FEMA’s Building Resilient Infrastructure and Communities Program │ April 24, 2020
Welcome
- Lisa Jacobson, President, Business Council for Sustainable Energy
- Lynn Abramson, President, Clean Energy Business Network
- David Terry, Executive Director, National Association of State Energy Officials

FEMA’s Building Resilient Infrastructure and Communities Program
- Camille Crain, Section Chief, Building Resilient Infrastructure and Communities (BRIC), Federal Emergency Management Agency (FEMA)

State and Industry Perspectives
- Ben Bolton, Energy Programs Administrator, Office of Energy Programs, Tennessee Department of Environment & Conservation and Co-Chair, NASEO Energy Security Committee
- Megan Levy, Director, Local Programs, Wisconsin Office of Energy Innovation, WI Public Service Commission and Co-Chair, NASEO Energy Security Committee
- Anna Pavlova, Vice President, Government Relations, Schneider Electric
- Manny Perotin, Senior Project Manager, CDM Smith
About the BCSE

The Business Council for Sustainable Energy (BCSE) is a coalition of companies and trade associations from the energy efficiency, natural gas and renewable energy sectors.

The Council advocates for policies at state, national and international levels that:

• Increase the use of commercially-available clean energy technologies, products and services;
• Support an affordable, reliable power system; and
• Reduce air pollution & greenhouse gas emissions.
2020 BCSE Members
BCSE Resilience and Reliability Dialogue

- **Readiness for Resilience** Project
  - Texas and Puerto Rico
- Thought Leader Speaker Series
- White Paper on Resilience and Reliability
- External education and advocacy initiatives
  - Resilience Project Case Studies

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**OUR REACH**

*New milestones*

3,500+ business leaders across 50 states

50+ premium members

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**Diverse technologies**

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About NASEO and State Energy Offices

- NASEO is the only national organization whose membership includes the governor-designated energy directors and their offices – *over 3,000 state energy professionals* – from each of the 56 states, territories, and District of Columbia.
- NASEO engages with federal energy policy and regulatory officials and private sector energy organizations on behalf of the states.
- NASEO’s structure includes six regions and various topical energy committees.
- State Energy Offices have broad policy and program responsibility over all energy sectors, with over 80 percent having direct access to the governor and/or relevant cabinet secretary,
- State Energy Offices advise and support their governors and state legislators with 50 percent of the State Energy Directors serving as the governor’s energy advisor, and others function in an expert supporting role.
State Energy Office Activities

While State Energy Office activities vary widely, depending upon states’ indigenous resources, policies, and needs, most:

- Advise and inform governors and legislators on energy policy and regulatory development
- Lead or co-lead energy security (e.g., ESF12) and resilience across energy sectors – grid, fuels, critical end-use.
- Ensure that the needs and issues of business and residential energy consumers are considered during energy program development
- Aid citizens in adopting energy efficiency measures that lower utility costs and reduce waste
- Demonstrate the application of emerging energy technologies in real-world situations
- Work with other state agencies to deploy cost-effective, state-of-the-art technologies to reduce public facility energy consumption at the state and local levels
- Communicate to the public the importance of energy to economic development and the environment
Building Resilient Infrastructure and Communities (BRIC)
Camille Crain | April 24, 2020
Agenda

- BRIC Program Overview
- BRIC Policy Key Elements
- Draft BRIC Policy
- BRIC Rollout Timeline
- BRIC Funding
- How is BRIC Different Than PDM?
- Elements of Good Mitigation Projects
- Stakeholder Feedback
- Other Supporting Funding Sources
- Resources
What is Building Resilient Infrastructure and Communities (BRIC)?

Guiding Principles

- Support Community Capability & Capacity Building
- Encourage and Enable Innovation
- Promote Partnerships
- Enable Large Infrastructure Projects
- Maintain Flexibility
- Provide Consistency

Supports FEMA’s Strategic Plan

1. Build a Culture of Preparedness
2. Ready the Nation for Catastrophic Disasters
3. Reduce the Complexity of FEMA
Disaster Recovery Reform Act (DRRA) Section 1234, which amends Section 203 of the Stafford Act

- Funded by a 6% set-aside from federal post-disaster grant funding
- Eligible applicants – major disaster declaration in seven years prior
- Will replace existing pre-disaster mitigation (PDM) program
BRIC Policy Key Elements

Available Funding Mechanisms
- State and Territory Allocation
- Tribal Set-Aside
- Project Competition

Uses of Assistance
- Technical Assistance
- Capability and Capacity Building
- Mitigation Projects
- Management Costs

Pre-Award Costs
- Can be Incurred prior to start date
- Can be reimbursed
Draft BRIC Policy

- Public notice of the proposed BRIC policy published in Federal Register on April 10, 2020
- Stakeholders may view policy and provide comments until May 11, 2020 on regulations.gov
Timeline

- BRIC Policy and Program Development
  - Summer 2019

- Policy Review
  - Fall 2019 - Spring 2020

- Public Comment Period: Federal Register Notice
  - Spring 2020

- BRIC Rollout and Training
  - Spring - Fall 2020

- Notice of Funding Opportunity
  - Summer/Fall 2020

- Grant Application Period Opens
  - Fall 2020

* Timing is estimated as of April 2020 and subject to change.
BRIC Funding

6% of federal post-disaster grant funding estimate

Disaster Declaration

BRIC account
How is BRIC Different than PDM?

Sets Clear Priorities
- Lifelines & infrastructure projects
- Building codes
- Shared responsibility & partnerships
- Innovative projects

Builds Capability
- Capability & capacity-building activities
- In-person non-financial technical assistance
- Mitigation Action Portfolio

Increases Flexibility
- Reduces limitations
- Increases caps
- Allows pre-award costs

Streamlines Processes
- New application process through FEMA GO
- Project extensions
- Phased projects
Elements of Good Mitigation Projects

- Risk Reduction
- Grant Implementation Approach
- Innovation in Project Planning and Implementation
- Populations Impacted
- Partnerships and Outreach
- Future Conditions
- Infrastructure and Community Lifelines
What Makes a Project Eligible?

Existing activities are still eligible

Expanded eligibility includes:

- Project scoping
- Building code projects
- Additional activities for wildfire and wind implementation (DRRA Section 1205)
- Earthquake early warning (DRRA Section 1233)

Projects must:

- Be cost-effective
- Reduce/eliminate risk and damage from future natural hazards
- Meet latest two consensus codes (i.e. 2015 or 2018 international building code)
- Align with Hazard Mitigation Plan
- Meet all environmental and historic preservation requirements
Building Codes

• DRRA provides legislative mandate to support broader adoption of updated building codes

• Projects must be in conformance with latest published codes (either of 2 most recently published editions)

• BRIC will fund building code activity
Building Codes

States without 2015/2018 IRC and/or IBC Adoption

- 46% of states and territories (26) have not adopted the 2015/2018 International Building Code and/or International Residential Code

States with a 0% BCEGS Survey Score

- 15 states and territories do not have a community with a Building Codes Effectiveness Grading Schedule score
- 11 more have less than 10% of their communities with a BCEGS of 1-5

* Not shown are the Territories and DC
Community Lifelines

Lifelines are services communities use. The goals and objectives of FEMA’s Strategic Plan promote using mitigation to reduce risk to lifelines before a disaster and to quickly stabilize a community after disaster by preventing cascading impacts. BRIC mitigation grants can go toward projects which help improve these systems.

**Lifeline-focused mitigation projects** could involve a wide variety of public, private, and non-profit organizations.
Example Infrastructure Projects

Nature-Based Infrastructure
Underground Resiliency Park for a Water Treatment Plant, Hoboken, NJ
Example Infrastructure Projects

Microgrid Installation
Blue Lake Rancheria Tribe Microgrid, Humboldt Co., CA
Example Infrastructure Projects

Nature-Based Flood Protection
Resilient St. Vrain, Longmont, CO
Example Infrastructure Projects

Energy Support for Critical Infrastructure

Texas County Memorial Hospital, Houston, MO
What Is Project Scoping?
• Provides states, federally-recognized tribes, and territories with resources to develop mitigation strategies and obtain data to prioritize, select, and develop complete mitigation project applications
• Project Scoping can help states and communities prepare projects for the full launch of BRIC in FY20 and beyond, including years with larger funding available.

What Activities Are Eligible For Project Scoping?
• Engineering design and feasibility studies for larger or complex projects
• Hydrologic and Hydraulic (H&H) studies
• Obtain staff or resources to develop cost-share strategy and identify potential match funding
• Evaluate facilities or areas to determine appropriate mitigation actions
• Incorporate environmental considerations early into program decisions
• Collect data for benefit cost analyses, environmental compliance and other program requirements
• Evaluation of potential solutions (i.e., alternative analysis)
• Project scoping across a wide variety of programs to incorporate sustainability, resilience and renewable building concepts
Benefit-Cost Analysis (BCA)

- FEMA has a statutory requirement to fund “cost-effective” hazard mitigation projects – to assess the cost-effectiveness of a project, FEMA requires a BCA.
- A BCA quantifies the benefits of a project and compares them to its cost, resulting in a Benefit-Cost Ratio (BCR).
- FEMA has released “pre-calculated benefits” for some project types.

FEMA’s BCA Toolkit, pre-calculated benefits, and other resources may be found at www.fema.gov/benefit-cost-analysis
Technical Assistance

We heard that communities need technical assistance, application advice and have other information needs. FEMA is offering tools and resources for stakeholders such as:

- Mitigation Action Portfolio – A guidebook with project examples and best practices
- Educational Opportunities:
  - BRIC Engagement Webinars (July 2020)
  - BRIC NOFO Webinars (August/September 2020)
- Non-financial technical assistance with select communities to help build local capability and capacity
Partnerships

Guiding Principles:

- Support Community Capability & Capacity Building
- Promote Partnerships

Partnering with other federal agencies and state, local, tribal, and territorial governments, the private sector, and non-governmental organizations amplifies mitigation investment and its effects.
Other Supporting Funding Sources

FEMA

- Hazard Mitigation Grant Program
- Flood Mitigation Assistance
- Public Assistance 406 Mitigation

State Agencies

Other Federal Agencies (NOAA, USACE, HUD, DOE, DOT, etc.)

Building Resilient Infrastructure and Communities (BRIC)
Stakeholder feedback was vital to inform the BRIC policy and program design.

FEMA gathered feedback from:
- Federal, State, Tribal, and Territorial Stakeholders
- Partners
- Members of the General Public

The Stakeholder Feedback Summary is available online at fema.gov/bric
Stakeholder Feedback: Top Themes and Subtopics

The following themes and subtopics were used to categorize comments received:

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Purpose and Goals

- Educate stakeholders on all aspects of the BRIC policy and program
- Increase awareness and understanding of key BRIC program components, such as:
  - Eligibility
  - Innovative projects
  - Benefit-Cost Analysis
  - Project Scoping
Building Resilient Infrastructure and Communities (BRIC)

FEMA Resources

Other Resources:

• Hazard Mitigation Assistance (HMA): https://www.fema.gov/hazard-mitigation-assistance

• Community Lifelines Implementation Toolkit: https://www.fema.gov/media-library/assets/documents/177222

• Benefit Cost Analysis (BCA): www.fema.gov/benefit-cost-analysis

• Hazard Mitigation Planning: https://www.fema.gov/hazard-mitigation-planning

https://www.fema.gov/bric

This page provides general information about a new pre-disaster hazard mitigation program.
Thank you!
fema.gov/bric
State Energy Office Hazard Mitigation

**April 24, 2020**

**Ben Bolton,** Energy Programs Administrator, Office of Energy Programs, Tennessee Department of Environment & Conservation and Co-Chair, NASEO Energy Security Committee

**Megan Levy,** Director, Local Programs, Wisconsin Office of Energy Innovation, WI Public Service Commission and Co-Chair, NASEO Energy Security Committee
Tennessee Hazard Mitigation Dashboard

ArcGIS-based dashboard with data on approved and proposed hazard mitigation projects by county.

TEMA Local and County Mitigation Planning website
Statewide Assistance For Energy Resilience and Reliability (SAFER2)

- Wisconsin’s SEP Competitive grant seeks to assist County and Tribal governments with energy emergency plan (ESF-12) development, identifying critical infrastructure, and exploring resilient strategies beyond diesel back-up.

- Kentucky and other states are working on innovative strategies.

Energy Assurance and Resilience Tool Kit Project Registration is Open! Mark Your Calendars - Links Below
Oneida Nation Critical Infrastructure Microgrid Feasibility study

- Alternative evaluation matrix will consider:
  - Critical needs of community
  - Cost effectiveness
  - Lifelines supported
  - Pollution profile
Opportunities for The Public Private Partnerships under BRIC

Anna Pavlova
VP, Government Relations
Schneider Electric North America

“Embracing Digital Transformation to deliver economic value to your business”
Energy as a Service (EaaS) is a long-term arrangement that transfers the burden of financing, installing, owning and managing energy from a customer to a third-party entity.

EaaS involves construction of a microgrid, energy efficiency upgrades, procurement of distributed energy resources, and long-term management and optimization of the end-to-end system.

An entity, such as SE’s AlphaStruxure, designs, builds, owns, operates and maintains an energy system that meet a customer’s comprehensive goals – with no capital cost.
Example of new Business Model: Energy-as-a-Service

Microgrid: Montgomery County, MD
Customer: Public Safety HQ and Correction
Microgrid type: Facility, islandable
Location: Maryland, USA
Capacity: 1.2 MW

Customer pain point
Aging infrastructure with resiliency challenges, budget challenges with no capability to perform upfront investment, aggressive sustainability goals

Solution
Energy as a service business model with Duke Energy, delivering solutions with no upfront cost

“Upgrades to critical facilities improve the county’s resilience, so we can keep residents safe and provide needed services even in the event of prolonged power outages.”

Isiah Leggett, County Executive, Montgomery County

100% green energy produced as part of public safety microgrids
Avoided $4M capital repair investment via EaaS
Relies on Schneider Electric to purchase 100% clean energy to power all county facilities

1000 vehicles EV fleet
Utility microgrids usually require rate-basing a larger community that may not see the benefits.

Third-party/P3 microgrids are competitive since EaaS can be financed outside of that framework.

Projects should be a real benefit to a set of real customers rather than a vague benefit to a broad base of customers.

The asset holder (town, subdistrict) must have flexibility to enter a P3 where the microgrid is owned by a P3 entity – guidelines would need to clarify the ownership aspect of the program.

Interconnection rules and property rights need to be fleshed out for speedy deployment. RIGHT of WAY is currently a big impediment to quick growth, and utilities need to allow P3 projects to go forward.
CEBN/BCSE/NASEO Webinar on Building Resilient Infrastructure and Communities (BRIC)

Industry perspectives on BRIC implementation and the types of projects that could be supported by this program

Manny Perotin, PE, PMP, CFM
Long Island Power Authority (LIPA)

- $1+ billion for repair of substations as well as overhead electric transmission and distribution lines
- Mitigation measures including strengthening transmission/distribution lines and elevating substations

New York University Langone Medical Center (NYULMC)

- $982 million to restore damaged buildings
- Flood risk reduction mitigation measures designed to protect it from future storms as well as emergency power
Other Resources

- FEMA Loss Avoidance Study
- Hazard Mitigation Assistance: BRIC announcement in Federal Register open through 5/11/2020
- FEMA Hazard Mitigation Assistance “Open Data”
  - 400.1: Utility Protective Measures (Electric, Gas, etc.)
  - Over 700 projects
  - $600+ Million
Next up in POWERING FORWARD

The Clean Energy Economy: a Decade of Growth, a First Quarter in Crisis

Ethan Zindler, Bloomberg New Energy Finance
Phil Jordan, BW Research

May 20, 2020