Synapse
Energy Economics, Inc.

The Resilience Planning Landscape for Communities and Electric Utilities

Findings and Opportunities

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Purpose/Scope

Improve the integration of community energy and electric utility resilience planning

- Understand the challenges and opportunities experienced by communities and electric utilities coordinating energy-related resilience efforts
- Inform better coordination of community and utility resilience efforts moving forward, with a focus on how to best engage with utilities and utility regulators

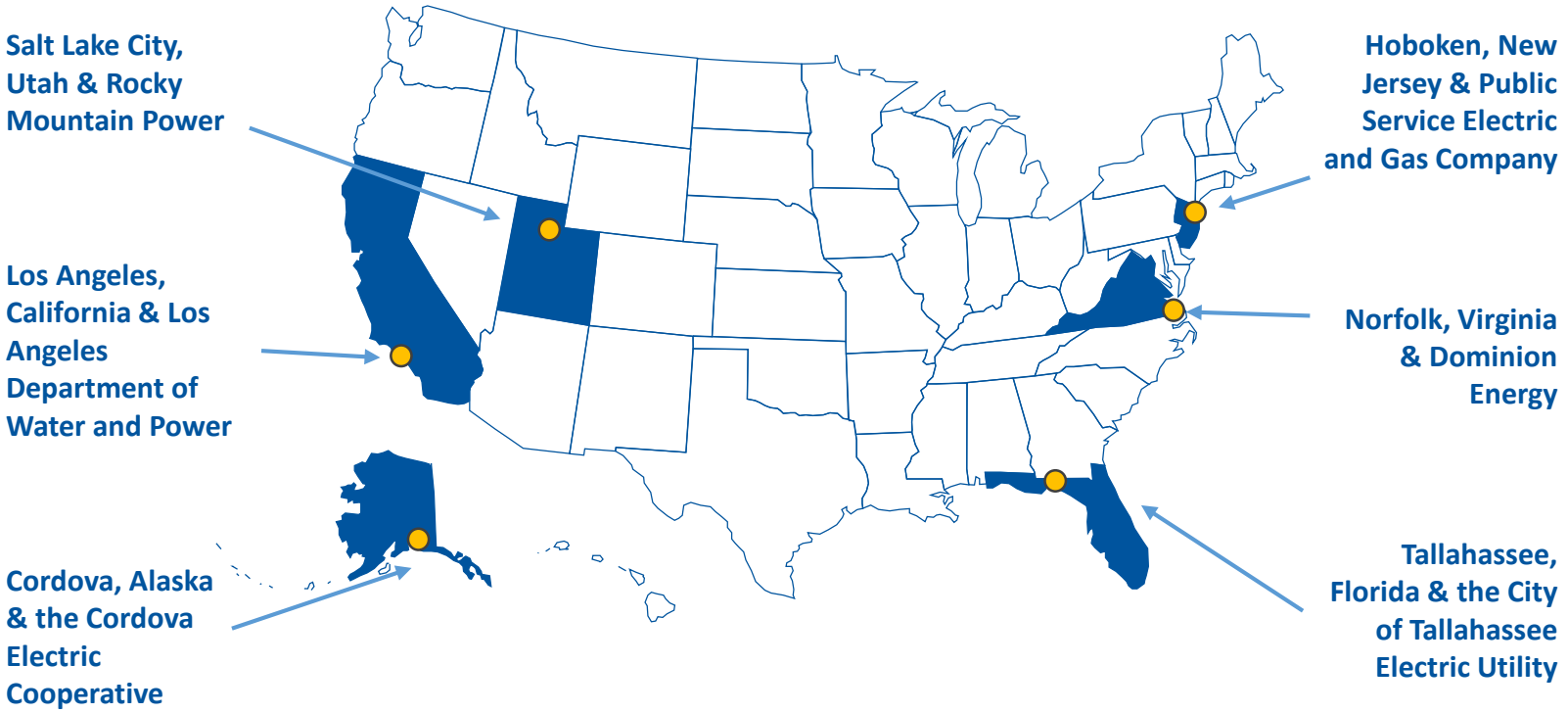
Agenda

1. Preview of landscaping report, with a focus on findings and opportunities
2. Foundational information for metrics discussion

Preview of landscaping report findings and opportunities

Description of the approach

Synapse asked standardized questions to a sample of community/utility pairs covering four dimensions: utility regulatory structure, region, threat types, and community size



Findings

Interviewees:

- Discussed **increased interest in and commitment of resources** for energy-related resilience.
- Described how they consider energy-related resilience investments and efforts in planning and budgeting. But utility and community **definitions of resilience differ, as do the ways they assess performance**.
- Identified that **risks and consequences (past, present, and future)** improved engagement, advanced processes, furthered decision-making, and in many cases enabled investments in projects.
- Reported that **funds and staff time for resilience efforts are limited and competition for these resources is a barrier** they face in trying to be more resilient.
- Described different processes that allowed each one to make progress **in its own way**.

Process Opportunities

Several emerging approaches can provide good models.

Some communities are propelled by state leadership.

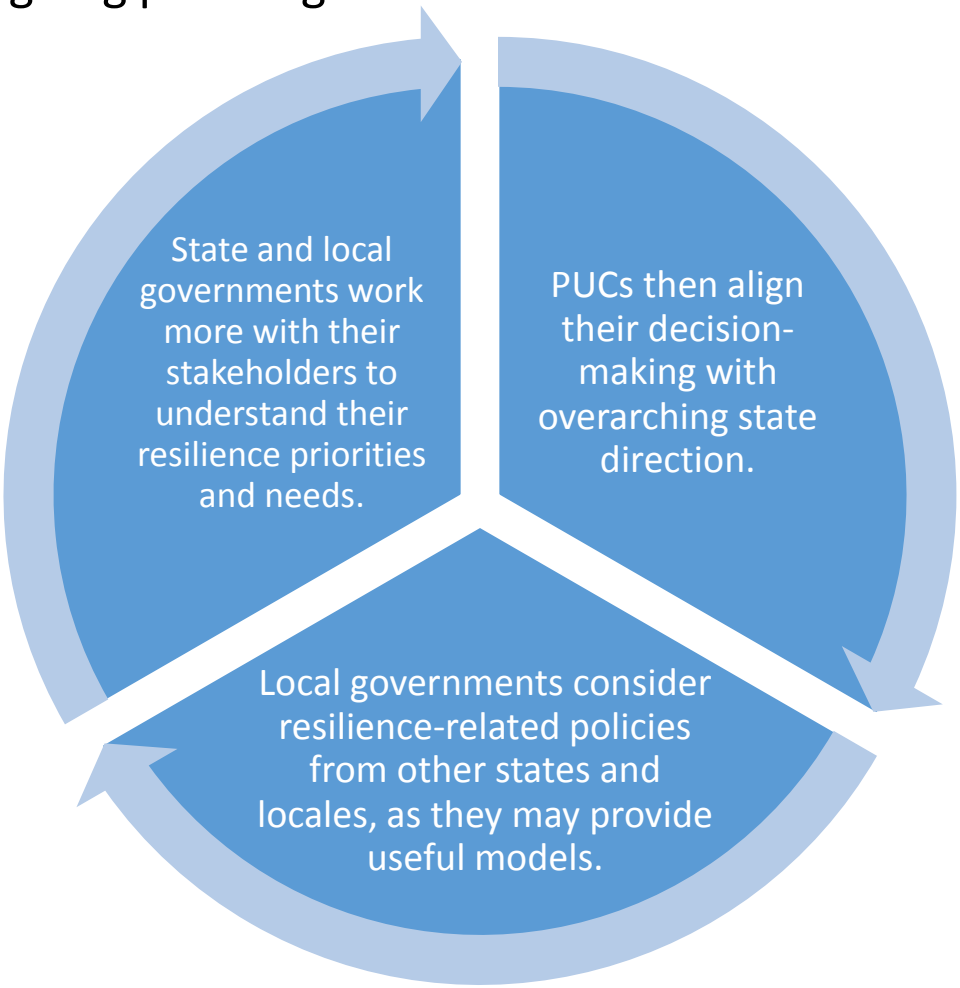
Some cities are leading by convening a broad group of stakeholders including utilities to develop resilience plans.

In some places, existing community-led processes are expanding to include resilience.

New types of PUC proceedings are providing opportunities for more comprehensive utility planning.

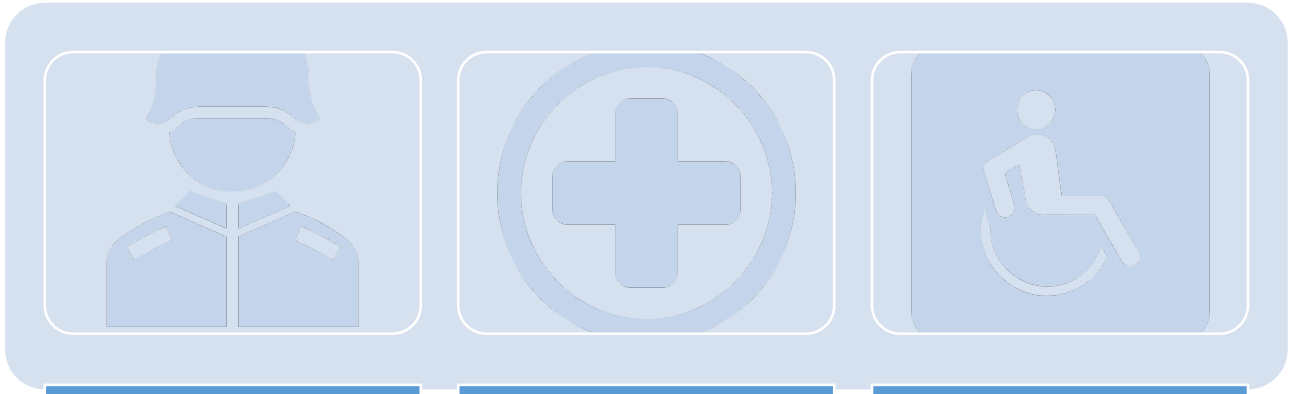
Process Opportunities

State-level leadership can help communities and utilities move from reactive to proactive, ongoing planning.



Targeting Opportunities

Solutions can address several areas of special need:



- continuity of government/ military operations
- maintenance of life-sustaining products and services
- access to goods and services for vulnerable populations

Opportunities Related to Roles/Responsibilities

Communities can engage directly with utilities and regulators

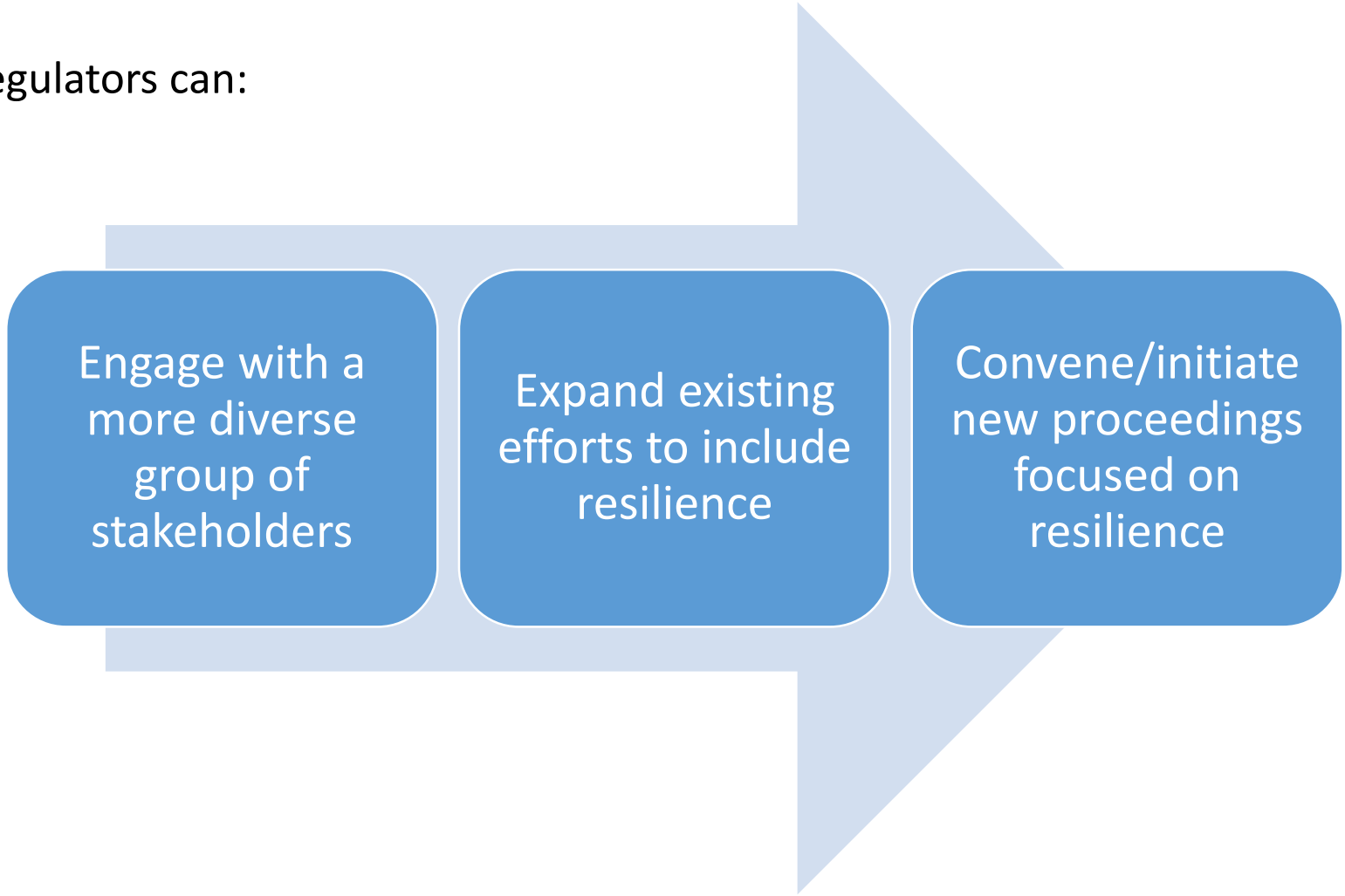
Formally intervene in PUC proceedings

Participate in less formal docketed and undocketed PUC proceedings, technical sessions and working groups

Empower a community representative to engage on their behalf

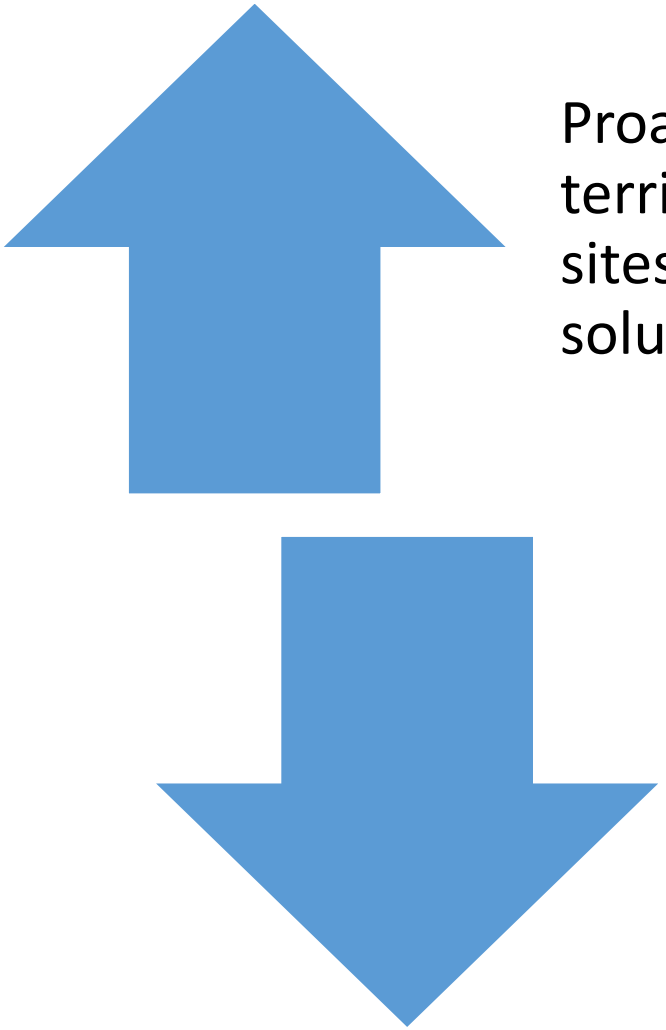
Opportunities Related to Roles/Responsibilities

Regulators can:



Opportunities Related to Roles/Responsibilities

Utilities can:



Proactively conduct service territory-wide screening for sites where a resilience solution makes sense

Approach and engage with communities of all sizes across their service territories

Develop customized solutions to meet the varied needs and values of communities

Funding Opportunities

1. Utilities and their regulators can work together to better define what investments and project designs can be supported by ratepayer funding and provide this information to communities. A specific focus on certain solutions, including microgrids and advanced metering infrastructure (AMI), may be warranted.

2. Approaches to prioritizing projects and allocating resources appear to be important and should be developed.

3. Access to other funding resources may be required to support resilience.

- FEMA pre-disaster mitigation (PDM) program
- FEMA Building Resilient Infrastructure and Communities (BRIC)
- U.S. Department of Housing and Urban Development Agency (HUD) Community Development Block Grant (CDBG)
- IRS/Treasury Opportunity Zone tax break
- Other philanthropic and resilience-focused efforts

Foundational information for metrics discussion

Principles for Designing Metrics

1. Tied to goals: To be meaningful and useful, a metric should convey whether progress toward a goal is being achieved.
2. Clearly defined: The definition and methodology for quantifying the metric should be precise. This means (1) providing clear data definitions and metric formulas, (2) establishing responsibility for measuring, calculating, reporting, and verifying the metric and (3) determining when and how often these tasks should be performed.
3. Comparable: The ability to compare performance between similar utilities can yield valuable insights. Hence, it is preferable to use metrics consistent with accepted, widely-adopted standards wherever possible.

Principles for Designing Metrics (cont'd)

4. Calculated using readily available data: Where possible, metrics should use data that are currently available or can be obtained without substantial difficulty.
5. Objective and free from exogenous influences: Metrics should address outcomes over which the utility and/or community has some degree of control.
6. Easily interpreted: Simple designs, context, and scale may facilitate interpretation of metrics by stakeholders.
7. Verifiable: Metrics should lend themselves to evaluation and verification wherever possible.

Key Questions

Threat Level

What is the severity of the threat?

- What will be impacted (electricity, transportation, communications, water supply)?
- What will the impacts be (power outage)?
- How soon are the impacts projected to occur?
- How often are the impacts projected to occur?
- For how long are the impacts projected to occur?

Threat Scope

Who is impacted by the threat (who do we want to avoid impacting)?

- Customers, facility, utility, utility system, community, society

Threat Consequences

What types of consequences are anticipated?

What are the magnitude of the benefits of avoiding these consequences?

- Avoided damages to property
- Avoided health impacts
- Avoided losses in economic productivity/opportunity

Four Stages of Metric Development

In some cases, tracking and reporting may be all that is needed

Questions/Contact Information

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