Federal Partners in Disaster Recovery:
DOE, FEMA, and SBA

2019 CDBG-DR Problem Solving Clinic
Kansas City – Overland Park | July 30 – August 1, 2019
Agenda & Speakers

Agenda:
• Welcome
• DOE Energy Efficiency and Renewable Energy Resources for Disaster Recovery
• FEMA Hazard Mitigation Assistance Programs
• SBA Disaster Assistance

Speakers:
• Tennille Parker, HUD
• Lauren Nichols, ICF
• Adam Hasz, DOE
• Roosevelt Grant, FEMA
• Alejandro Contreras, SBA
DOE Energy Efficiency and Renewable Energy Resources for Disaster Recovery

Adam Hasz
Residential Energy Fellow
U.S. DOE Building Technologies Office
The mission of the Office of Energy Efficiency and Renewable Energy (EERE) is to create and sustain American leadership in the transition to a global clean energy economy. Its vision is a strong and prosperous America powered by clean, affordable and secure energy.
Five key takeaways from this presentation:

1. Energy Efficiency and Renewable Energy (EE & RE) technologies are now quite affordable

2. Take advantage of the Green Building Standard

3. EE & RE can provide resilience benefits

4. DOE has free resources to help implement EE & RE

5. You reach out to me (adam.hasz@ee.doe.gov) to talk more about DOE can support your recovery
The solar energy industry is one of the fastest growing industries in the U.S. Driven by falling costs, total solar installed capacity is now **58.3 GW** with over **two million solar systems** operating across the country.

Sola PV Deployment and System Price in the U.S.

CDBG-DR grantee requirement for Green Building Standards:

- All new construction of residential buildings
- All replacement of substantially damaged residential buildings (reconstruction, changes to structural elements)

Green Building Standards include:

- ENERGY STAR
- LEED
- Enterprise Green Communities
- ICC-700 National Green Building Standard
- Other equivalent comprehensive green building program (approved by HUD)

For rehabilitation of non-substantially damaged residential buildings, CDBG-DR grantees must follow guidelines specified in HUD CPD Green Building Retrofit Checklist
EE has many benefits – take full advantage!

High-performance green building construction creates:

• Energy bill savings for residents
• Improved home comfort
• Improved indoor air quality and health
• Reduced environmental pollution
• Overall cost savings for operating the electric grid
DOE tools can help your program build better

Building America Solution Center

Available at https://basc.pnnl.gov/

Welcome to our new homepage! The Building America Solution Center provides access to expert information on hundreds of high-performance construction topics, including air sealing and insulation, HVAC components, windows, indoor air quality, and much more. Click on the links below to explore the Solution Center.
EE Resilience Benefit #1: Passive Survivability

NREL simulated a four-day power outage for 8,000 homes in the Chicago area during a heat wave in 2012. Homes with low air leakage stayed cooler than leaky homes.

Source: Eric Wilson, National Renewable Energy Laboratory
EE Resilience Benefit #2: Reduce Backup Costs

K-12 school buildings serve as emergency shelters in many communities. In this case study model of a high school in Orlando FL, the estimated upfront cost of a resilient backup microgrid goes down by around $400,000 if energy efficiency investments reduce energy needs by 20%.

<table>
<thead>
<tr>
<th>Electricity Use Scenario</th>
<th>Solar Generation Capacity</th>
<th>Battery Storage Capacity</th>
<th>System Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline Annual Usage:</td>
<td>661 kW</td>
<td>1559 kWh</td>
<td>$1,966,000</td>
</tr>
<tr>
<td>3,421,024 kWh</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20% Energy Savings:</td>
<td>531 kW</td>
<td>1,247 kWh</td>
<td>$1,575,000</td>
</tr>
<tr>
<td>2,736,819 kWh</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Different buildings need different strategies

MANUFACTURING
Built with a highly efficient building envelope, efficient equipment, and a state-of-the-art building energy management system.

SCHOOL
Solar panels and a tightly insulated building envelope keep air conditioning running to keep students safe during a summer power outage.

UNIVERSITY
Uses a renewable microgrid system combining a solar PV structure with battery storage, which can disconnect from the traditional grid and operate autonomously during outage events.

HOSPITAL
A combined heat and power system provides low-cost energy for critical lifesaving equipment during a winter storm power outage.

GROCERY STORE
A tightly insulated building envelope and highly efficient refrigeration equipment reduces the size of required backup generators, allowing the store to preserve inventory at a lower cost during a power outage following a hurricane.

COMMUNITY CENTER
Constructed for passive survivability with highly insulated concrete walls, window-shades that block direct summer sunlight, and a light-colored, reflective roof. During a summer time power outage, the community center stays cool enough to provide a place for residents to gather as well as a base for community services and local response.

OFFICE BUILDING
During a heat wave that threatens to strain the electrical grid, it can participate in electric utility demand response by temporarily reducing its demand on the grid while maintaining essential operations.

APARTMENT BUILDING
Features triple-pane windows, heavy insulation, and passive solar heating, and uses efficient electric heat pumps instead of gas heating. During a blizzard, residents are protected from the costs of natural gas price spikes. During a power outage, it can stay warm enough to keep residents safe for the duration of the event.

Graphic from https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/Resilience%20Infographic%204.8.19.pdf
This tool estimates the required rating and physical size of grid-connected photovoltaic (PV) and battery energy storage to provide power for extended periods during a large scale grid power outage. SolarResilient is designed for buildings that form part of a city’s resilience strategy.

Available from the DOE at https://solarresilient.org/
DOE resources can help with EE, RE, and resilience

Find these resources at https://betterbuildingsinitiative.energy.gov/resilience
Microgrids – Resilient Energy for a Community

A microgrid is 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.

Image and text from https://building-microgrid.lbl.gov/about-microgrids
Modeling Ideal Microgrid Locations in PR

The Sandia National Laboratory team identified 159 locations with strong potential for microgrid application in Puerto Rico.

Report available at https://www.osti.gov/servlets/purl/1481633
Resilience Roadmap
A Collaborative Approach to Multi-Jurisdictional Planning

To mitigate hazards and risks, the Resilience Roadmap offers comprehensive guidance for federal, state, and local entities to effectively convene at the regional level for adaptable and holistic planning. This multi-jurisdictional approach requires major cooperation across boundaries, considerable reliance on partnerships and multi-agency collaborations, and significant utilization of interdisciplinary teams.

Step-by-Step Process
To constructively lead intergovernmental planning efforts with tangible outputs, follow these steps in order:

1. Intergovernmental Preparation and Coordination
2. Planning and Strategy Development
3. Plan Adoption, Implementation, and Evaluation

WHAT IS RESILIENCE?
The ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions through adaptable and holistic planning and technical solutions.

Contact Eliza Hotchkiss with questions about the resilience planning process.
How can the DOE help your recovery efforts?

The DOE has many free resources and can provide limited technical assistance to states and cities utilizing CDBG-DR funds for energy-related projects.

Email your specific CDBG-DR requests to Adam Hasz at adam.hasz@ee.doe.gov, and he will connect you to the proper DOE office that can provide assistance.
Hazard Mitigation Assistance Programs

30 Years of Hazard Mitigation Assistance

1988

1998

2008

2018

HMGP
HAZARD MITIGATION GRANT PROGRAM

PDM
PRE-DISASTER MITIGATION

FMA
FLOOD MITIGATION ASSISTANCE
Disaster Recovery Reform Act (DRRA)

- Establishes more than 50 new authorities and requirements across FEMA
- Designed to address the rising costs of disasters and reform federal disaster programs
- The Mitigation Directorate is responsible for implementing 13 of the new provisions, over half of which directly impact Hazard Mitigation Assistance programs

DRRA Section 1234:
Building Resilient Infrastructure and Communities (BRIC)

- Leverage 6% set-aside funding mechanism
- Encourage community-wide mitigation of critical lifelines
- Prioritize resilient infrastructure projects
- Competitive, risk-informed projects
- Build capacity and capability
- Support building code efforts
Common Hazards

- Tornado
- Hurricane
- Wildfire
- Flood
- Earthquake
FY2018 HMA Funding

In FY 2018 more than $1.3B in pre- and post-disaster Hazard Mitigation Assistance Grants was delivered to states, tribes, and territories, resulting in mitigation actions that will reduce risk.

FLOOD MITIGATION ASSISTANCE GRANT PROGRAM 7% $88.2M
PRE-DISASTER MITIGATION GRANT PROGRAM* 4% $57.7M
406 MITIGATION FUNDING 30% $400M

59% HAZARD MITIGATION GRANT PROGRAM $784.5M

* This figure includes legacy PDM program funding
The Mitigation Opportunity

Natural Hazard Mitigation Saves

Natural Hazard Mitigation Provides the Nation $6 in Benefit for Every $1 Invested

- Riverine Flood: $5:1 Beyond Code Requirements, $7:1 Federally Funded
- Hurricane Surge: $7:1 Beyond Code Requirements, Too Few grants
- Wind: $5:1 Beyond Code Requirements, $5:1 Federally Funded
- Earthquake: $4:1 Beyond Code Requirements, $3:1 Federally Funded
- Wildland-Urban Interface Fire: $4:1 Beyond Code Requirements, $3:1 Federally Funded

This Interim Study quantified a number of benefits from mitigation, including reductions in:
- Future deaths, nonfatal injuries, and PTSD
- Repair costs for damaged buildings and contents
- Sheltering costs for displaced households
- Loss of revenue and other business interruption costs to businesses whose properties are damaged
- Loss of economic activity in the broader community
- Loss of service to the community when fire stations, hospitals, or other public buildings are damaged
- Insurance costs other than insurance claims
- Costs for urban search and rescue
Eligible Applicants and Subapplicants

- Applicants
  - State agencies
  - Indian Tribal governments

- Subapplicants
  - State agencies
  - Indian Tribal governments
  - Local governments/communities
  - Private non-profit organizations (HMGP only)

- Individuals and businesses are not eligible to apply directly to FEMA for HMA funds
Note: Applicants for PDM and FMA may apply for a maximum of 10 percent of the total funds requested in their grant application budget for management costs
Programmatic Requirements

- Cost Effectiveness
- Feasibility & Effectiveness
- Hazard Mitigation Plan
- Environmental Planning & Historic Preservation
- National Flood Insurance Program
Specific criteria for each HMA program:

http://www.fema.gov/hazard-mitigation-assistance

Contact the FEMA Regional office:

http://www.fema.gov/regional-operations
FEMA has published many technical documents to assist States, Indian Tribal Governments and communities to promote sustainable community development and mitigation practices.

FEMA Document Library  
http://www.fema.gov/about-fema-library

FEMA Building Science Website  
http://www.fema.gov/building-science
HUD CDBG-DR
Problem Solving Clinic

Alejandro Contreras
Director of Preparedness, Communication and Coordination
Office of Disaster Assistance
U.S. Small Business Administration

July 31, 2019
SBA’s Role in Disaster Assistance

- SBA was created in 1953 as an independent agency of the federal government to aid, counsel, assist and protect the interests of small business concerns, to preserve free competitive enterprise and to maintain and strengthen the overall economy of our nation.

- Since 1953, SBA has approved nearly $64 billion to 2.2 million businesses, homeowners and renters following America’s worst disasters.

- After a disaster declaration for hurricanes, floods, tornadoes, earthquakes, wildfires and other disasters, SBA disaster loans are the primary source of federal assistance to help private property owners pay for disaster losses not covered by insurance or other recoveries.

- SBA has its own declaration making authority for disaster events that do not rise to the level of a Major Presidential Disaster Declaration for Individual Assistance.

- SBA offers low-interest federal loans to businesses of all sizes, private nonprofit organizations, homeowners and renters. SBA disaster loans can be used to repair or replace the following items damaged or destroyed in a declared disaster: real estate, personal property, machinery and equipment, and inventory and business assets.
Office of Disaster Assistance Centers

Field Operations Center West
Citrus Heights, CA

Processing and Disbursement Center
Fort Worth, TX

Field Operations Center East
Atlanta, GA

Customer Service Center
Buffalo, NY

SBA Headquarters
Washington, D.C.

DCMS Ops & DVC, ODSEE,
ODP and ASC
Herndon, VA
Billion Dollar Disaster Loan Activity

- Northridge Earthquake 1994: $4.0
- Florida Hurricanes 2004: $2.2
- Hurricanes Katrina, Rita & Wilma 2005: $10.9
- Hurricane Sandy 2012: $2.5
- Louisiana Flooding 2016: $1.2
- Hurricanes Harvey, Irma & Maria 2017: $7.4
- Hurricanes Florence & Michael 2018: $1.1
### Post-KRW

- Added workstations:
  - 1,800 in Ft. Worth
  - 350 in Sacramento Surge space
- Maintain reserve force of 2k
- Increased concurrent DCMS users from 800 to 10,000
- Implemented Case Management
- Increased loan limit to $2 million
- DAIP and ELA launched (paperless application process)

### Post-Sandy

- New messaging: 3 Step Process
- Separate home and business tracks
- RAPID Approval (higher credit scores)
- Increased unsecured loan limit to $25,000 for physical and economic injury
- Launched DLAP and status updates
- Stop issuing paper applications (unless requested by survivor)
- Piloted desktop verifications (homes)

### HIM/Post-HIM

- All initial verifications via desktop
- Comprehensive surge plan (facilities, equipment, staff)
- SBA and interagency staffing
- Expanded language services contract
- DCMS 2.0 Modernization
- Disaster Preparedness Campaign
- Revised 2018 Staffing Strategy
- Wharton Research Project
- New strategic and priority goals

### Major Disaster Events by Comparison

<table>
<thead>
<tr>
<th></th>
<th>KRW</th>
<th>SANDY</th>
<th>HIM</th>
<th>FLORENCE &amp; MICHAEL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FEMA Referrals:</strong></td>
<td>2.2M</td>
<td>404,107</td>
<td>2.94M</td>
<td>283,261</td>
</tr>
<tr>
<td><strong>Apps Received:</strong></td>
<td>423,254</td>
<td>88,045</td>
<td>344,057</td>
<td>53,926</td>
</tr>
<tr>
<td><strong>Verifications:</strong></td>
<td>324,863</td>
<td>71,683</td>
<td>256,603</td>
<td>40,166</td>
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<tr>
<td><strong>Apps Processed:</strong></td>
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<tr>
<td><strong>Loans Approved:</strong></td>
<td>160,850</td>
<td>38,091</td>
<td>145,523</td>
<td>25,745</td>
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<tr>
<td><strong>Dollars Approved:</strong></td>
<td>$10.9 Billion</td>
<td>$2.5 Billion</td>
<td>$7.4 Billion</td>
<td>$1.1 Billion</td>
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<tr>
<td><strong>Avg Home/Business</strong></td>
<td>74/67 Days</td>
<td>25/42 Days</td>
<td>16/23 Days</td>
<td>7/10 Days</td>
</tr>
<tr>
<td><strong>Peak Staff:</strong></td>
<td>4,253</td>
<td>2,451</td>
<td>5,046</td>
<td>2,976</td>
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<tr>
<th><strong>2005</strong></th>
<th><strong>2012</strong></th>
<th><strong>2017</strong></th>
<th><strong>2018</strong></th>
<th><strong>2020</strong></th>
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# SBA Disaster Loan Limit

<table>
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<tr>
<th>Types of Loans</th>
<th>Borrowers</th>
<th>Purpose</th>
<th>Max. Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Loans</td>
<td>Businesses and private nonprofits</td>
<td>Repair or replace real estate, inventory, equipment, etc.</td>
<td>$2 million *</td>
</tr>
<tr>
<td>Economic Injury Loans</td>
<td>Small businesses and private nonprofits</td>
<td>Working capital loans</td>
<td>$2 million *</td>
</tr>
<tr>
<td>Home Loans</td>
<td>Homeowners</td>
<td>Repair or replace primary residence</td>
<td>$200,000</td>
</tr>
<tr>
<td>Home Loans</td>
<td>Homeowners and renters</td>
<td>Repair or replace personal property</td>
<td>$40,000</td>
</tr>
<tr>
<td>Mitigation</td>
<td>Businesses, private nonprofits and homeowners</td>
<td>Mitigate / prevent future loss of the same type</td>
<td>20% of verified physical damage. Homeowners limited to $200,000</td>
</tr>
</tbody>
</table>

*The maximum business loan is $2 million, unless the business qualifies as a Major Source of Employment (MSE).
SBA Loan Requirements

Requirements for loan approval:

• Eligibility - damaged property must be in a declared county.

• Credit History - Applicants must have a credit history acceptable to SBA.

• Repayment - Applicants must show the ability to repay all loans.
SBA’s Disaster Loan Program

The law gives SBA several powerful tools to make disaster loans affordable:

- Low interest rates
- Long terms (15 or 30 years)
- Refinancing of prior debts (in some cases)
# Current Interest Rates

Interest Rates effective for disasters occurring on or after April 30, 2019.

<table>
<thead>
<tr>
<th>No Credit Available Elsewhere</th>
<th>Home</th>
<th>Business</th>
<th>EIDL</th>
<th>Nonprofit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.938%</td>
<td>4.000%</td>
<td>4.000%</td>
<td>2.750%</td>
</tr>
</tbody>
</table>

| Credit Available Elsewhere   | 3.875%   | 8.000%   | N/A      | 2.750%    |

*Most SBA disaster loans are at the lower interest rates.*

Credit available elsewhere means that the disaster victim can provide for their own recovery through private sector borrowing on reasonable rates and terms without causing financial hardship, as determined by SBA.
The Three Step Process: Disaster Loans

About Disaster Loans
The U.S. Small Business Administration (SBA) provides low-interest, long-term disaster loans to businesses of all sizes, private non-profit organizations, homeowners, and renters to repair or replace uninsured/underinsured disaster damaged property. SBA disaster loans offer an affordable way for individuals and businesses to recover from declared disasters.

STEP 1: Apply for Loan
- Apply: 1) online; 2) in-person at a disaster center; or 3) by mail.
- Apply online at the SBA’s secure website disasterloan.sba.gov/ela.
- As a business of any size, you may borrow up to $2 million for physical damage.
- As a small business, small agricultural cooperative, small business engaged in aquaculture, or private non-profit organization you may borrow up to $2 million for Economic Injury.
- As a small business, you may apply for a maximum business loan (physical and EIDL) of $2 million.
- As a homeowner you may borrow up to $200,000 to repair/replace your disaster damaged primary residence.
- As a homeowner or renter, you may borrow up to $40,000 to repair/replace damaged personal property.

STEP 2: Property Verified and Loan Processing Decision Made
- SBA reviews your credit before conducting an inspection to verify your losses.
- An SBA verifier will estimate the total physical loss to your disaster damaged property.
- A loan officer will determine your eligibility during processing, after reviewing any insurance or other recoveries. SBA can make a loan while your insurance recovery is pending.
- A loan officer works with you to provide all the necessary information needed to reach a loan determination. Our goal is to arrive at a decision on your application within 2 - 3 weeks.
- A loan officer will contact you to discuss the loan recommendation and your next steps. You will also be advised in writing of all loan decisions.

STEP 3: Loan Closed and Funds Disbursed
- SBA will prepare and send your Loan Closing Documents to you for your signature.
- Once we receive your signed Loan Closing Documents, an initial disbursement will be made to you within 5 days:
  - Physical damage:
    - $25,000
  - Economic injury (working capital):
    - $25,000 (In addition to the Physical damage disbursement)
- A case manager will be assigned to work with you to help you meet all loan conditions. They will also schedule subsequent disbursements until you receive the full loan amount.
- Your loan may be adjusted after closing due to your changing circumstances, such as increasing the loan for unexpected repair costs or reducing the loan due to additional insurance proceeds.

For more information or to find a local disaster center, contact SBA’s Customer Service Center at 1-800-659-2955 (TTY: 1-800-877-8339).

sba.gov/disaster
August 2018 v1
For More Information about SBA disaster assistance programs, go to: www.sba.gov/disaster

Or, contact SBA’s Customer Service Center at: 1-800-659-2955 / 1-800-877-8339 (TTY)

Or by email at: disastercustomerservice@sba.gov
Data Sharing Requests

Alejandro Contreras
Director of Preparedness, Communication and Coordination
Alejandro.Contreras@sba.gov
202-205-6734

Lynda Lowe
Program Analyst
Lynda.Lowe@sba.gov
202-205-6734

General Inbox
DisasterDataSharing@sba.gov
Questions?
Thank you!

Questions?