Financing Resilience in Connecticut: Current Programs, National Models and New Opportunities

Wayne Cobleigh, CPSM
Coauthors - Rebecca French, Ph.D.
Jessica LeClair, M.S.
Yi Shi, M.E.M. candidate
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What We Need to Fund

Credit: USACE North Atlantic Coast Comprehensive Study
Ask 3 Questions and Innovate

**Why?** Let’s confront a problem and a present reality.

**What if?** Envision what might be. What if we borrow an idea or try some combination of X and Y?

**How?** Turn speculation into reality. How can we get this done? What are the first steps?

If my idea isn’t working, how can I figure out what’s wrong and fix it?
Federal Policy Motivating Proactive Resilience

• FEMA’s Disaster Deductible concept
• States responsible for up front commitment of funds
• Resilience projects could be credit towards deductible
• Opportunity for resilience financing?

FEMA Administrator Craig Fugate AP
Resilience Outcomes

- Market Investments
- Green Infrastructure
- Shoreline Protection
- Hazard Mitigation
- Retreat to Safety
- Elevation
- Jobs

Socio-economic Return on Resilience

- Increased property value
- Lower insurance costs
- Reduced losses
- Reduced risk
- Property tax stability
- Safer community social welfare
- Bond Rating Stability

Benefit Cost Analysis
Return on Resiliency
Lower Risk and Insurance Costs

Standards to mitigate flood and wind risk to reduce disaster recovery costs

Increase public welfare safety and resiliency

Increase property value
business continuity & community socioeconomic stability
Resilience Financing in Connecticut

CURRENT PROGRAMS
Resilience Financing in Connecticut

• Microgrids Grants and Green Bank Financing
• Clean Water Revolving Loan Funds
• Shore Up Connecticut Loans
• Rebuild by Design (grant)
• National Disaster Resilience Competition (grant)
Microgrids Grants and Green Bank Financing

• CT DEEP made $23 million in grants
• Partner with CT Green Bank
  – Generators, fuel cells, or any other type of electrical energy production source
  – Fuel tanks, piping, or fuel regulation equipment
  – Foundations
  – Excavation, trenching, paving
  – Mechanical equipment or piping
  – Thermal insulation
Clean Water Revolving Loan Funds

- Grants range from 20% to 50% of costs
- Loans are repaid 2% over 20 years
- FY15 Reserve for construction of resiliency projects for sea level rise $4M (20% grant/80% loan)
Clean Water Revolving Loan Funds

FY16 Requires CWRLF projects to assess risk to existing wastewater infrastructure from climate change (rising sea levels, increased storm frequency and intensity and coastal flooding) and an evaluation of alternatives for remedial actions.
Shore Up Connecticut Loan Results

- 13 Loans $82-300K, $170K average per house,
- $2.06M total
- 3 Elevation Contractors
- Multiple architects, engineers

- 5 in Milford
- 4 in Fairfield
- 2 in East Haven
- 1 in Branford and Norwalk
Shore Up CT

- Recognized by Obama Administration in *Standards and Finance to Support Community Resilience* (December 2016 OMB Report)
- Listed as example of “State, Local, and Private Sector Innovation”
Potential Resilience Financing in Connecticut

MODEL PROGRAMS
New Models - Resilience Finance

- Social Impact, Green and Resilience Bonds
- Tax Increment Financing Districts
- Energy Savings Performance Contracts
- Public-Private Partnerships (P3s)
- Connecticut Green Bank C-PACE (existing)
- R-PACE with Property Assessed Resilience (coming soon...)

UCONN  
CIRCA  
Proactive by Design
Climate Bonds Initiative

Green Bonds Market 2017 2017 Issuance
• (aligned with CBI definitions)$25B
• Climate Bonds Certified $3.5B
• + bonds aligned with both CBI and China definitions $25B
• + bonds only aligned with China definitions $21.7B
• Jan $11.22B
• Feb $5.14B
• Mar $4.64B
• 2016 Total $81.0 billion
• 2017 Estimate $150 billion  Source www.climatebonds.net
Using Debt Capital Markets to **Fund** Climate Solutions

Green bonds were created to fund projects that have positive environmental and/or climate benefits. “Use of proceeds” bonds are earmarked for green projects but are backed by the issuer’s entire balance sheet.

There are also green "use of proceeds" revenue bonds, green project bonds and green securitized bonds.

**Source** [www.climatebonds.net](http://www.climatebonds.net)
Tax Increment Financing Districts

- TIF districts capture the future net economic value increase from an investment through district-level taxes or fees to finance that investment.
- PA 15-57 established use of TIF districts in Connecticut for economic development projects (including transit-oriented development in resilience improvement zones).

Meriden CT addresses chronic flooding as part of a transit-oriented development strategy.
Resilience Bonds

• Modify the catastrophe bond structure to capture the future savings from a resilience project and lowered risk to investors of insurance payouts, then apply that performance value as a rebate for resilient infrastructure projects
“A **Resilience Bond** is a financial instrument which aims to leverage the framework from an established financial product, **Catastrophe Bonds**, in conjunction with advanced **Catastrophe Models** to allow communities to monetize the benefits of investments in resilience infrastructure.

- **Resilience Projects** mitigate the physical and financial impacts of natural, catastrophic events
  - Examples include sea walls, river embankments, developing coastal wetlands, and other similar projects
- **Catastrophe Bonds** are insurance products designed to provide coverage or compensation to a “Sponsor” or cedent to help react and rebuild following an natural catastrophic events

Resilience Bonds work as a hybrid of these concepts which can encourage Resilience Projects by offering a mechanism to protect against major events occurring but also reducing cost of that coverage over time as projects are completed.” – Rhodri J. Lane, GC Securities
Energy Savings Performance Contracts

- Energy savings pays down the financing
Connecticut Green Bank C-PACE* & Property Assessed Resiliency

Access to PRIVATE financing of mitigation measures with senior lien for qualified upgrades and repaid via a benefit assessment on the owner’s property tax

Requires legislative consent of municipality and existing mortgage lender

Savings from upgrades payback over loan period enforced by legal, financial and technical underwriting

* Commercial - Property Assessed Clean Energy
Another First? – Proposed R-PACE with Property Assessed Resilience*

- Proposed Substitute SB 973
  - the lien securitizing the loan only applies to past due amounts (does not accelerate to include full loan obligation amount)
  - Allows property owners and lenders to transfer loan payment obligation
  - DOE, HUD and FHA provided guidance on R-PACE as a valuable financial tool

*effective October 1, 2017 (if passed into law)

- Eligible improvements:
  - Flood and hurricane resistant construction retrofits
  - Clean energy and energy efficiency retrofits
For More Information on R-PACE Substitute Senate Bill 973


Contacts:
wayne.cobleigh@gza.com
rebecca.french@uconn.edu
Additional Resources and References

5. Insurance Institute for Business and Home Safety, Fortified Overview at [www.disastersafety.org/fortified-main/](http://www.disastersafety.org/fortified-main/)