

Energy Resilience Planning for Communities

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Agenda

- Introduction to the Office of Energy Reliability and Security
- What is reliability?
- Who are the electricity regulators?
- Overview of national and state systems
- Online dashboard or toolkit for local energy reliability planning
 - Electricity, petroleum fuels, propane, natural gas
- Cyber and Physical Security

MN Commerce: Office of Energy Reliability and Security

Located in the Division of Energy Resources

Planning, preparedness, and response

- Functions per US Code and Minnesota Statute
- Electricity, petroleum fuels, natural gas, propane
 - Physical and cyber security, supply issues, coordination
- State Energy Security Plan
- Community Resilience



Reliability

- No single standard definition for reliability in Minnesota Statutes
- Reliability
 - Energy systems meets the needs of end-use customers even when a disruptive event occurs
 - Energy systems can withstand and rapidly recover from outages
 - Affected by regional market structures, engineering complexities, energy supply shortfalls, extreme weather events, Parts and equipment supply chain constraints, equipment failures, cyber threats, etc.

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Example: Electricity Regulators

- Federal Energy Regulatory Commission (FERC)
 - Regulates the interstate transmission of electricity, natural gas and oil
 - Regulates electric grid reliability, primarily the bulk electric transmission system, as well as approve standards established by MRO and NERC
- Minnesota <u>Public Utilities Commission</u> (PUC)
 - Regulates electricity, natural gas and telephone as a quasi-judicial body
- Minnesota <u>Department of Commerce</u>
 - Environmental review
 - Analysis of resource and distributions plans
- Executive Order <u>23-13</u> (Emergency Response)

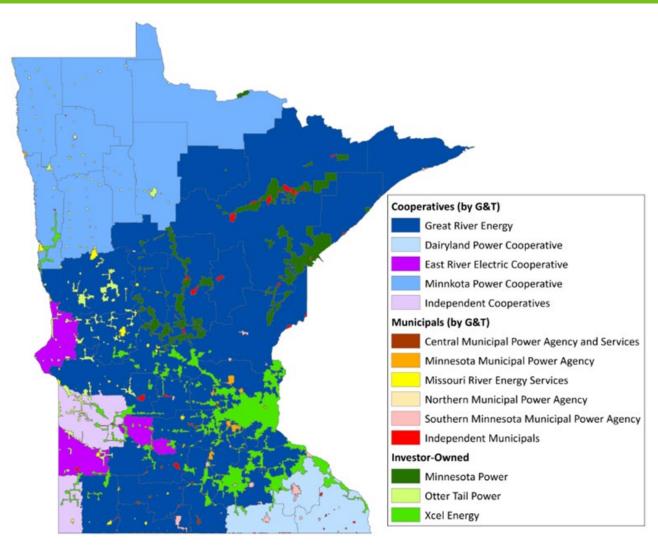
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Electric System Interdependence



- Minnesota is part of a regional, national, and international electricity grid
- MISO is a regional transmission organization (RTO) that coordinates electricity transmission from Manitoba to the Gulf of Mexico
- MISO is regulated by the Federal Energy Regulatory Commission (FERC)

Minnesota Utilities



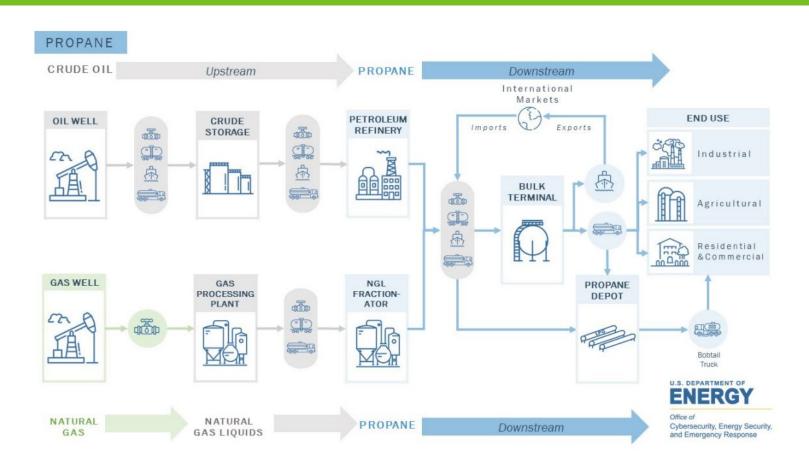
- 3 investor owned (public utilities)
- 44 electric distribution cooperatives served by 5 generation & transmission providers
- 125 electric municipal utilities mostly served by 5 municipal power agencies; approx. 30 independent municipal utilities

Local Energy Planning and Resilience Needs?

A few ideas:

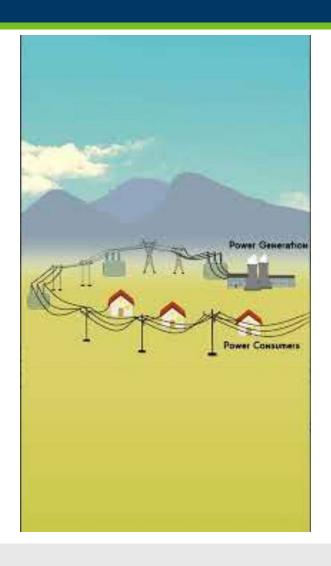
- Basic information about energy systems (electric grid, propane, natural gas)
- Overview of reliability and security
- Planning materials
 - Checklist or workbook
- In person or online
- Other?

Example - Propane Supply Chain



State Energy Security Plan Optional Drop-In: Energy Supply Chain Diagrams

Example of a short "explainer" video



What is a Power Grid?

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Example: Simple planning checklist

List name and cell phone number:

Emergency management and related:

- Community emergency manager
- County emergency manager
- HSEM regional representative
- Fire department
- Police and/or sheriff office

- Utilities:
- Electric
- Natural gas
- Propane
- Heating oil
- Telecommunications,
- Drinking water
- Wastewater
- Area Infrastructure:
- Pipelines
- Fuel terminals

Planning questions

Have you met all the key people?

Do they know each other? Meeting before an incident happens.

Does the local electric utility know what critical facilities are on a given feeder?

- What electricity feeders should be kept online if load is curtailed
- Restoration priorities
- Winter storm plowing priorities
- Propane or heating oil delivery in a weather emergency?

Example Planning Toolkit (Alaska)

Primary Shelter Information					
Shelter		Location	Phone	Contact to OK Use and Open Shelter	
				Primary Name:	
				Number:	
Restrictions on use/availability, if any:				Backup Name:	
				Number:	
Bed Capacity	Number of	Number of	ADA Accessibility	Emergency	Kitchen
(15-20 sq ft/person)	Showers	Bathrooms		Power/ Generator	Facilities
			Yes □ No □	Yes □ No □	Yes 🗖 No 🗖

2013 Alaska <u>Small-Community-Emergency-Response-Plan-Toolkit-2013.11.26-PDF.pdf</u>

Alaska <u>2025 SCERP Toolkit.docx</u>



DISCUSSION

THANK YOU!