

C-PACE FOR RESILIENCY, RETROFITS & NEW CONSTRUCTION

VIRGINIA CLEAN ENERGY SUMMIT

September 17, 2019



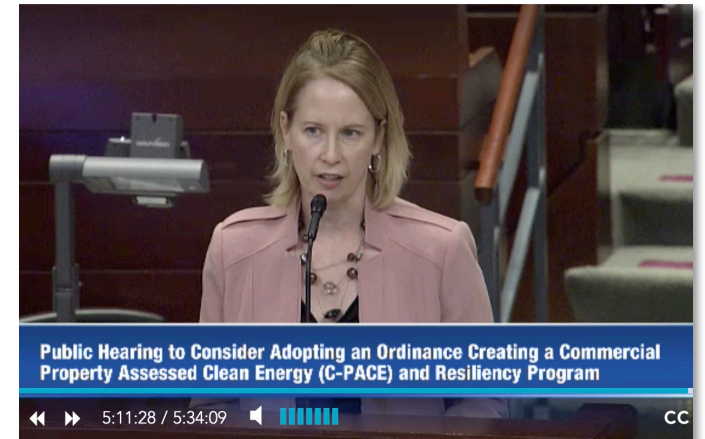
Source: Safety4Sea.com

VIRGINIA PACE AUTHORITY (VPA)

Building the Future with Commercial PACE Financing

September 17, 2019

- Non-profit PACE program administrator serving Virginia localities
 - P.A. for Loudoun County and City of Petersburg
 - Best-in-Class partners, Pace Financial Servicing & Slipstream
 - Partner in MidAtlantic PACE Alliance (MAPA)
- Loudoun cooperative rider option for interested localities
- Abigail Johnson, Founder and Executive Director:
 - Designed and implemented C-PACE legislation and programs around the country and in the Commonwealth
 - Instrumental in amending C-PACE statutes in 2015 and in 2019 which added resiliency and stormwater management to the law



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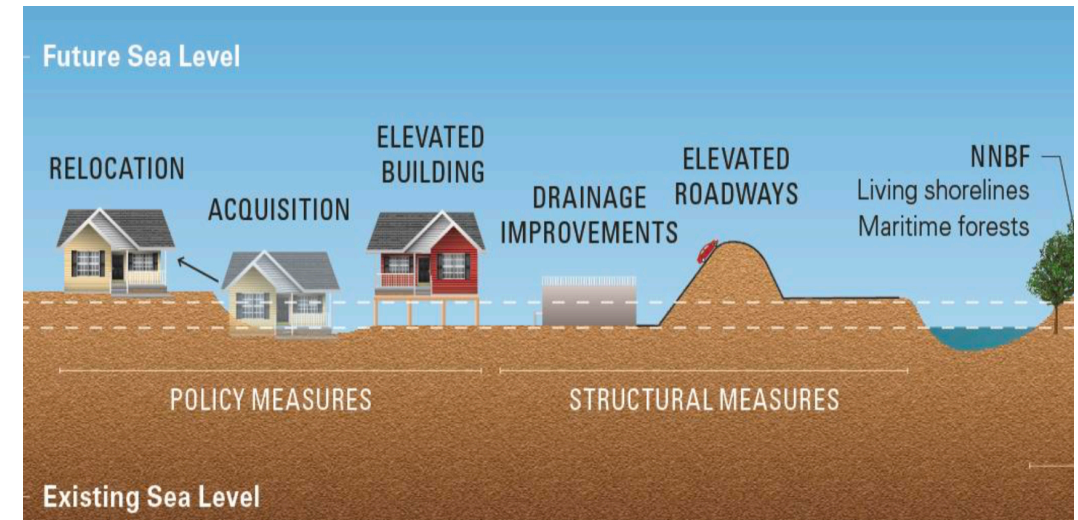
Resiliency

September 17, 2019

Definition

According to The U.S. Department of Energy Better Building Initiative, Resiliency is defined as:

“The ability to resist being affected by an event...or to return to an acceptable level of performance in an acceptable period of time after being affected by an event,” such as a deliberate attack or naturally occurring threats like hurricanes, floods, droughts, earthquakes, fires, and other disasters.“



In the case of buildings, resiliency projects typically take the form of retrofits that improve the envelope, structure, or systems of a building.

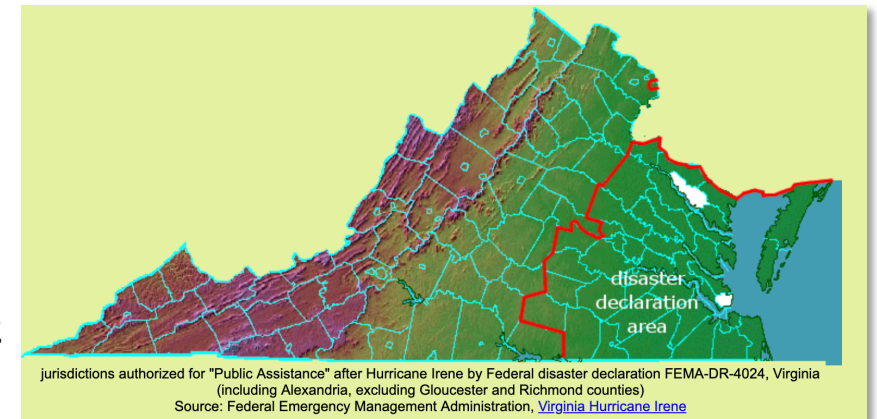
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State initiatives

- September 2018 - Governor appoints Ann Phillips as Special Assistant to the Governor for Coastal Adaptation and Protection
- November 2018 – Governor signs executive order to increase Virginia's Resilience to Sea Level Rise and Natural Hazards
- July 1 2019 - C-PACE resiliency & stormwater measures become law
- Spring/Summer - Department of Housing and Community Development holds resiliency workgroup meetings to discuss potential code changes
- August 2019 - Virginia's Final Chesapeake Bay Restoration Plan is announced



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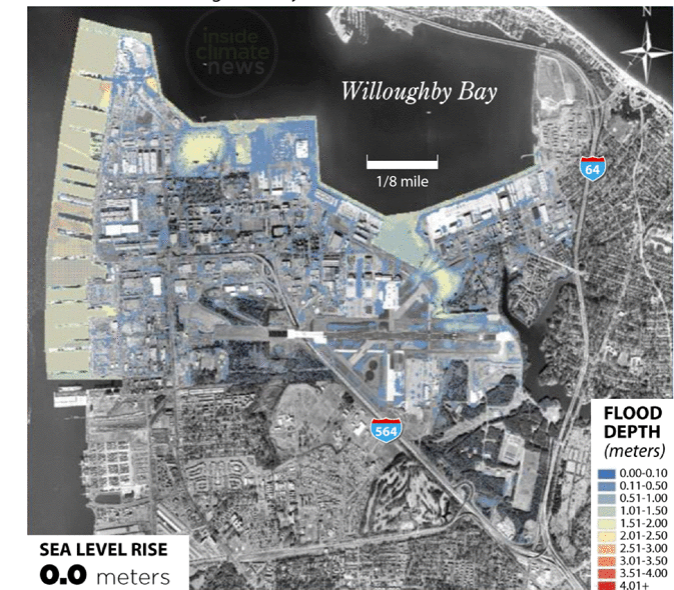
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Regional initiatives

- Norfolk's 2019 Mayor's Advisory Commission Climate Change Mitigation & Adaptation Climate Action Plan
- New Institute for Coastal Adaptation and Resilience at Old Dominion University announced in August 2019
- Hampton Roads Regional Planning Commission – Hazard Mitigation Plan, Coastal Resiliency Program
- VPA and partners spearheading new C-PACE resiliency initiative in Hampton Roads

How Rising Seas Will Affect Norfolk Base

This animation shows the flooding that's likely to occur at Naval Station Norfolk, at current and higher sea levels, during the type of storm that hits on average once a year.



SOURCE: U.S. Army Engineer Research and Development Center

PAUL HORN / InsideClimate News

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Virginia C-PACE Resiliency language

*The kinds of renewable energy production and distribution facilities, energy usage efficiency improvements, **resiliency improvements**, or water usage efficiency improvements for which loans may be offered. **Resiliency improvements may include mitigation of flooding or the impacts of flooding or stormwater management improvements with a preference for natural or nature-based features and living shorelines***



Codified in §15.2-958.3

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Benefits



Norfolk streetscape, September 2019

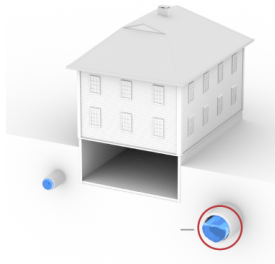
- More efficient operations (e.g. *redundant power, off-grid power, business interruption avoidance*)
- Protected buildings and critical equipment (e.g. *against flood and fire damage, anti-terrorism*)
- Insurance and risk reduction (e.g. *lower premiums*)
- Health, and Safety improvements (e.g. *avoid mold and other environmental hazards*)
- Lower stormwater charges
- Meet or exceed new code requirements

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Examples



Electricity and Lighting	→ Relocate or protect critical electrical circuitry
Energy Storage & Generation	→ Provide backup power for critical systems
Elevators	→ Provide backup power source
Envelope and Structure	→ Dry and wetproof building
Envelope and Structure	→ Design with non combustible cladding & insulation
Envelope and Structure	→ Install floating foundations
Envelope and Structure	→ Shutters, impact resistant openings, roof braces
Plumbing	→ Install sewage backflow prevention devices
HVAC	→ Raise equipment, upgrade ventilation systems
Fire suppression	→ Elevate pumps to protect from flooding
Stormwater management	→ Install pervious pavement, blue roofs

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Moving the Needle

- How can we use resiliency to incentivize jurisdictions to enable C-PACE?
- What additional technical tools should we consider in underwriting resiliency in C-PACE financing?
- How can we utilize the broad language in the statute to go beyond standard building improvements typically associated with C-PACE?
- How can you champion C-PACE in your community?





THANK YOU !

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