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

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What We Need to Fund

Critical Infrastructure, Including utilities benefiting public

Credit: USACE North Atlantic Coast Comprehensive Study
Why finance?

Finance is key to implementing climate resilience projects at every level because:

• investments may require substantial up-front costs and only generate benefits over many years.
• costs are likely to be well beyond the usual capital budgets of cities and towns
• large-scale federal funding in the United States is mostly available post-disaster, even though in many cases it makes sense in economic, social and environmental terms to invest in resilience before disasters strike

(Levy, *Financing Climate Resilience*, Sustainable Solutions Lab, UMass Boston, April 2018)
Challenges Ahead

Investments face several major hurdles that can weaken the business case and make financing difficult:

• first, resilience projects reduce future damage, but do not necessarily generate cash flows that could service new bonds;

• second, resilience projects will frequently entail investments by public agencies, but the benefits largely accrue to private property owners;

• third, estimates of the extent and probability of future damage are very uncertain; and

• fourth, market signals in insurance and property markets are not yet fully reflecting climate risks.

As a result, the win-win opportunities associated with energy efficiency and clean energy projects are likely to be more elusive for climate adaptation.

( Levy, Financing Climate Resilience, Sustainable Solutions Lab, UMass Boston, April 2018)
Resilience Financing in Connecticut

Microgrids Grants and Green Bank Financing
Clean Water Revolving Loan Funds
Tax Increment Financing Districts
Shore Up Connecticut
Model Programs

Resilience Bonds
Energy Savings Performance Contracts
New Jersey Energy Resilience Bank
Connecticut Green Bank C-PACE and R-PACE
Property Assessed Resilience
Current Programs

RESILIENCE FINANCING IN CONNECTICUT
Microgrids Grants and Green Bank Financing

CT DEEP provided $23 million in grants

Partner with 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)

FY15 Reserve for green infrastructure (20% grant/80% loan or 50% grant/50% loan)

FY16 climate change assessment and evaluation of remedial actions
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.
Shore Up Connecticut

- 15 Year Term
- 2.75% interest rate (2.895% APR*)
- 1% origination fee
- Minimum $10,000 to maximum $300,000
- No monthly principal or interest payments for the first 12 months

*APR is based on Loan Amount of $125,000 - 168 payments of $897.29
Shore Up CT

SITUATION IN CONNECTICUT

$85-90K to elevate house
   ($35-40K in PA)

Require elevation to 500 year + 1’

Insurance Premium Reduction $2600/yr to $400/yr
   ◦ Sometimes you can do better: recent $300K loan with NFIP reduction of $4,482/yr to $487/yr

Challenges
   ◦ Low and Moderate Income not likely to participate
   ◦ Home by home approach
Shore Up CT: Results

12 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”
Model Programs

POTENTIAL RESILIENCE FINANCING IN CONNECTICUT
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.
Energy Savings Performance Contracts

Energy savings pays down the financing

U.S. DOE
New Jersey Energy Resilience Bank

Funding for distributed energy resource technologies

Grants and low-interest loans capitalized with federal disaster recovery dollars

Can become self-sustaining after disaster dollars spent

Waiver from small business rule due to broad public benefit of privately-owned utilities
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
Resilience Outcomes

- Elevation
- Mitigation
- Retreat
- Jobs & Investments

Return on Investment

- Increased property value
- Insurance savings
- Reduced losses
- Reduced risk
- Property tax stability
- Catastrophe Bond Market
- Resilience Bond Market
DESIGNING FOR CLIMATE CHANGE RESILIENCY

define natural hazards
assess vulnerabilities

building code compliance

“beyond building code”
Risk-Informed Decision Making

site and building design

mitigate residual risks:
insurance
flood mitigation and response plans

additional considerations:
site access & infrastructure
electric power & communications
Emergency Response Plan
Boston Study – Conclusions

- We Need More Accurate Pricing of Risk
- Stakeholders Need Standardized Metrics
- Spread the Cost Burden
- More Value Capture Mechanisms for Climate Resilience Are Needed
- Ensure that New and Upgraded Infrastructure and Buildings are Resilient
- There Is No Free Lunch (cash flows)
- Refine the Business Case
- Solutions Need to Be Equitable and Fair (those who benefit pay and ability to pay)
- Finance and Insurance Can Be Creatively Combined
Boston Study – Conclusions

- There Is No Silver Bullet
  - range of policies and funding mechanisms from federal, state, municipal, and district levels
  - leverage private capital as well as public sources of revenues
  - carbon or gasoline or real estate taxes at the state level
  - resilience fees based on water and sewer bills
  - Mechanisms based on property taxes – TIFs,