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## Attachment 8: CIRCA Financing Resiliency in Connecticut Fact

Old Saybrook Coastal Resilience and Adaptation Study **GZA**





# Financing Resilience in Connecticut

## Current Programs, National Models, and New Opportunities

Becoming resilient to the impacts of climate change and extreme weather in Connecticut has a price. To date, in Connecticut most of the dollars invested in resilient infrastructure have come from federal grants provided in the form of assistance after a declared disaster, but grants alone will not cover the bill. This fact sheet reviews existing resilience financing programs in Connecticut as well as model programs that can be applied in the State. It accompanies a presentation at the Earth Day 2016 symposium *Resilience and the Big Picture*, and a forthcoming publication.<sup>1</sup>

### Connecticut Resilience Financing Programs

***Shore Up Connecticut.*** Shore Up Connecticut is a low interest loan program, run by the Housing Development Fund, for homeowners and small businesses in the coastal floodplain to elevate structures and utilities.

***Microgrids Grants and Green Bank Financing Program.*** The Department of Energy and Environmental Protection administers the microgrids grants program. These grants provide funding for energy sources that can operate without the grid. The grants can be paired with financing from the Connecticut Green Bank for additional infrastructure to install the microgrid.

***Clean Water Revolving Loan Funds.*** Loans from the Clean Water Fund provide a low interest loan and grant combination to fund wastewater infrastructure projects. Connecticut's program has provided funding for planning and designing new facilities to operate safely and resiliently under conditions of more frequent and intense storms, flooding, and sea level rise.

***Tax Increment Financing (TIF) Districts.*** TIF districts use increased market value of property and capital improvements that come from public-private partnership investments to a specific geographic area to fund that investment. A TIF district captures the future net economic value increase from the investment through district-level taxes or fees. TIF districts could, in principle, finance neighborhood-scale resilience projects.

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<sup>1</sup> Fact sheet based on article: Rebecca French, Wayne Cobleigh, Jessica LeClair, and Yi Shi. Financing Resilience in Connecticut: Current Programs, National Models, and New Opportunities. *See Grant Law & Policy Journal*, in preparation.

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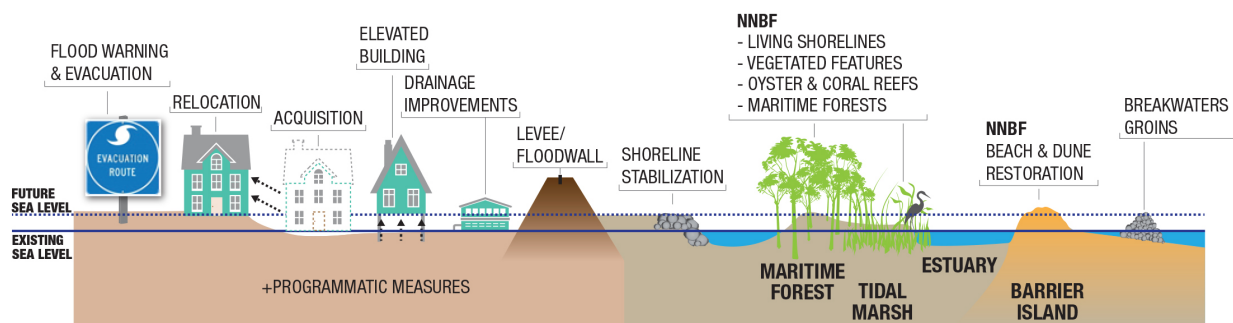
## Model Programs for Resilience Financing

**Connecticut Green Bank C-PACE and R-PACE Programs and PAR.** The Connecticut Commercial Property Assessed Clean Energy (C-PACE) program allows businesses to pay for energy efficiency projects through capital assessed on their tax bill and carried over as a lien on the property, regardless of a change in ownership. This same principle can be applied to residential properties or a Residential-PACE (R-PACE). Using the same principles as C-PACE and R-PACE, Property Assessed Resilience (PAR), captures the increased property value and insurance savings to finance resilience measures for a property.

**New Jersey Energy Resilience Bank (ERB).** The ERB intends to fund distributed energy resource technologies that can operate in island mode with power blackout start capabilities, both of which allow for operation of critical facilities during extended power outages to the grid. The program is a mix of grants and low interest loans and was capitalized with federal disaster recovery funds from Sandy, utilizing a unique waiver of small business only rules.

**Energy Savings Performance Contracts (ESPCs).** Owners of properties with large energy usage can hire an Energy Services Company (ESCO) and an Owner's Representative to assist the owner in procuring financing, installation, operation, and maintenance of building retrofits involving onsite energy generation, energy efficiency, and water conservation related capital improvements. The ESCO can access long-term financing methods such as Tax-Exempt Lease Purchase (TELP) commercial loan or bonds for these projects with limited or no up-front costs to the owner. Cash flow to the ESCO from the energy savings pays down the financing over the term of the TELP.

**Resilience Bonds.** Resilience bonds modify the existing catastrophe bond insurance market to capture the savings from a lowered risk of insurance payouts and then use that value as rebates to invest in resilient infrastructure projects.



Sea level rise and flooding adaptation measures needing federal, state or local funding or long-term financing to be implemented in coastal communities in Long Island Sound. NNBF stands for natural and nature-based features.<sup>2</sup>

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<sup>2</sup> Source: ASCE North Atlantic Comprehensive Coastal Study

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## References

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### ***Microgrids Grants and Green Bank Financing Program***

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*Connecticut Microgrid Program – Project Financing*, Energize Connecticut (2015), available at [http://www.energizect.com/your-town/solutions-list/microgrid\\_financing](http://www.energizect.com/your-town/solutions-list/microgrid_financing).

### ***Clean Water Revolving Loan Funds***

*The Clean Water Fund: Financial Assistance for Municipal Projects*, Connecticut Department of Energy and Environmental Protection (last updated March 15, 2016), available at <http://www.ct.gov/deep/cwp/view.asp?a=2719&q=325576>.

### ***Tax Increment Financing (TIF) Districts***

Richard Brugmann, *Financing the Resilient City: A demand driven approach to development, disaster risk reduction and climate adaptation - An ICLEI White Paper*, ICLEI Global Report (2011), available at [http://resilient-cities.iclei.org/fileadmin/sites/resilient-cities/files/Frontend\\_user/Report-Financing\\_Resilient\\_City-Final.pdf](http://resilient-cities.iclei.org/fileadmin/sites/resilient-cities/files/Frontend_user/Report-Financing_Resilient_City-Final.pdf).

### ***Connecticut Green Bank C-PACE and R-PACE Programs***

*C-PACE, Sparked by Connecticut Green Bank*, Connecticut Green Bank (last accessed April 15, 2016), available at <http://www.cpace.com/>.

Clean Energy States Alliance, *Residential Property Assessed Clean Energy - A Connecticut Program Viability Assessment, Report for the Connecticut Green Bank* 55-58 (January 30, 2015) available at <http://www.cesa.org/assets/Uploads/R-PACE-CT-Viability-Assessment.pdf>.

### ***Property Assessed Resilience (PAR)***

Howard Kunreuther and Erwann Michel-Kerjan, *People Get Ready: Disaster Preparedness*, 28 *Issues in Science and Technology* (2011), available at [http://opim.wharton.upenn.edu/risk/library/J2011IST\\_PeopleGetReady.pdf](http://opim.wharton.upenn.edu/risk/library/J2011IST_PeopleGetReady.pdf).

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## ***New Jersey Energy Resilience Bank***

*Energy Resilience Bank*, State of New Jersey Board of Public Utilities (last accessed April 15, 2016), available at <http://www.state.nj.us/bpu/commercial/erb/>.

## ***Energy Savings Performance Contracts***

Chris Lotspeich, *Stamford, Connecticut: a City on the Cutting-Edge of Sustainable Development*, NESEA blog (January 4, 2016) available at <http://nesea.org/conversation/masters-blog/stamford-connecticut-city-cutting-edge-sustainable-development>.

## ***Resilience Bonds***

Shalini Vajjhala, *Financing infrastructure through resilience bonds*, (December 16, 2015), available at <http://www.brookings.edu/blogs/the-avenue/posts/2015/12/16-financing-infrastructure-through-resilience-bonds-vajjhala>.

Shalini Vajjhala and James Rhodes, re:focus partners, llc., *Leveraging Catastrophe Bonds - As a Mechanism for Resilient Infrastructure Project Finance*, RE.bound Report (December 9, 2015), available at <http://www.refocuspartners.com/reports/RE.bound-Program-Report-December-2015.pdf>.

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