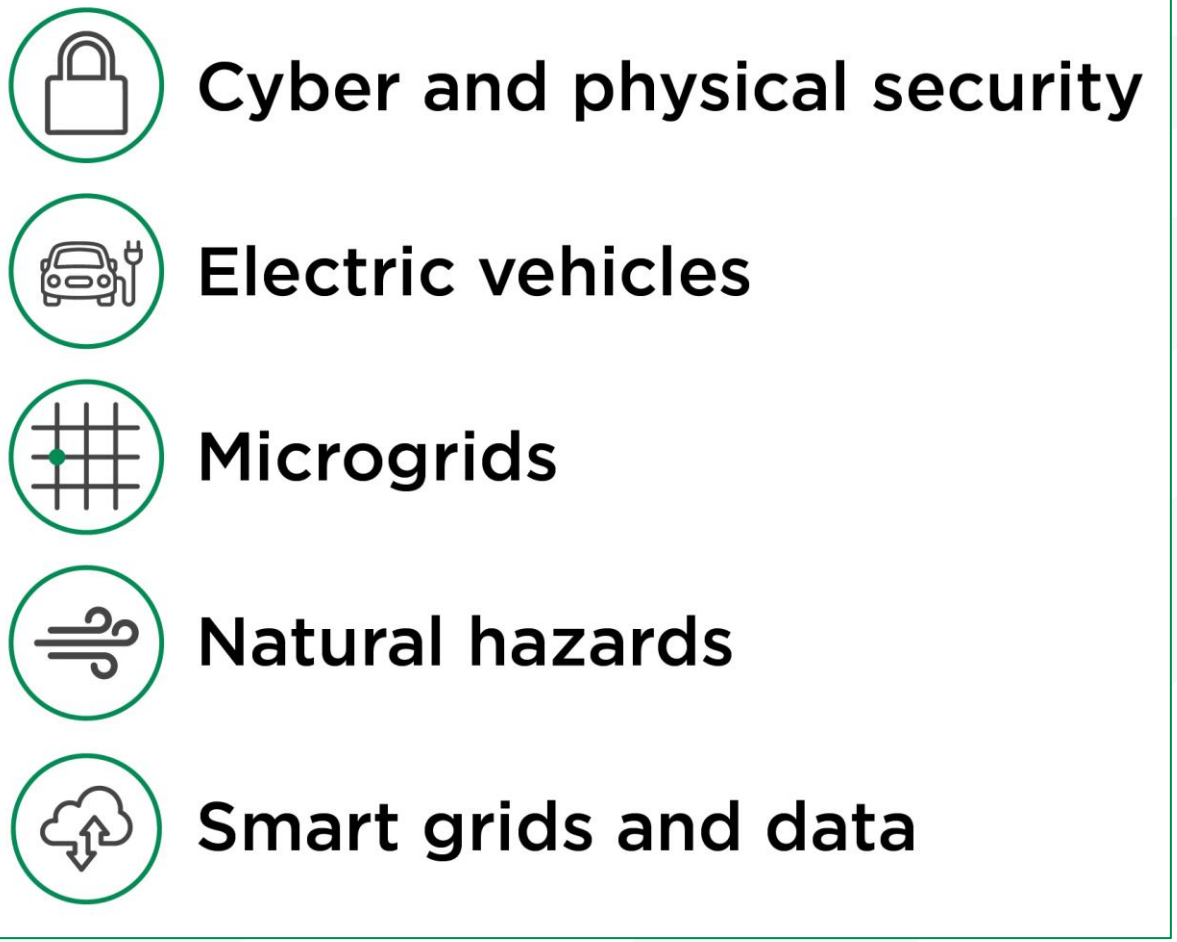
NRECA Represents:

- 832 distribution cooperatives
- 63 generation and transmission cooperatives
- 21 million businesses, homes, schools, and farms in 48 states
- 92% of persistent poverty counties
- 56% of the US landmass



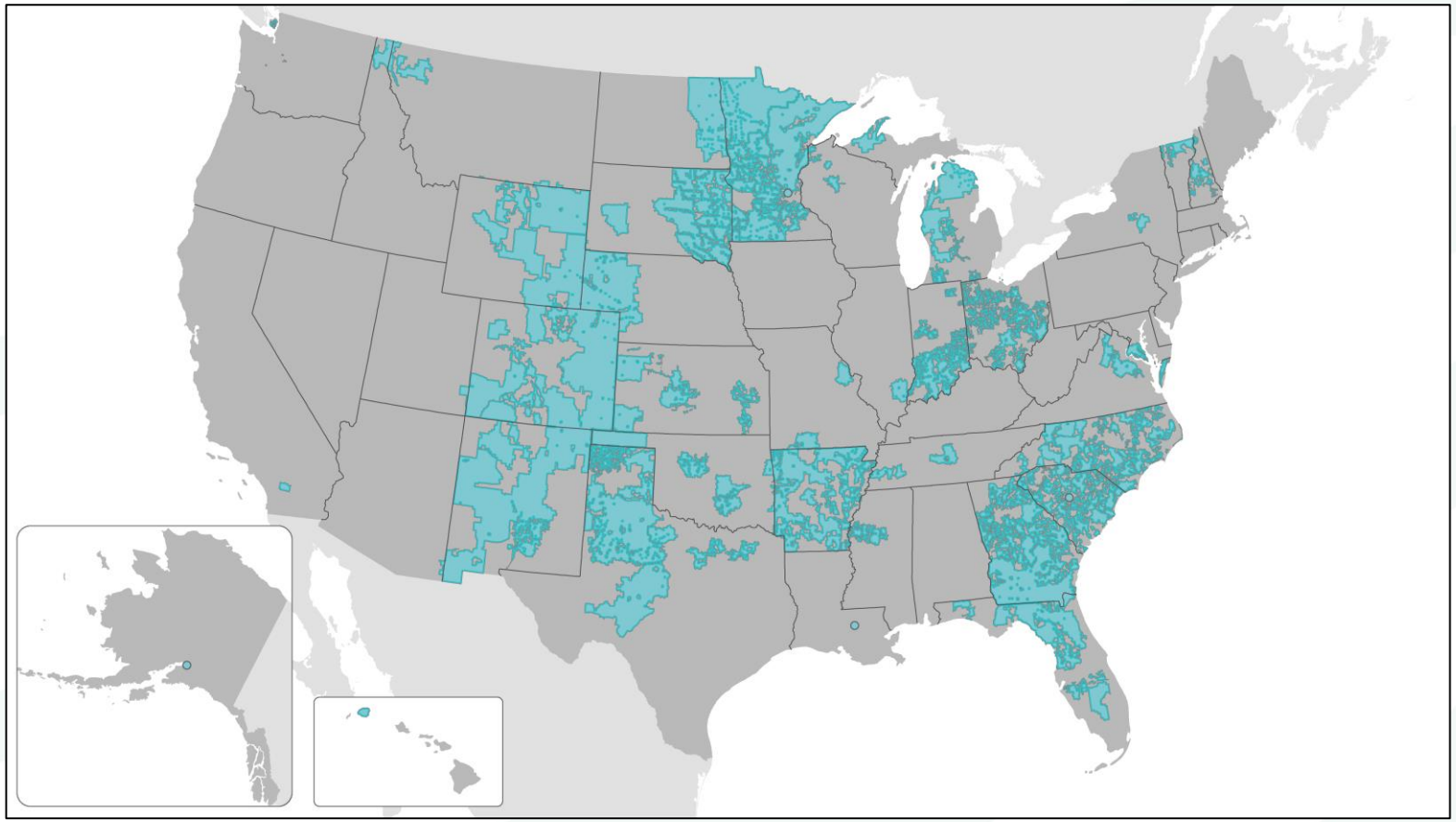
NRECA
America's Electric Cooperatives

Stronger Together: The Consortium Approach



NRECA
America's Electric Cooperatives

NRECA's Microgrid Consortium Member Participation



Data on Members:

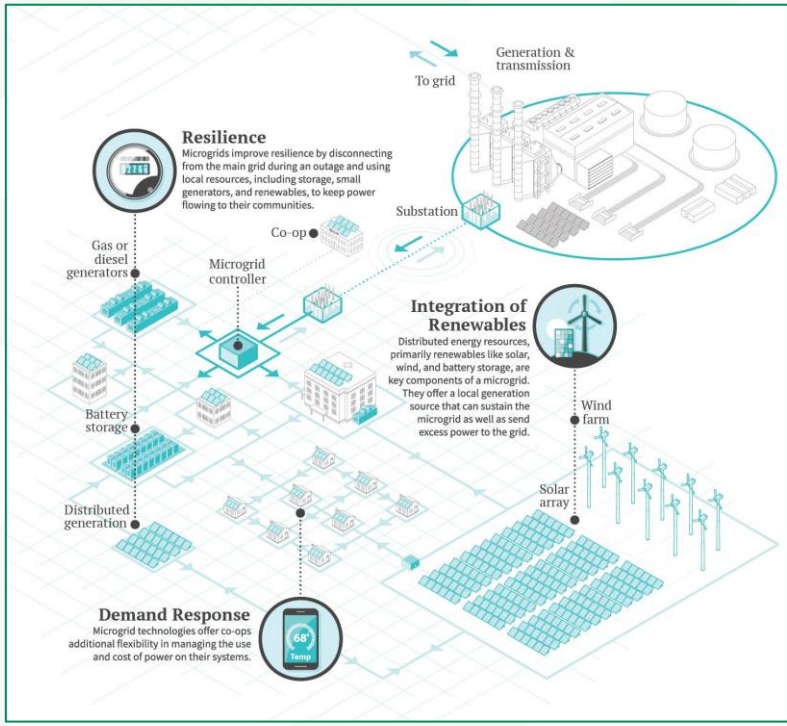
- 126 member staff
- 96 member organizations from 37 states, including:
  - 71 Distribution (Median Size: 35,475 consumers)
  - 15 Generation & Transmission

NRECA
America's Electric Cooperatives

Microgrid Consortium Goals

Coops coming together that have implemented or are planning to implement microgrid programs.

- ✓**Enable information sharing** and collaborative solutions (planning, engineering, design, operations, economics).
- ✓**Leverage opportunities** as networks or groups of regional microgrids to apply for funding.
- ✓Create education-based programs to **develop workforce** solutions.
- ✓**Demonstrate unique programs** that utilize technologies to improve grid reliability, resilience.
- ✓**Address fundamental barriers** / implement solutions to integrate microgrids to infrastructure.



NRECA America's Electric Cooperatives

https://www.cooperative.com/programs-services/government-relations/infrastructure-resource-hub/Pages/Secure/microgrid-consortium.aspx

Microgrids CARED – Project Goals

- **Improve grid reliability and resiliency of the grid** in the rural communities benefiting from the microgrid subprojects.
- Support overall r**eduction in the use of carbon emitting energy sources**, especially during times of peak demand.
- **Provide backup resources for outage mitigation to help reduce 80%** of outages caused in some communities.
- **A measurable reduction of power supply costs** for the participating cooperatives and their consumer-members.
- **Community engagement and participation in co-op workforce development.**

Key Personnel/Organizations
Prime recipient: NRECA Research
Project manager: Tolu Omotoso

Proposed Budget
Federal funds: $45,200,000
Cost-share: $12,600,000 (21.88%)
Total: $57,900,000

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America's Electric Cooperatives

Community Benefits Plan

Community and Labor Engagement

- Several members engage with the communities, local governments, tribes, unions, and local businesses.
- 70% of the consortium members have a Collective Bargaining Agreement in place.

Investing in the American Workforce

- Create about 100 jobs
- Many opportunities for coop employees = jobs with benefits stay in rural America.

Diversity, Equity, Inclusion, and Accessibility (DEIA)

- Establish DEIA plans to enhance diversity, reduce barriers, and increase access to new, good-paying jobs.
- Develop creative partnerships with community members and integrate diversity in career track and workforce development.

Justice40 Initiative

- 16 census tracts will benefit of which 12 (75%) are considered disadvantaged or partially disadvantaged by CEQ.

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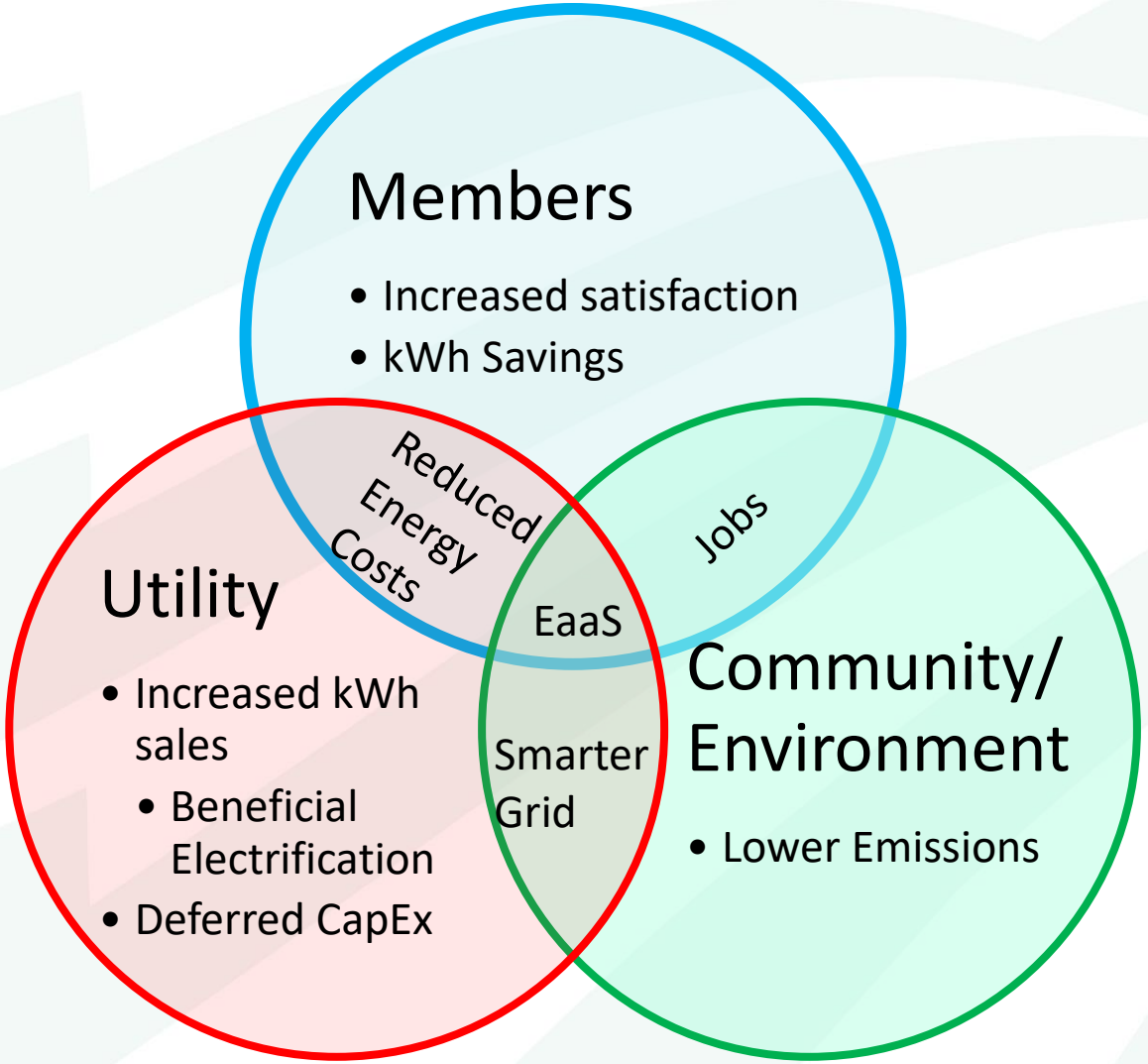
NRECA's Partnership Framework

Partnership Objectives

- ❑ Develop win-win-win relationships between utilities, communities and technology providers
- ❑ De-risk replicable/scalable projects
  - ❑ Conduct preliminary engineering analysis - microgrid feasibility studies
- ❑ Apply for project funding
  - ❑ BIL/IRA
    - ❑ OCED ERA
    - ❑ OCED Prize
    - ❑ USDA New ERA



Partnerships being sought

- ❑ Industry
  - ❑ OEMs
  - ❑ Key Accounts
- ❑ Educational Institutions
  - ❑ Local Colleges
  - ❑ School Districts
- ❑ Local Community
  - ❑ Workforce Assn
  - ❑ Builders Assn
  - ❑ Contractors

Risk Mitigation

- ❑ Feasibility Studies
- ❑ Extended Warranties

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Solar+Storage Microgrids for Rural Community Health Centers

Benjamin Money Jr.
Senior Vice President
National Association of Community Health Centers

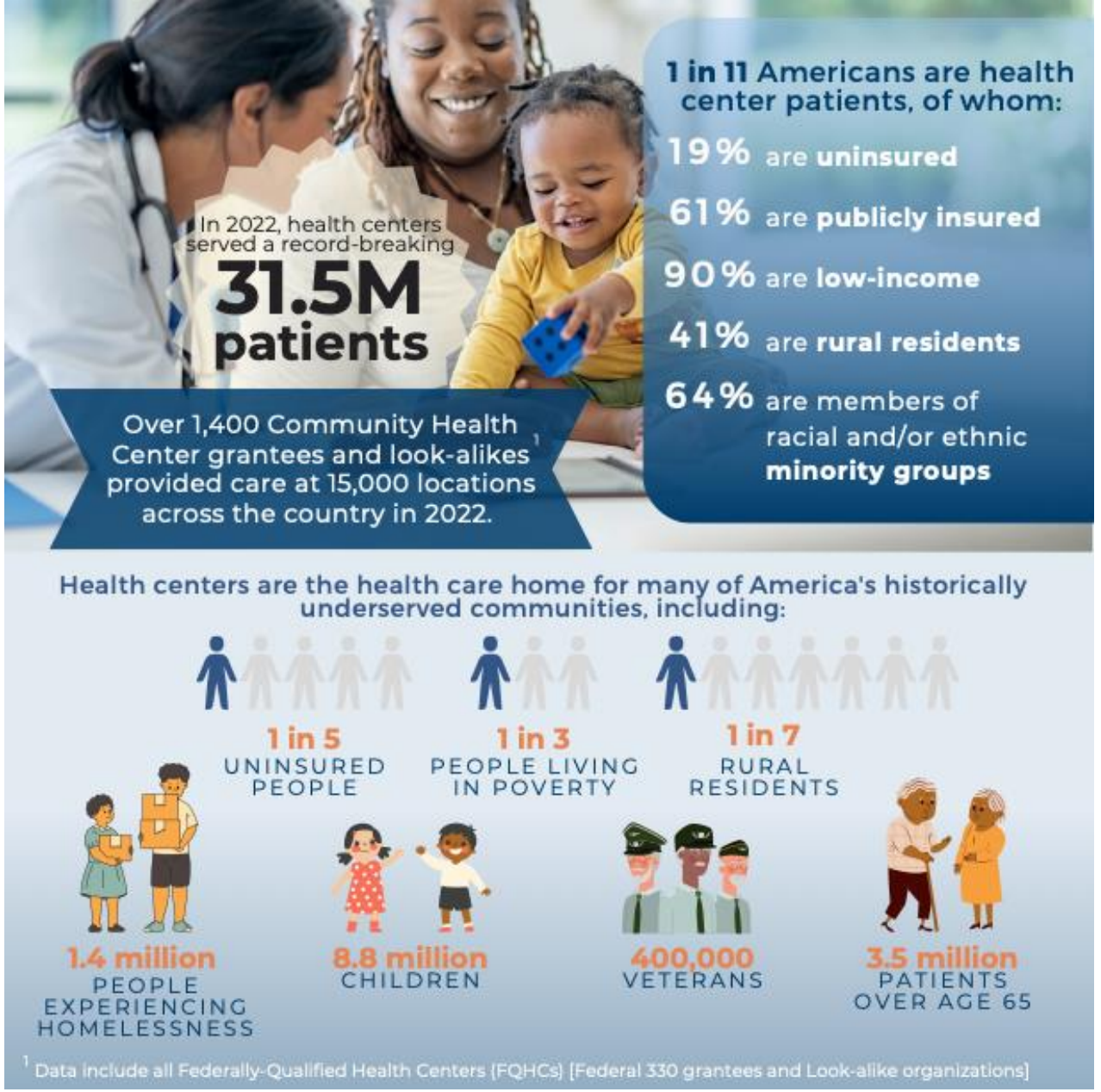
Overview

- The **National Association of Community Health Centers (NACHC) and Capital Link, Collective Energy** formed the **CHARGE Partnership** in 2022 to advance clean energy and resilience at Community Health Centers. CHARGE along with **Clean Energy Group** partnered on the DOE OCED for Energy Improvements in Remote or Rural Areas (ERA) opportunity.
- **The award will strengthen the energy resilience (through solar panels and battery storage) of rural Community Health Centers** in the rural Southeast (HRSA Region IV) **Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina,** and **Tennessee**.
- CHC sites in locations with < 10,000 population are eligible. (783 in HRSA Region IV)
- **The project goal is to install solar+storage microgrids on an estimated 125 to 175 CHC sites** in over 100 rural communities across the eight states in the Southeast Region over the next seven years.
- **Aaron E. Henry Community Health Center in Tunica, MS will be the initial site.**

AMERICA'S COMMUNITY HEALTH CENTERS

Community Health Centers:

- ✓ are nonprofit
- ✓ are **patient-governed** organizations
- ✓ provide high-quality, **comprehensive primary health care** to America's **medically underserved communities**
- ✓ **Medical, dental, pharmacy, behavioral health and enabling services**
- ✓ serve **all patients** regardless of income or insurance status

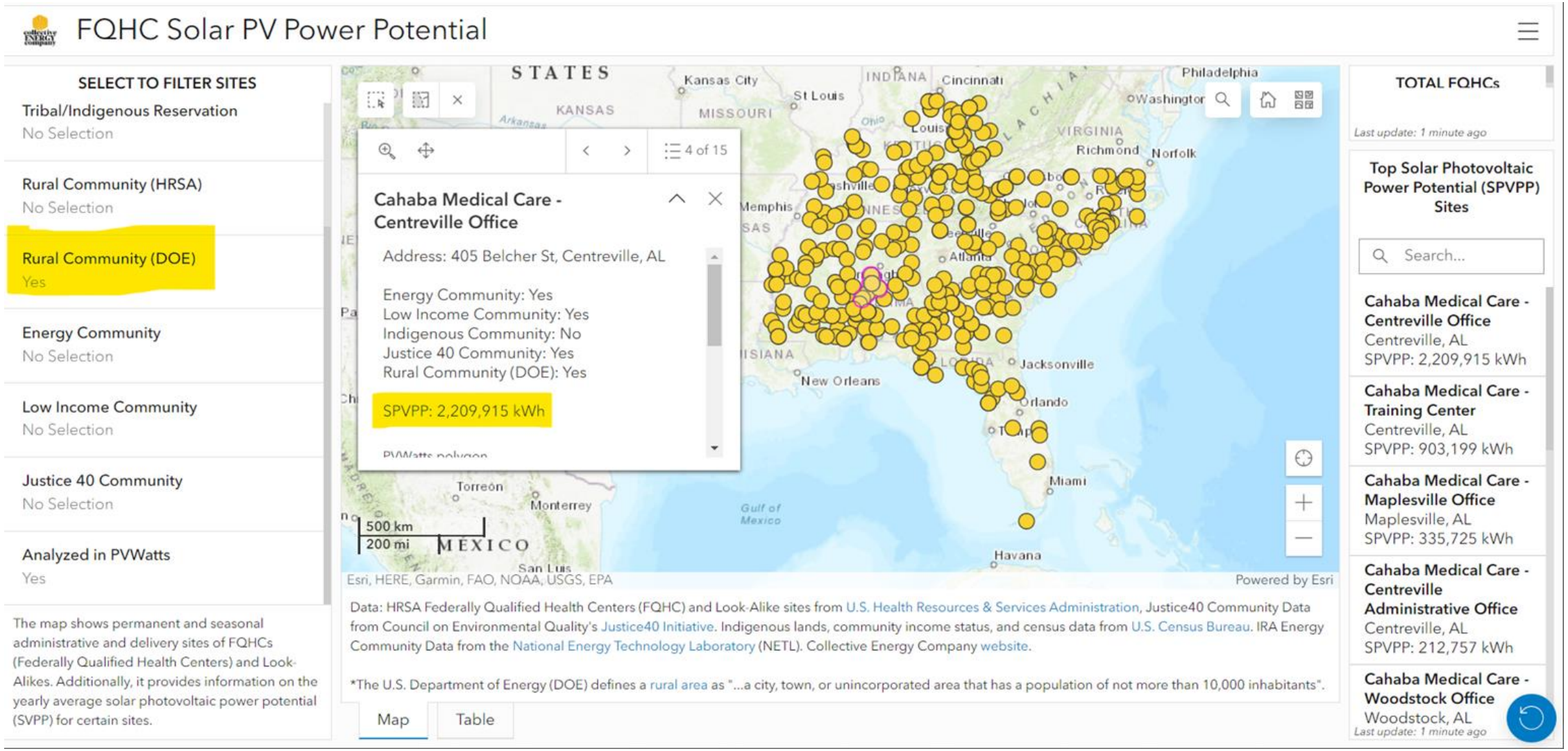


Why Solar Microgrids?

Project Rationale

- CHCs are patient-governed non-profits that provide medical services to over **31.5 million patients** who are **predominantly low-income and communities of color**.
- The **Southeast faces numerous energy and climate issues** that inequitably impact low-income households and communities of color.
- These challenges exacerbate rural healthcare delivery issues, like distance to clinics and shortage of providers; **proving deadly during power outages and climate events**.
- The project would deliver solar+storage to rural CHCs in the Southeast and assures that vulnerable health center patients and communities will continue to have **access to essential primary care services during power outages**, thereby saving lives and reducing costly visits to the hospital emergency room.

Solar Power Potential for CHCs in the Southeast



Community Benefits Plan

- Of the 783 permanent rural CHCs in the Southeast, **636 (81%) are in locations designated as disadvantaged communities.**
- Project could save CHCs an **estimated $45M** that can be **reinvested in patient care**.
- Reduction of greenhouse gas emissions is estimated over **125,000 tons of carbon** emissions over the systems' lifetimes).
- Creation of robust clean energy **workforce.**
- Expand education and awareness of the benefits of clean energy projects and how they can **benefit disadvantaged communities**.
- **Community residents** will be provided **opportunities to develop skills** and to participate in training in conjunction with microgrid development.

Community Benefits continued…

- Opportunities for **local trade programs and community-based organizations (CBOs)** for training and jobs.
- **Partners include Interstate Renewable Energy Council, GRID Alternatives, and Black Owners of Solar Services**
- Prioritization of Minority Owned Business Enterprises (MBEs), Disadvantaged Business Enterprises (DBEs), Woman-Owned Businesses (WOBs), and Veteran-Owned Businesses (VOBs) with a focus on firms capable of managing apprentice programs and **providing quality, equitable, full-time, well-paying jobs for diverse, local workforces**.
- **Initial site is Aaron E Henry CHC, Coahoma Community College (CCC),** and project partners will identify, recruit, train, and place community members in the microgrid training and recruitment program.

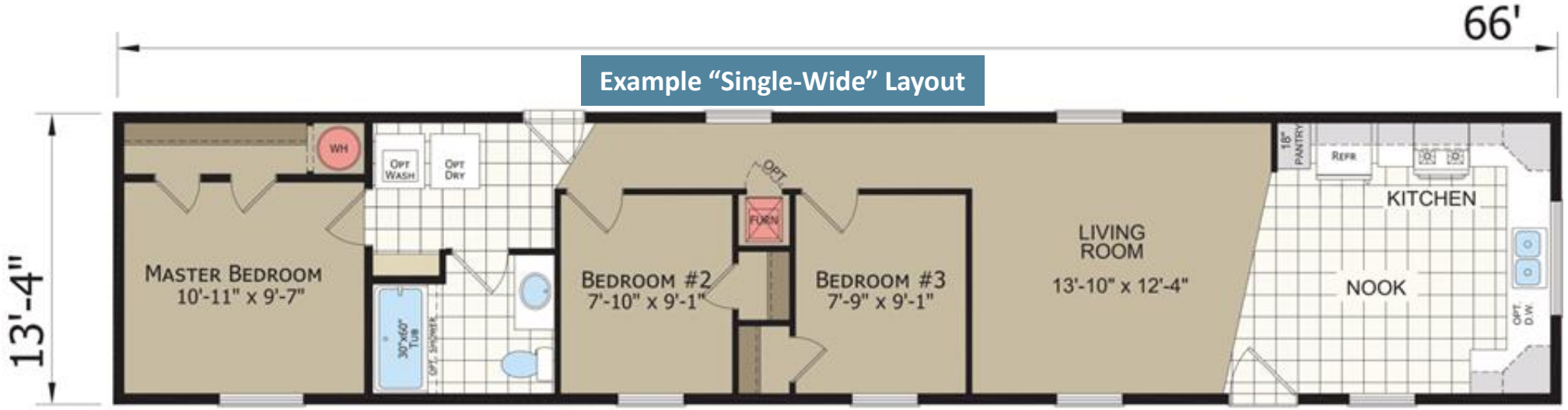
Heat Pump Solutions for Mobile/Manufactured Homes

Dan Mistro
Strategic Initiative Manager
Efficiency Trust Maine

Project Overview

- Manufactured homes in Maine
  - Over 62,000 in the state, or 8% of the housing stock. 55,000 in rural communities.
  - Primarily use low- and moderate efficiency- kerosene, oil, and propane furnaces.
  - Include economically challenged households.
- Electrification of manufactured homes is a challenge due to:
  - Lack of industry experience.
  - Many tiny rooms rather than open space.
  - Water lines run under homes and are kept warm by air in the ducts.
  - Small HVAC closets.
  - 100A panel capacities.

Eligible Manufactured Home Style

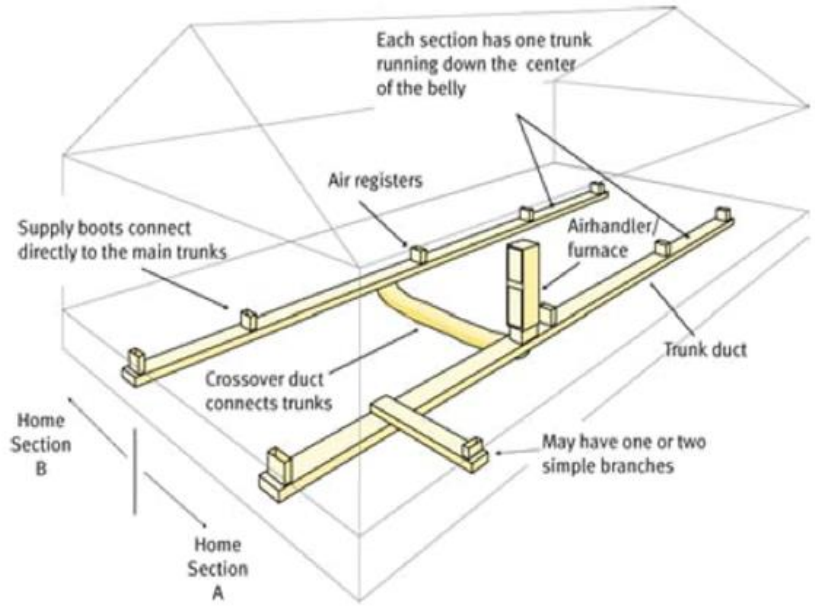


- "Single-wide" manufactured homes (to start)
- Climate zones 6a, 5b, and 5a (to start)
- Located in a rural community
- Heating with kerosene, oil, or propane
- Underbelly insulation fully intact
- Owner-occupied
- Meet lower income qualifications
- Ability to fit appropriately sized heat pump and, if necessary, supplemental electric resistance in closet and electrical panel

Ducted Manufactured Home Solution

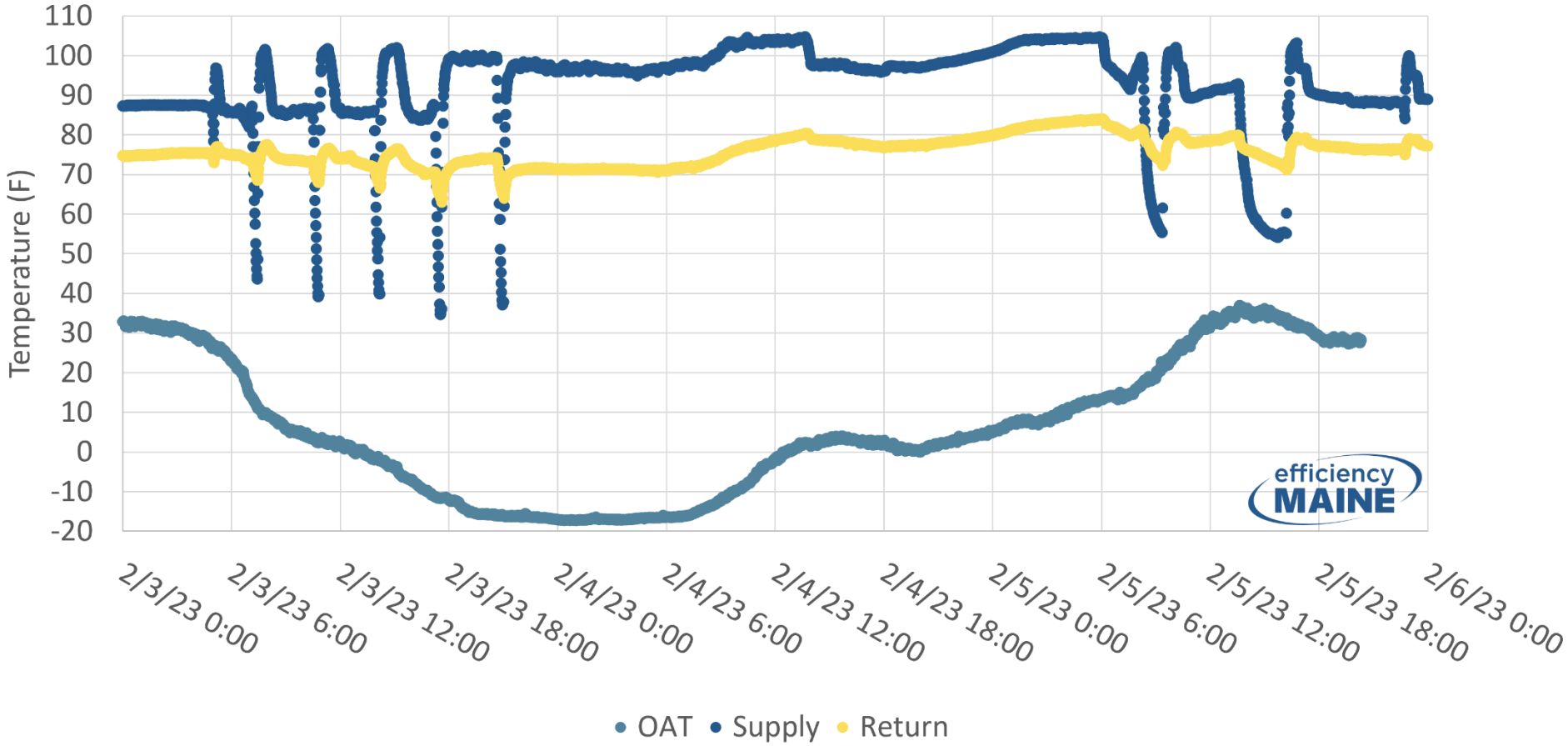
- Heat pumps replace the Miller furnace and use the existing closet and ductwork to warm every part of the home.
    - Keeps warm air flowing through the ducts, which prevents frozen pipes.

Duct Work Layout



Efficiency Maine Pilot Program Background

- 80 installations completed
  - Includes a sample of “double-wide” and northern Maine homes
  - Metering data from 3 winters



Proposed Project Timeline

Year 1	• Single-wide sized homes in climate zone 5A or warmer. • 150 manufactured home heat pump retrofits expected.
Year 2	• Consider including single-wide homes located in climate zone 4B if viable. • Consider including double-wide homes in climate zone 5B or warmer if viable. • 250 manufactured home heat pump retrofits expected.
Year 3	• Consider including double-wide homes in climate 5A or warmer if shown to be viable. • Consider including single-wide homes in climate zone 4A if shown to be viable. • 275 manufactured home heat pump retrofits expected.
Year 4	• Project closeout

Community Benefits Plan & Stakeholder Engagement

Potential Benefits:

- Estimated 40% reduction in annual heating costs
- Over 4 Million pounds of CO2 savings per year at full project scale
- Installer training and support across the state

Partners

- Maine Governor's Energy Office
- Maine State Housing Authority

Potential Beneficiaries:

- Towns of less than 10,000 people (350+ in Maine)
- Lower income residents
  - Priority for Home Energy Assistance Program (HEAP) recipients
  - SNAP, TANF, MaineCare or other assistance recipients are eligible
  - Additional eligibility through adjusted gross income threshold on tax returns
- Installers working in rural communities

Community Benefits Plans

Prioritizing Community Benefits in OCED Projects

OCED **requires** applicants to include a Community Benefits Plan (CBP) to help ensure broadly shared prosperity in the clean energy transition.

By **prioritizing community benefits**, we can ensure the next chapter in America's energy story is marked by greater justice, equity, security, and resilience.

Community & Labor Engagement

Diversity, Equity, Inclusion, & Accessibility

Investing in the American Workforce

Justice40 Initiative

Next Steps & Resources

Get Involved

How could this project impact me?

Learn more about OCED's Community Benefits Plan Framework →

Is there an ERA project near me?

Learn more about the selected projects here →

Project selected

WE ARE HERE

Announcement and Negotiations
Projects have been selected, but awards have not been made

What is an ERA project?

Learn more →

Project awarded

NEPA engagement during phase 2 →

1 ~5 years

2 ~5 years

3 ~2-4 years

4 ~2-4 years

Anticipated phases

Phase 4: Ramp-Up & Operate
Community Benefit Commitments Public

Phase 3: Install, Integrate, Construct
Community Benefit Commitments Public

Phase 2: Project Development
Community Benefit Commitments Public

Phase 1: Project Planning
Community Benefit Commitments Public

Ongoing community engagement throughout each phase

Learn more about project phases →

When are the ERA project-specific briefings?

Learn more and register here →

How do I stay informed?

Sign up for updates →

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Community Benefit Commitments Public
Go/No-Go Decisions

Feedback Session

Ground Rules for Discussion

Submit questions using the Q&A feature

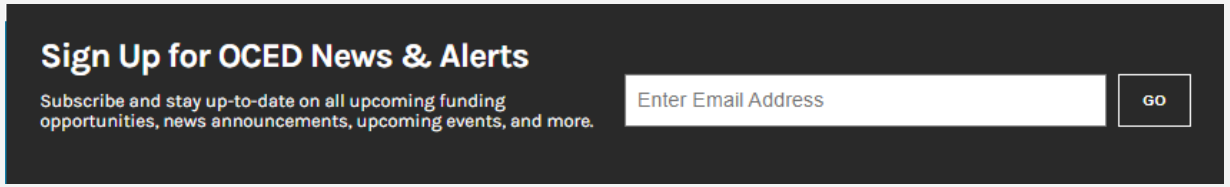
Reserve judgement

One idea at a time

It is okay to build on the ideas of others- Clarifying questions are okay

For more information

- **For questions regarding ERA projects in the Eastern Region**
  East_ERA2970@hq.doe.gov
- **OCED Website & Newsletter Sign-up**
  energy.gov/oced
  Scroll to bottom to sign up here:



- **OCED Exchange (RFIs, NOIs, and FOAs)**
  oced-exchange.energy.gov
- **Follow us on LinkedIn**
  linkedin.com/company/doe-oced/

Resources

- **ERA Program**
  - OCED ERA Program Webpage
  - ERA Selections for Award Negotiations | Department of Energy
  - Federal Energy Funding for Rural and Remote Areas: A Guide for Communities
  - Rural or Remote Areas Geospatial Dashboard
- **Justice40 Initiative**
  - https://www.energy.gov/diversity/justice40-initiative
- **Energy Justice Dashboard (BETA)**
  - https://energyjustice.egs.anl.gov/
- **Climate and Economic Justice Screening Tool**
  - https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5

Thank you!

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For more information, please visit energy.gov/OCED