



# Role of DOC/EDA in Disaster Recovery

Renewable Energy and Energy Efficiency Advisory Committee  
(REEEAC)

November 16, 2017

## Coordinating Agency



## Primary Agencies



FEMA



## Supporting Organizations



Corporation for  
**NATIONAL & COMMUNITY SERVICE** ★★ ★

# PRESENTATION OBJECTIVES

## What are the Department's Roles and Responsibilities in Helping Communities to Recover from Large Scale, Catastrophic Disasters?

*Topics to be discussed include:*

- The **National Framework** that Guides Federal Disaster Assistance
  - National Disaster Recovery Framework (NDRF)
- DOC's Specific Role to **Coordinate Economic Recovery Support**
  - Economic Recovery Support Function (ERSF)
- Preliminary **Objectives** for Economic Recovery Support
- Overview of Puerto Rico's pre-Hurricane **Economic Challenges**
- Puerto Rico post-Hurricane **Infrastructure Collapse**
- How can we **Power Critical Infrastructure** post-Disaster?

# DISASTER PREPARATION, RESPONSE, AND RECOVERY

## National Disaster Recovery Framework

### National Response Framework

### Economic Recovery Support Function



- Pre-disaster planning
- Resilience building
- Partnership building

- Emergency Operation Centers (EOC)
- Business Operation Centers (BOC)
- Private Sector Liaisons
- Emergency Support Functions (ESF)

- Mass Care/ Sheltering
- Debris removal
- Establish temporary/ interim facilities
- Re-establish cash flow
- Joint Field Operations for coordinated support (JFO)

- Housing
- Infrastructure
- Re-establish businesses
- Recovery Support Functions (RSF)
- Mission Scoping (MSA)

- Permanent housing solutions
- Rebuild infrastructure
- Economic revitalization strategies (RSS)
- Implement State/local recovery and priorities



# **NATIONAL DISASTER RECOVERY FRAMEWORK OVERVIEW**

# NATIONAL DISASTER RECOVERY FRAMEWORK

*Core Principle:* Disaster recovery is **supported** by the Federal Government, **managed** by the state and **executed** at the Local level



## National Disaster Recovery Framework

*Second Edition  
June 2016*



- A scalable and flexible coordination structure that brings all appropriate players to the table
- Forges common understanding of roles and responsibilities across organizations prior to disasters
- Introduces the 6 Recovery Support Functions (RSF)

# RECOVERY SUPPORT FUNCTIONS (RSF)

- Coordinating structures for six key Functional Areas of Assistance
- Each RSFs led by a designated Federal Coordinating Agency

- Enable local post-disaster planning
- Help State/Local gov'ts develop local recovery programs

**Community Planning & Capacity Building (FEMA)**



- Sustain and rebuild businesses and jobs
- Develop economic opportunities that result in sustainable, resilient communities

**Economic Recovery (DOC/EDA)**



- Restore public health, health care and social services networks
- Promote resilience, health and well being of affected communities

**Health & Social Service (HHS)**



- Implement adequate, safe, affordable accessible housing solutions that support the needs of the whole community

**Housing (HUD)**



- Restore infrastructure systems and services
- Improve resilience to and protection from future hazards

**Infrastructure Systems (Army Corps of Engineers)**



- Protect natural and cultural resources, historic properties
- Preserve, conserve, rehab, and restore consistent with local priorities and laws

**Natural & Cultural Resources (Interior)**





# **ECONOMIC RSF ROLES AND RESPONSIBILITIES**

# WHAT IS THE ECONOMIC RECOVERY SUPPORT FUNCTION?

## *Mission:*

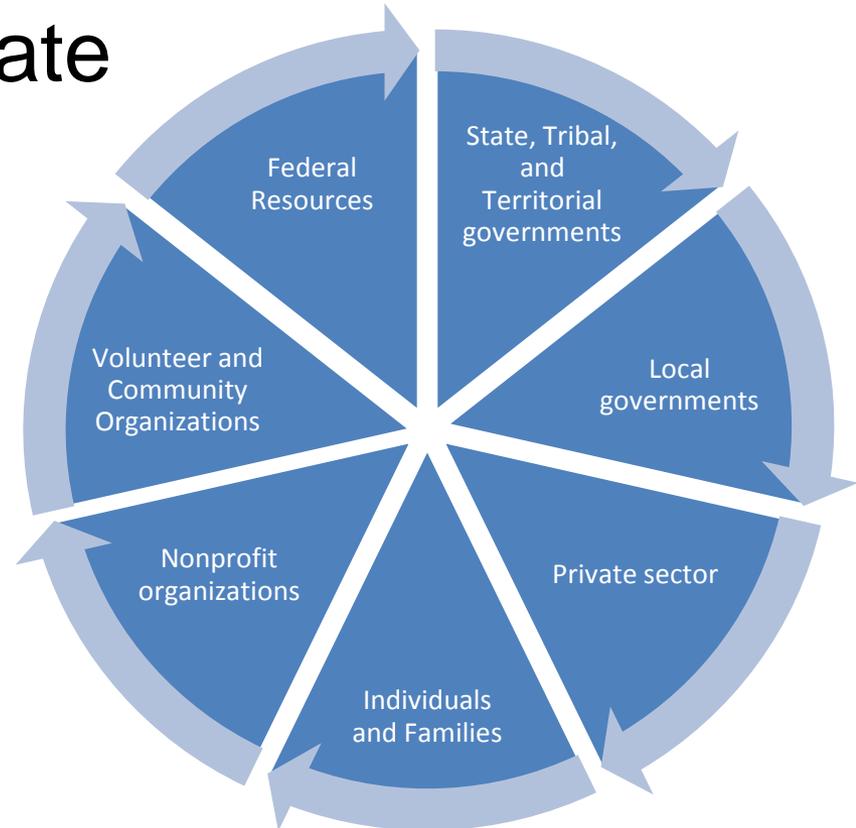
The **Economic RSF** integrates the expertise of the Federal Government to help local, State, and Tribal Governments and the private sector to:

- Sustain and/or rebuild businesses and employment, and
- Develop economic opportunities that result in sustainable and economically resilient communities after significant natural and man-made disasters.

FEMA ERSF Overview: [https://www.fema.gov/media-library-data/1489754721419-8d29c58733990d27f2e8894f33cdbdb2/RSF\\_Economic\\_0616\\_508\(1\).pdf](https://www.fema.gov/media-library-data/1489754721419-8d29c58733990d27f2e8894f33cdbdb2/RSF_Economic_0616_508(1).pdf)

## Lead, Promote, Facilitate

- ✓ Coordination
- ✓ Communication and
- ✓ Collaboration



- Enhance capacity of multi-sector partners to produce and implement a comprehensive strategy to support economic recovery and community resilience

# ECONOMIC RSF OUTCOMES

Based on local needs and priorities, ESRF supports the creation of:

- **Community-wide economic development plans**
  - Reflecting broad input on regional recovery and resilience strategies
- **Strategies for adapting to changed market conditions**
  - Workforce initiatives to build skills for and secure new jobs
  - Business initiatives to employ workers and generate revenue
  - Entrepreneurial programs to re-open and establish new businesses to address recovery needs
- **Accessible ongoing communication networks**
  - Ensuring private and public sector actors have the information they need to make informed recovery decisions

# RSF DELIVERABLES

- Near-Term: Mission Scoping Assessment (MSA)
  - Captures overarching issues related to economic recovery
- Long-Term: Recovery Support Strategy (RSS)
  - Documents federal capabilities that can be leveraged to support economic recovery



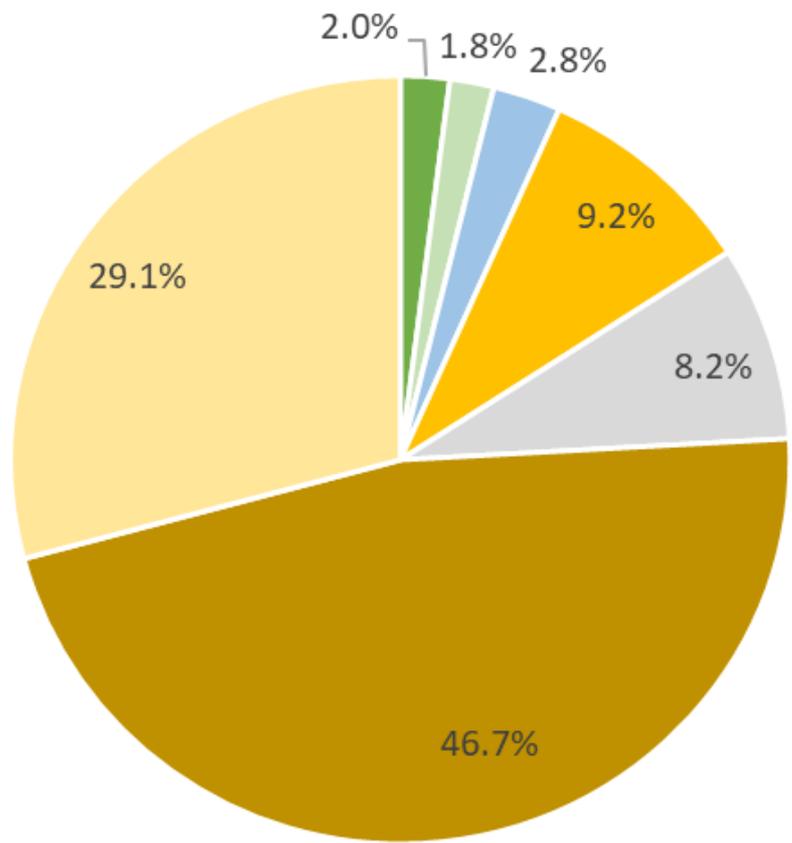


# **PUERTO RICO – PRE IRMA AND MARIA**

# PUERTO RICO'S PRE IRMA AND MARIA ISSUES

- Deep economic recession since 2006
- Poverty rate of 43.5%
- Nearly 90,000 manufacturing jobs have been lost since 1996
- Owes \$74 billion to bondholders / \$50 billion in pension obligations
- Filed for Protection under Title III of Promesa in May 2017 – Largest municipal bankruptcy in history
- From 2006 – 2016, Puerto Rico lost nearly 500,000 residents to outmigration
  - Estimates are another 400,000 from Hurricanes Irma and Maria
  - Population expected to decrease below 3 million within 12 months
- Second highest electricity rates in the U.S.
- Double digit unemployment rates (10.1%) and a low (39.9%) labor force participation rate.

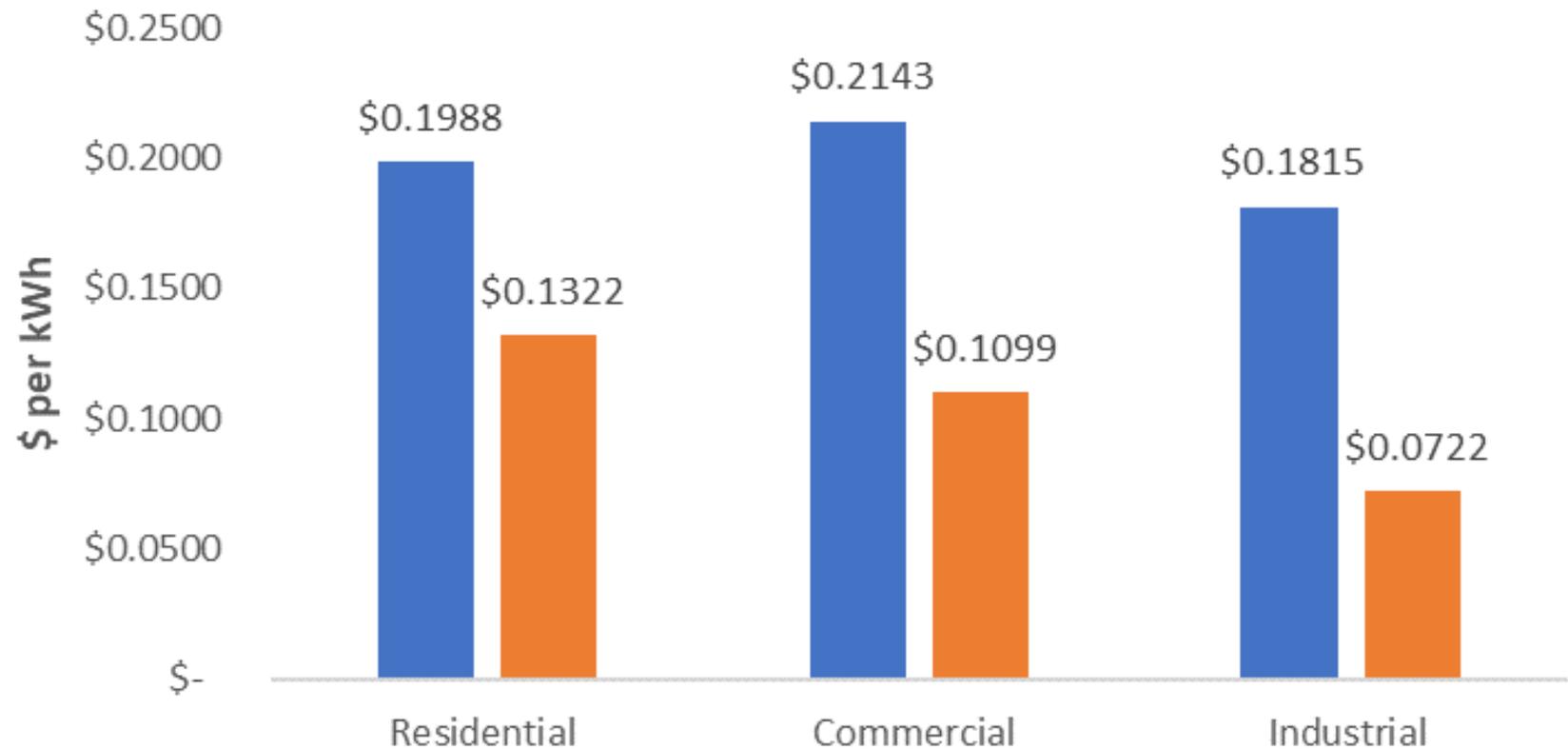
# PUERTO RICO ENERGY SOURCES



Source: Energy Information Administration  
September 2017

- Solar
- Wind
- Hydro
- Natural Gas
- Coal
- Heavy Fuel Oil
- Diesel Oil

## Electricity Rates per kWh September 2017

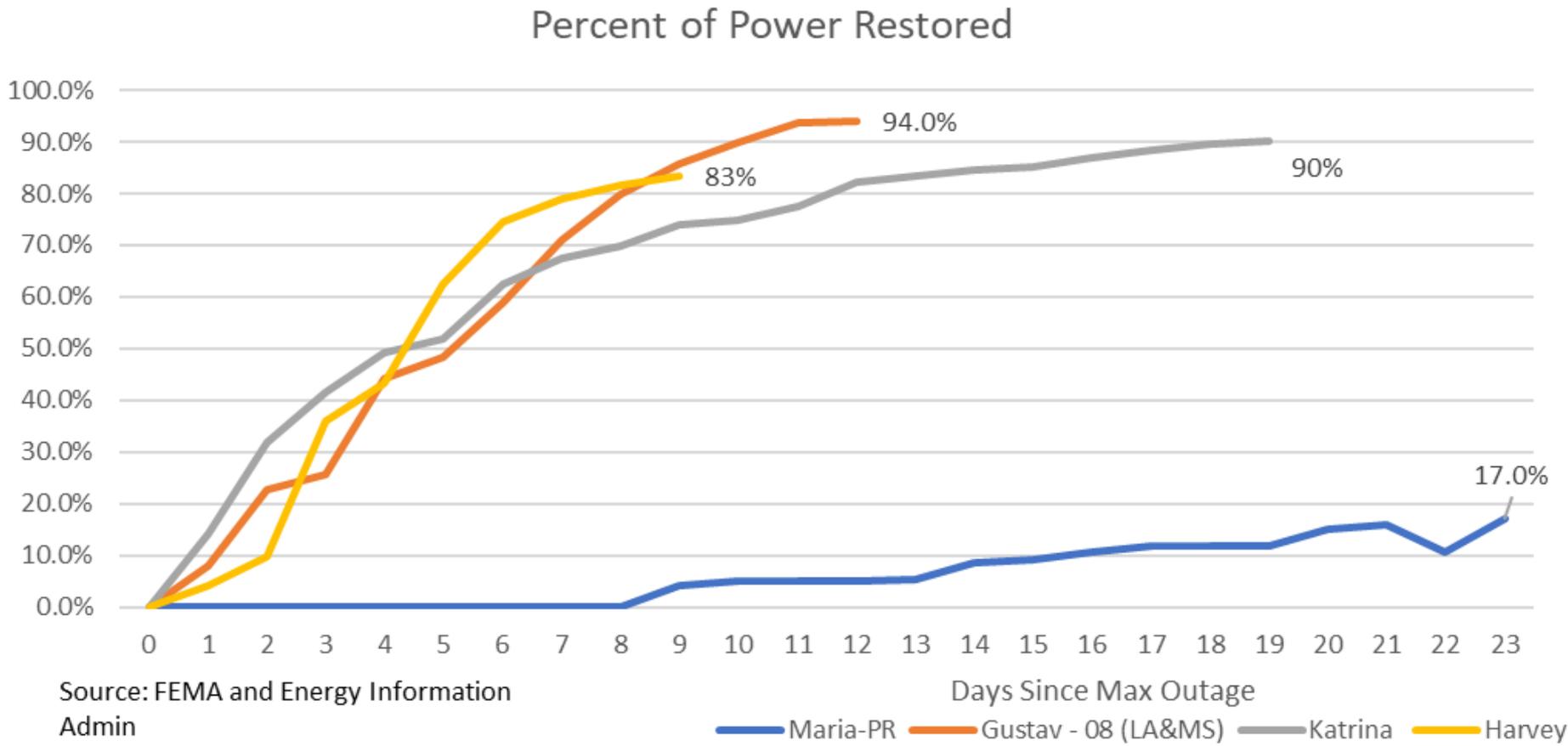




# **PUERTO RICO – HURRICANE IMPACTS**

- Destroyed power distribution grid
  - 100% of customers had no power in immediate aftermath of hurricane Maria
- Airport and port operations severely disrupted
- 95% of cell phone towers out of service
- 66% of customers without water
- Majority of wastewater treatment facilities not working
  - A boil water advisory remains in effect

# POWER RESTORATION AFTER HURRICANE MARIA



# CRITICAL INFRASTRUCTURE FAILURE

- Many waste water treatment facilities failed due to power supply.
  - Very challenging environmental response
  - Waste water contaminated many sources of drinking water
  - Puerto Rico remains on a boil water advisory
  - Many cases of Leptospirosis
  - Outbreaks of gastroenteritis and conjunctivitis
- Health care facilities are still operating on generator power
  - As of November 5, 13 hospitals remain on generator power
  - Of the 69 operational clinics, 33 remain on generator power
  - 21 of 45 operational dialysis centers are on generator power

# ECONOMIC RECOVERY SUPPORT FUNCTION - PRELIMINARY OUTCOMES FOR PUERTO RICO

- **THESE ARE PRELIMINARY, BECAUSE WE HAVE NOT EFFECTIVELY ENGAGED WITH LOCAL STAKEHOLDERS.**
  - Stabilize the economy by means of preventing additional business failures resulting from the hurricanes
  - Maintain and grow the manufacturing base
  - Lower energy costs for residents, business/industrial, and agricultural concerns
  - Enhance the resilience and reliability of the energy and communication grids
  - Reduce poverty and unemployment by means of lowering the cost of living, while at the same time retaining and increasing the number of quality jobs
  - Decrease outmigration
  - Assist small businesses in reopening and stabilizing
  - Assist agricultural concerns, especially in working towards a goal of food sovereignty, which should result in a lower cost of living while enhancing resilience
  - Explore what can be done to get Puerto Rico to become a regional trading hub in the Post-Panamax era.

# THANK YOU!



**Philip Saputo**

---

**EDA Disaster Recovery Coordination**

**[psaputo@eda.gov](mailto:psaputo@eda.gov)**

**202-400-0662**