Sustainable, Resilient, and Equitable Infrastructure

A presentation to the CFR State and Local Officials Webinar

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$1.2 trillion 2021 Infrastructure Investment and Jobs Act

$110 billion  
Roads and bridges

$73 billion  
Electric grid infrastructure

$66 billion  
Rail

$65 billion  
Broadband projects

$55 billion  
Water infrastructure

IIJA funds 380 federal programs – 132 completely new
ESG assets may be up to $53 trillion by 2025

- Bloomberg Intelligence, Feb 23, 2021
Why Resilience?

A hyper-connected world translates into a greater risk of cascading failures.

Internet of Things (IoT) 38 billion connected devices by 2025
Climate Change and the Metro Boston Flooding Risk

- Boston in 1630
- Filled 1630-1880
- Filled after 1880

Northeastern University
Global Resilience Institute
Energy assets impacted by 7-foot storm surge / sea-level rise
Understanding the Interdependency Challenge

Puerto Rico: Post-Hurricane Maria (Sep 2017)

Lifeline systems:
- Communications and information technology
- Energy
- Water
- Transportation

And without those lifeline systems:
- Many health care facilities were not open, and people could not travel to those that were.
- Emergency services were immobilized.
- Many businesses were not open, stores could not get supplies, and people could often not get to the stores or other businesses that were operating.

People and companies that have a choice will choose to live and invest in those communities and enterprises that are resilient, and avoid or leave those that are not.

. . . But, you cannot succeed if you are an island of resilience in a sea of fragility.
Overcoming the Infrastructure & Climate Resilience Capacity Issue

Headwaters Economics’ Rural Capacity Map - Identifies communities that lack the staff and expertise to support infrastructure and climate resilience projects

https://headwaterseconomics.org/equity/rural-capacity-map/
Leveraging Colleges and Universities to Develop Project Proposals

Public and Private Universities and Colleges can provide:

• Cutting edge expertise on climate change, sustainability, resilience, and equity issues
• Support Proposal Preparation
• Link project to Workforce Development needs
• Facilitate cross-jurisdictional, multi-sector, private-public partnerships

4 out of 5 of New England’s successful Phase 1 Economic Development Administration Build Back Better awards were university-led:

• Northeastern University: Regional Biomanufacturing Cluster (MA, ME, & RI)
• University of Rhode Island: Blue Economy Tech Cluster
• University of Maine: Northern Forest Bioeconomy Cluster
• University of Connecticut: Offshore Wind Industry Cluster
An Example of a Potential Sustainable, Resilient & Equitable Infrastructure Project

Leveraging Alternative Energy to develop
Green Economies in Rural Maine Communities