

A Consumer Advocate's Perspective on Electric System Grid Resilience

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Reliability v. Resiliency v. Grid Mod

- **Reliability:** Keeping the service on at all times, replacing equipment as necessary, ongoing maintenance.
- **Resiliency:** The ability to absorb, respond to, and recover from catastrophic events.
- **Grid Modernization:** Upgrading electrical grid to integrate new technology
- Grid mod  Resiliency  Reliability

Is fixing this pole considered...
Reliability? Resiliency? Grid Mod?



Does it matter?

The Connecticut Experience



- Tropical Storm Irene – August 2011 800,000 outages
- Halloween Nor'easter – October 2011 831,000 outages
- Super Storm Sandy – October 2012 626,000 outages

After the storms

- Approximately \$450 million in storm costs for our two IOUs from the three storms
- \$300 million+ for storm hardening
- Currently in the midst of a grid mod docket expected to wrap up by end of the year

Consumers shouldn't have to pay more than once

How much resilience do we need?

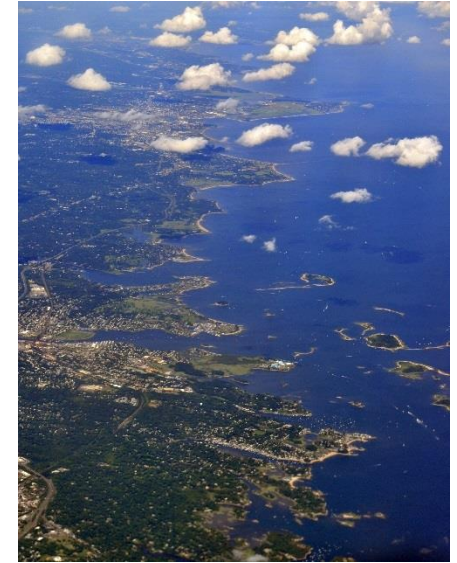
Depends on...

- Location, location, location



University of Connecticut

Photograph by John D. VanDine



- State energy and climate policies
- How much resilience can we afford?

What would be useful

- More uniform resilience analytical framework
- Prioritization of customer needs
- Careful consideration of *who* pays, and *how* they pay
- Continued dialogue among stakeholders
- Training, collaboration on policy development, more educational opportunities