



Mitigating Natural Hazard Risks in the Energy Sector: Innovative Projects that Help Build Resilient Communities

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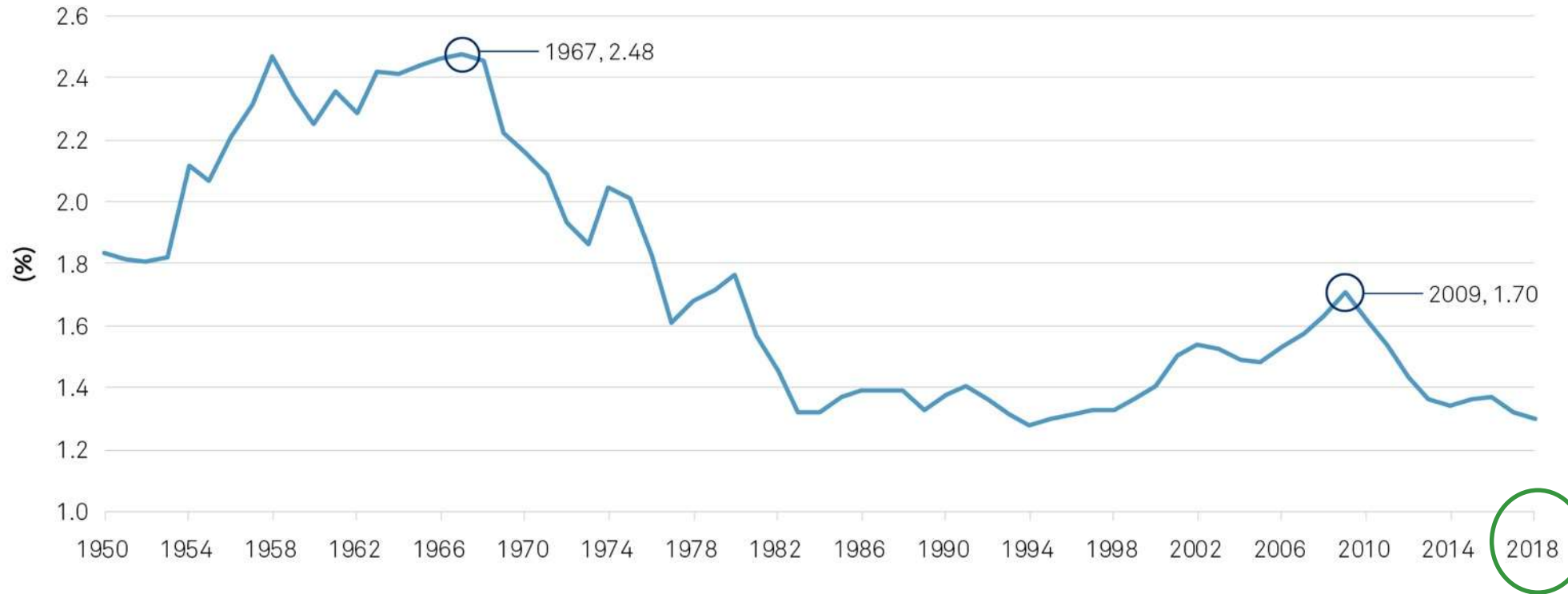
Agenda

- Trends in Public Infrastructure Spending
- Lifelines and Their Importance to Infrastructure and Mitigation
- FEMA's Building Resilient Infrastructure and Communities (BRIC) Program
- Building Collaborative Relationships and Partnerships
- Examples of Innovative Infrastructure Projects
- Thinking Strategically About Resiliency
- DOE-FEMA Collaboration



Trends in Public Infrastructure Spending

Clipped Wings: Public Spending On Broad Infrastructure As % of GDP



Source: BEA, S&P Global Economics.
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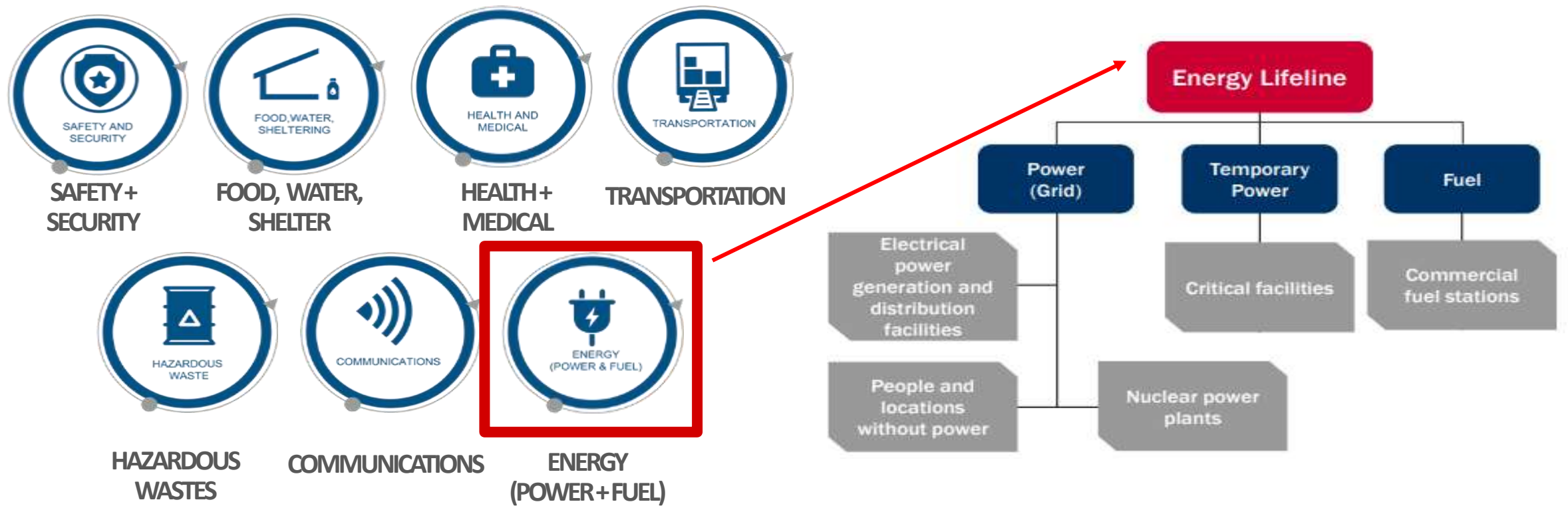
<https://www.spglobal.com/en/research-insights/featured/infrastructure-investment-as-an-elixir-for-ailing-u-s-productivity-growth>



In 2018, the president signed the Disaster Response and Recovery Act was signed into law.

Lifelines and Their Importance to Infrastructure and Mitigation

Lifelines are critical services in communities. 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.



FEMA's Building Resilient Infrastructure and Communities Program

BRIC Guiding Principles



Support communities through capability & capacity building



Encourage and enable innovation



Promote partnerships



Enable large projects



Maintain flexibility



Provide consistency



A new pre-disaster mitigation program resulting from Section 1234 of the Disaster Recovery Reform Act.

Building Collaborative Relationships and Partnerships

- Engage in partnerships with state and national organizations, such as the National Emergency Management Agency (NEMA), Silver Jackets, and National Association of Counties (NACo).
- Western States Petroleum Shortage Response Workshop
- Department of Energy (DOE) State Energy Program
- Cybersecurity & Infrastructure Security Agency (CISA) Regional Resiliency-Assessment Program
- DOE and FEMA collaborative training



Examples of Innovation:

Partnerships, Smart Energy, Nature-Based Solutions, Collaborative Funding



Microgrid Installation

Blue Lake Rancheria Tribe, Humboldt Co., CA

Power Grid to Reduce Energy Consumption

2018 Puerto Rico PV & Storage Energy Resiliency Project

Nature-Base Infrastructure

Hoboken, NJ Underground Resiliency Park for a Water Treatment Plant

Flood Barrier to Protect Critical Infrastructure

Langone Medical Center, New York University

Thinking Strategically About Achieving Resiliency Through Collaborative Funding

Hoboken's Resiliency Park

- ✓ The City leveraged \$10 million in Federal Share and \$47 million in match
- ✓ Provides significant mitigation of fluvial and flash flooding for multi-story residential, commercial, and industrial properties
- ✓ Reduces economic, environmental, and social impacts



DOE and FEMA Collaboration: Energy Lifelines Mitigation Webinar Series

***“This is the valuable
information we need
to support
communities we
serve!”***

– Webinar participant

First ever FEMA-DOE mitigation webinar series:

**Part 1 - Mitigating Natural Hazard Risks in the Energy Sector:
Innovative Projects that Help Build Resilient Communities**
November 6, 2019 2 p.m. – 4 p.m. EST

<https://www.fema.gov/media-library/assets/videos/185075>

**Part 2 - Demonstrating Value: How to Use Benefit-Cost Analysis
to Evaluate Energy Mitigation Projects**
November 12, 2019 2 p.m. – 4 p.m. EST

<https://www.fema.gov/media-library/assets/videos/185176>

More than 150 Participants. Nearly 90% of our poll respondents found them “useful” or “very useful.”



FEMA

HMA
Hazard Mitigation
Assistance

Thank you!

Question & Answer

Contacts

- FEMA Regions: <https://www.fema.gov/fema-regional-contacts>
- State Emergency Management Agencies: <https://www.fema.gov/emergency-management-agencies>
- State Hazard Mitigation Officers: <https://www.fema.gov/state-hazard-mitigation-officers>

FEMA Resources

- FEMA Hazard Mitigation Assistance (HMA):
<https://www.fema.gov/hazard-mitigation-assistance>
- FY19 Pre-Disaster Mitigation (PDM) General Information:
<https://www.fema.gov/pre-disaster-mitigation-grant-program>
- FY19 PDM Notice of Funding Opportunity (NOFO) and Fact Sheet:
<https://www.fema.gov/media-library/assets/documents/182171>
- Community Lifelines Implementation Toolkit:
<https://www.fema.gov/media-library/assets/documents/177222>

Department of Energy Resources

- Weatherization and Intergovernmental Programs Office (WIP) Fact Sheet:
https://www.energy.gov/sites/prod/files/2019/08/f65/EERE_WIP_Overviewv6.pdf
- State Energy Program Fact Sheet: <https://www.energy.gov/sites/prod/files/2019/06/f64/wip-sep-factsheet-0619.pdf>
- Energy Efficiency and Renewable Energy Resources for State and Local Leaders:
<https://www.energy.gov/sites/prod/files/2019/07/f64/Summer2019-SLSC-resource-guide.pdf>
- DOE's Better Buildings Initiative's resilience webpage: <https://betterbuildingsinitiative.energy.gov/resilience>
- How Distributed Energy Resources Can Improve Resilience in Public Buildings: Three Case Studies and a Step-by-Step Guide:
<https://www.energy.gov/eere/slsc/downloads/how-distributed-energy-resources-can-improve-resilience-public-buildings-three>
- Energy Efficiency and Distributed Generation for Resilience: Withstanding Grid Outages for Less:
<https://www.energy.gov/sites/prod/files/2019/06/f64/EEDG-Resilience.PDF>
- DOE Energy Resilience Planning Guide:
https://toolkit.climate.gov/sites/default/files/Climate%20Change%20and%20the%20Electricity%20Sector%20Guide%20for%20Climate%20Change%20Resilience%20Planning%20September%202016_0.pdf