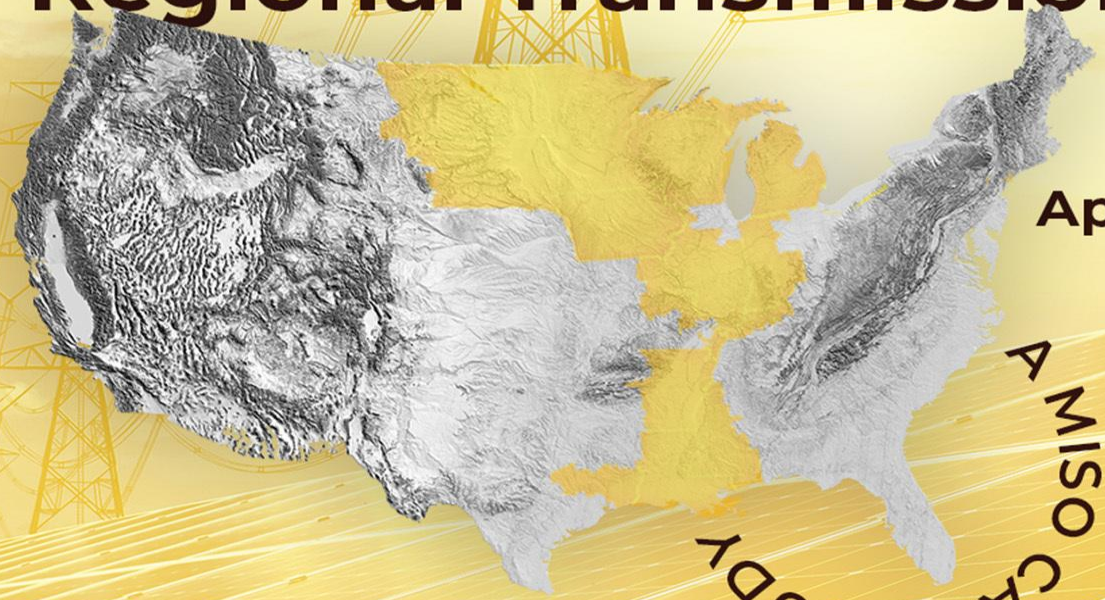
State Engagement with Regional Transmission Processes



A MISO CASE STUDY

April 24th at 3:00PM ET

CLIMATE XCHANGE | www.Climate-XChange.org

Introduction

Kristen Soares

State Climate Policy
Network Manager

CLIMATE X CHANGE
[SCPN]

State Climate Policy Network

Network of **15,000+**

- ➔ State and local elected officials
- ➔ NGO advocates
- ➔ Researchers
- ➔ State agency staffers
- ➔ Organizers and activists
- ➔ Business leaders

... working on state climate policy

www.climate-xchange.org/network

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Pro Bono Policy Assistance

We specialize in state climate policy design and analysis.
Reach out to kristen@climate-xchange.org with your requests on:

- **Example states** and **model rules** for a given policy
- **Gap analysis** of your state's climate policy landscape
- **Connections** to other actors working on similar issues

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State Engagement with Regional Transmission Processes, A MISO Case Study

Matt Prorok
Policy Director, Great Plains Institute

Benjamin Stafford
Senior Policy Manager, Great Plains Institute

Beth Soholt
Executive Director, Clean Grid Alliance

Andy Kowalczyk
Transmission Director, Southern Renewable Energy Association

Agenda

1. Setting the Stage: Transmission and RTOs
2. MISO's LRTP Case Study
3. Lessons Learned
4. Q&A

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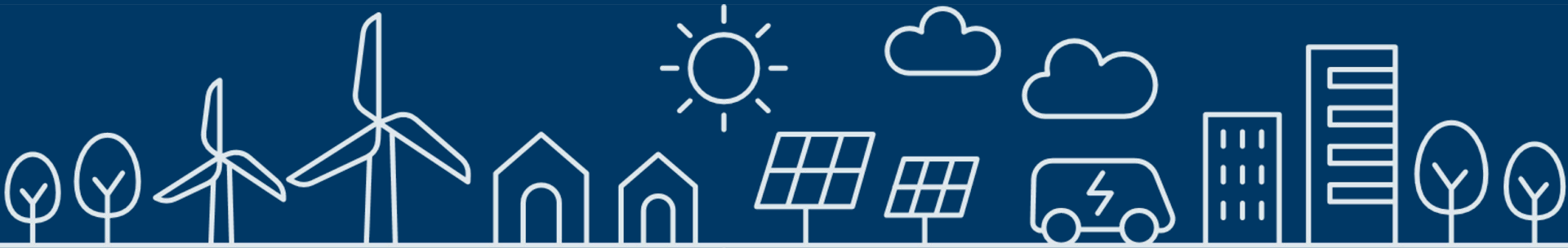
Transmission Deployment – Challenges and Opportunities

April 2025



Today's Agenda

- Discussion of the critical role transmission plays in assuring clean, affordable, reliable electricity supply.
- Examination of Regional Transmission Organizations (RTOs) as critical engagement points, particularly with Long Range Transmission Planning (LRTP) processes.
- Engaging with you! (Audience questions & discussion)

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Today's Speakers

Matt Prorok

Policy Director
Great Plains Institute

Benjamin Stafford

Senior Policy Manager
Great Plains Institute

Beth Soholt

Executive Director
Clean Grid Alliance

Andy Kowalczyk

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CLEAN GRID ALLIANCE

SOUTHERN RENEWABLE ENERGY ASSOCIATION

Great Plains Institute (GPI) - Mission

Accelerate the transition to net-zero carbon emissions for the benefit of people, the economy, and the environment.

Brief History of GPI

- **Founded in 1997** as the Great Plains Institute for Sustainable Development, Inc.
- **Decarbonizing the economy is the most important contribution** we could make to a sustainable society.
- **GPI is decarbonizing all five major emissions sectors**—transportation, electricity, industry, buildings, and agriculture and forestry.

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The GPI method:

Consensus-oriented advocacy

Convene

Inform

Agree

Act

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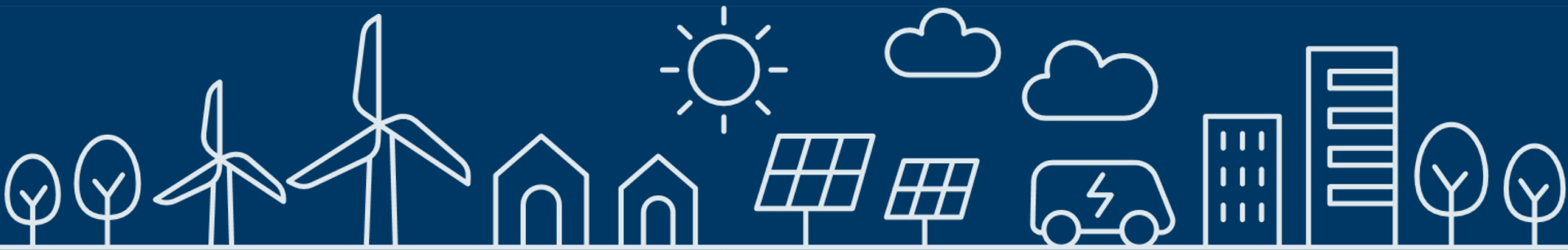
Transmission:

Enabler of clean, affordable, and reliable electricity



New transmission is critical for clean, reliable, and affordable electricity.

- Electricity delivery systems must connect supply and demand with increasing sophistication.
- Policy and markets drive increasingly decarbonized electricity.
- Economic development increases demand (load), including increased domestic manufacturing and data centers, and distributed energy resource deployment.
- Greater electrification of end uses of energy increases demands on electricity delivery systems.

Transmission ties is all together, providing optionality!

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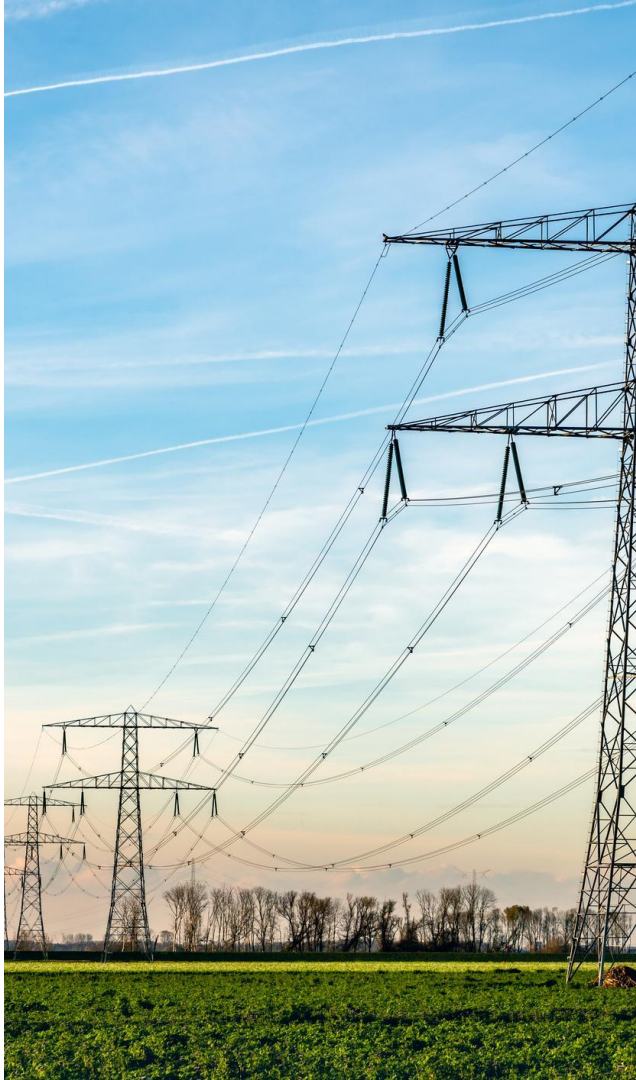


Today's high-voltage transmission network connects the country, but not all areas equally

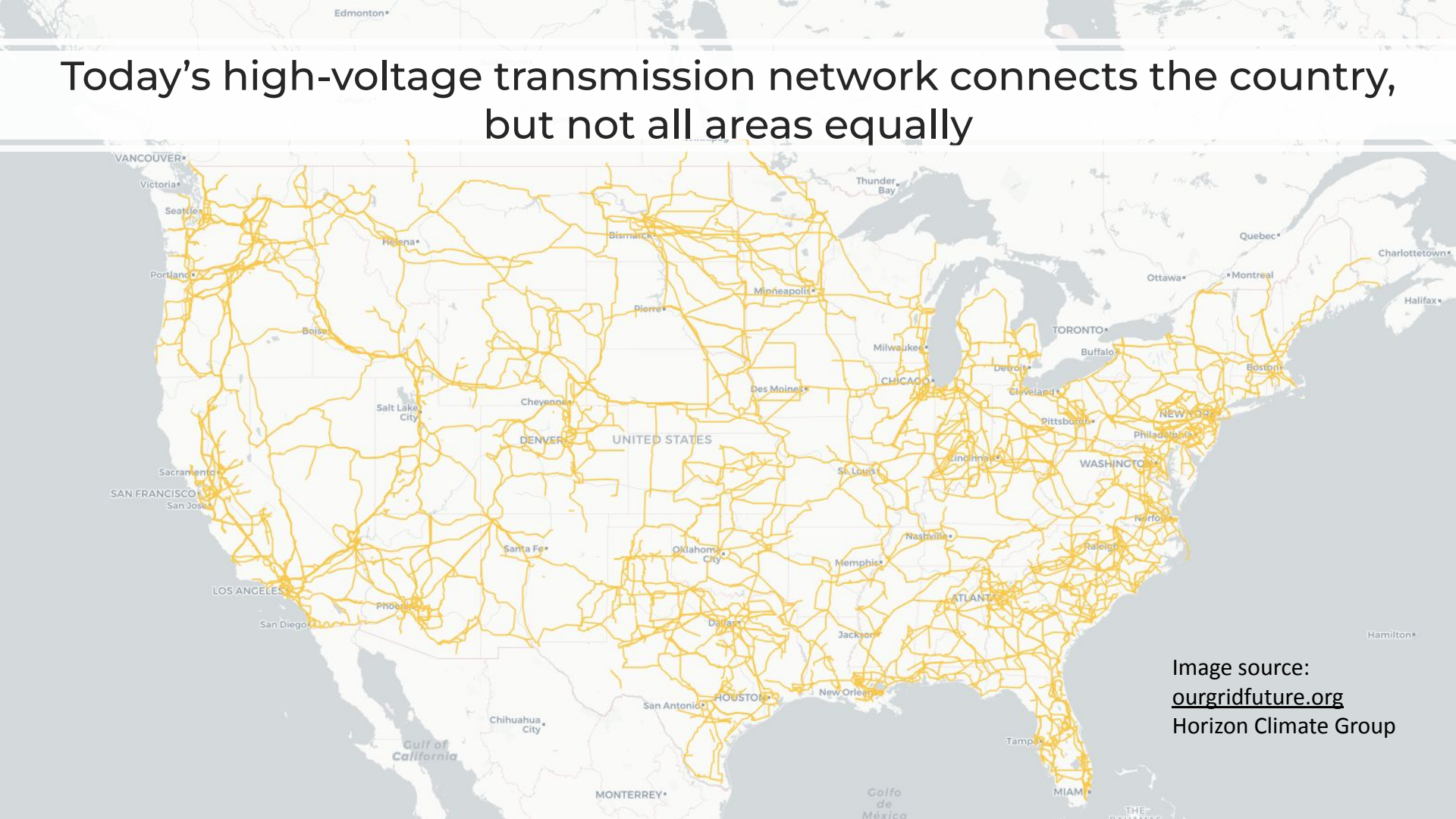
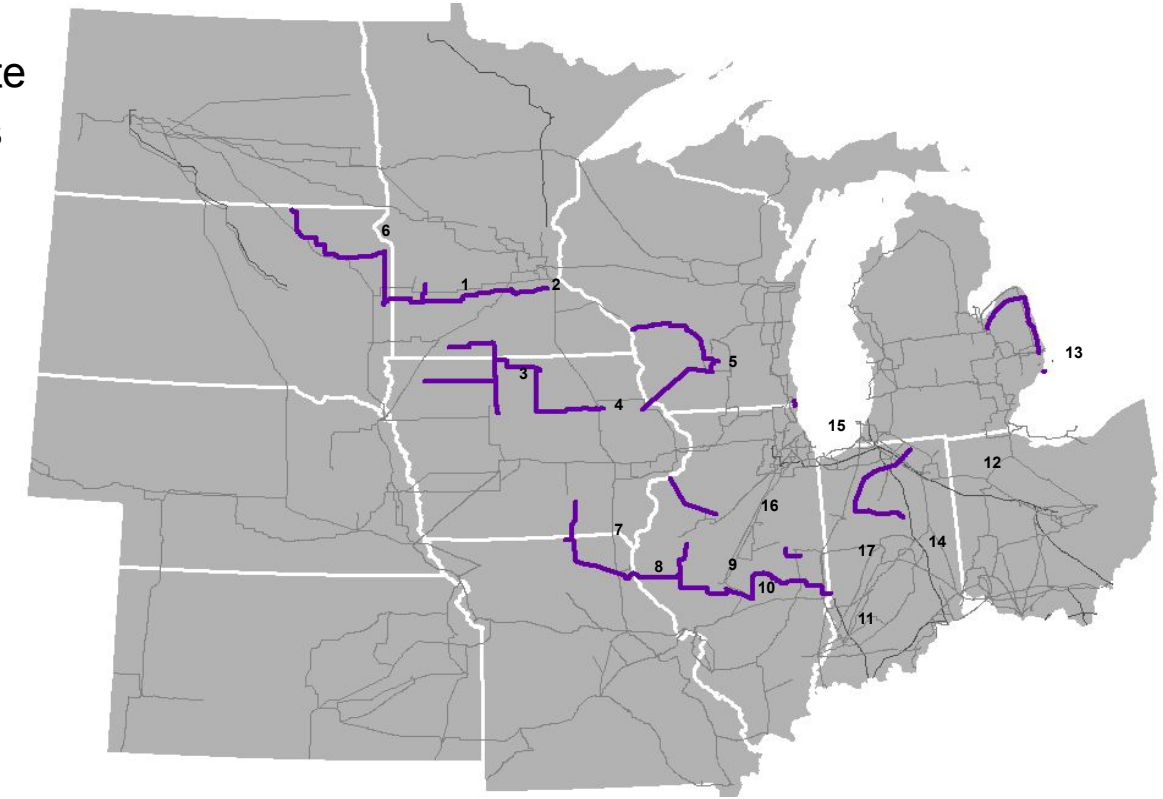


Image source:
ourgridfuture.org
Horizon Climate Group

MISO Multi-Value Projects: A regional response to state needs

- 17-line portfolio to enable state renewable portfolio standards
- Planning started 2008
- Approved in 2011
- Total of $5.5B cost
- 1.8-3.0 benefit to cost ratio
- The region's and nation's first backbone transmission expansion



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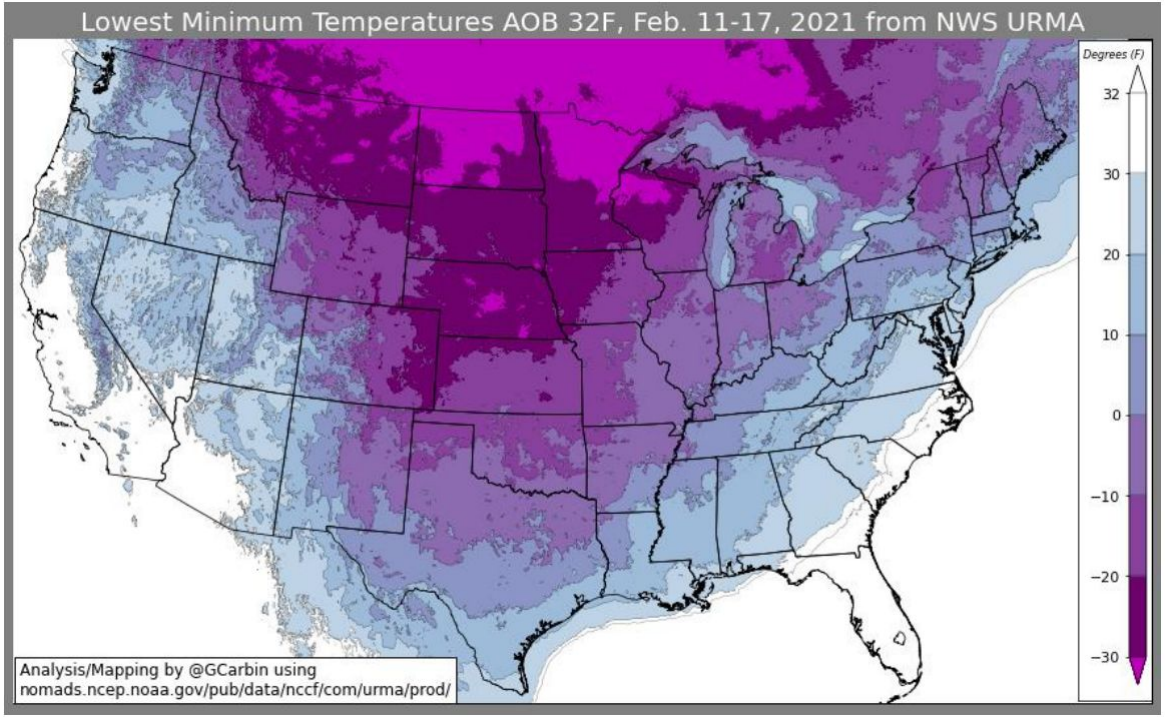
Data Source: MISO. Figure Authored by Great Plains Institute, 2017

Transmission keeps the lights on during extreme weather: Winter Storm Uri – February 2021

- 5-6 days of consecutive record setting cold temperatures across Texas and the Plains
- Grid emergencies in ERCOT (Texas), MISO (Midwest and South), and Southwest Power Pool (central Plains)
- ERCOT experienced near-catastrophic grid failure and lives were lost
- Load shed in SPP and MISO
- MISO wheeled 13,000 MWs from PJM to SPP to avoid additional load shed



Source: National Weather Service.
https://www.weather.gov/media/ewx/wxevents/ewx-20210218.pdf

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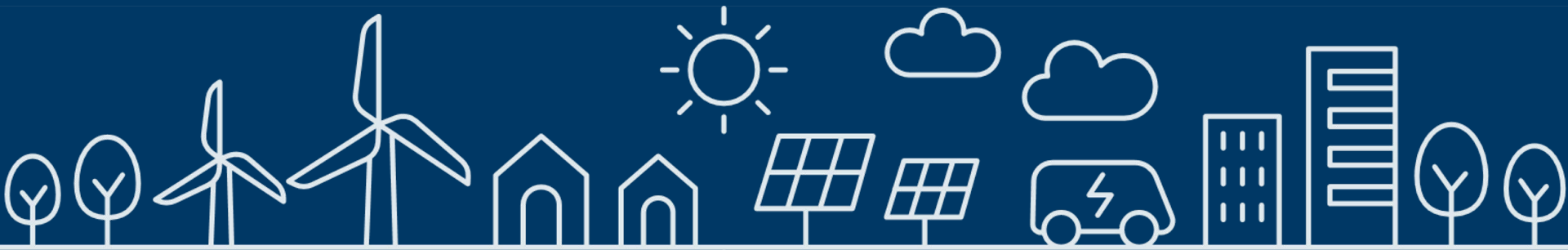
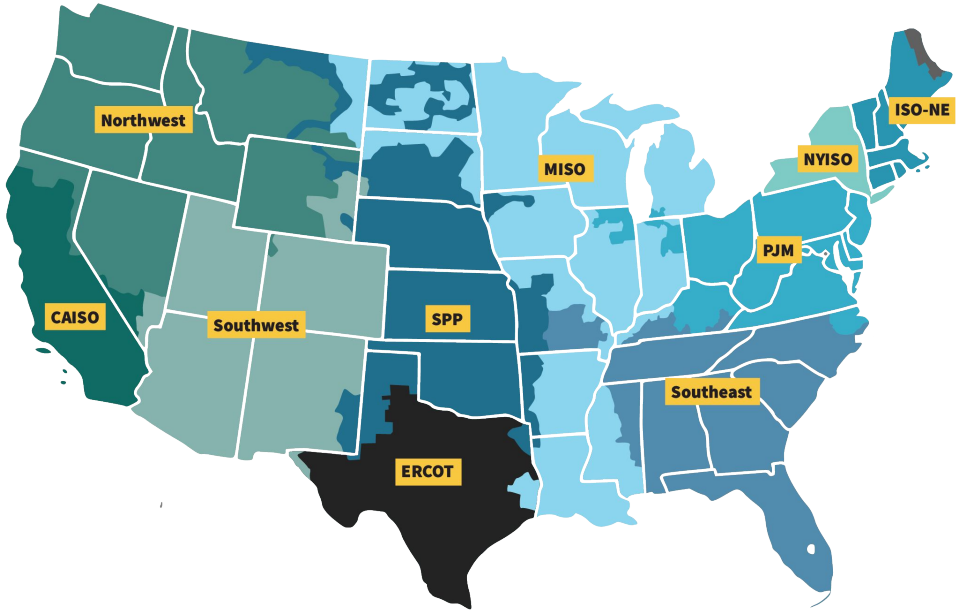
Regional Transmission Organizations (RTOs)

Our transmission grid planners & operators



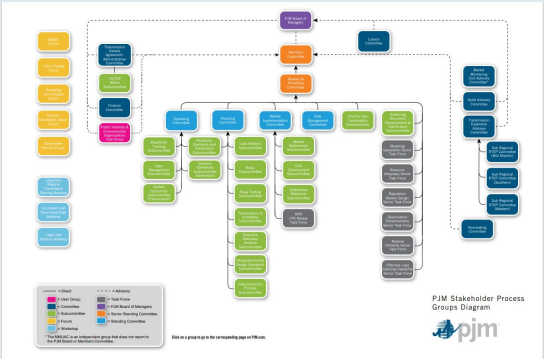
Regional Transmission Organizations (RTOs) or Independent System Operators (ISOs) coordinate regional energy markets, plan transmission, and operate systems that deliver over 70% of US electricity.



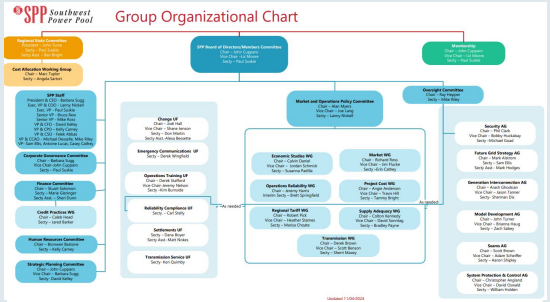
Great Plains Institute has focused efforts within three RTOs/ISOs.

Images source: Federal Energy Regulatory Commission

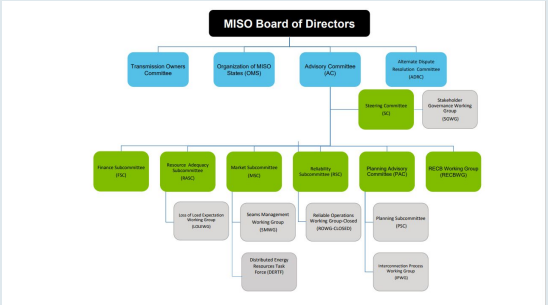
Stakeholder engagement for transmission is complicated.



PJM Interconnection



Southwest Power Pool



Midcontinent ISO

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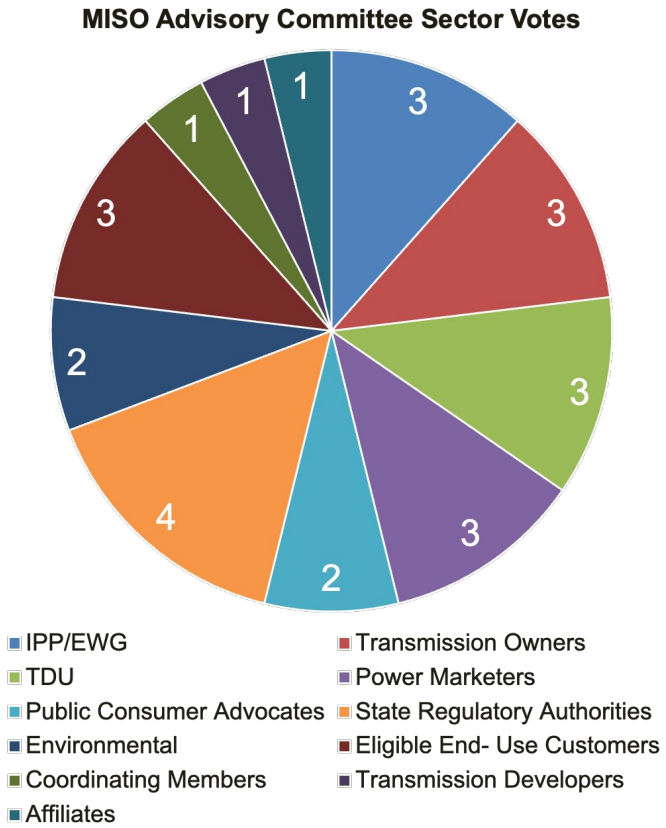
RTO governance, politics, and culture guide policymaking.

- Participation is MISO's stakeholder process requires technical expertise and significant time commitment
- Voting is limited to members, largely comprised of utilities and load interests.
- States have authority over resource adequacy and voting rights within MISO's stakeholder process.
- MISO is a member-based organization.



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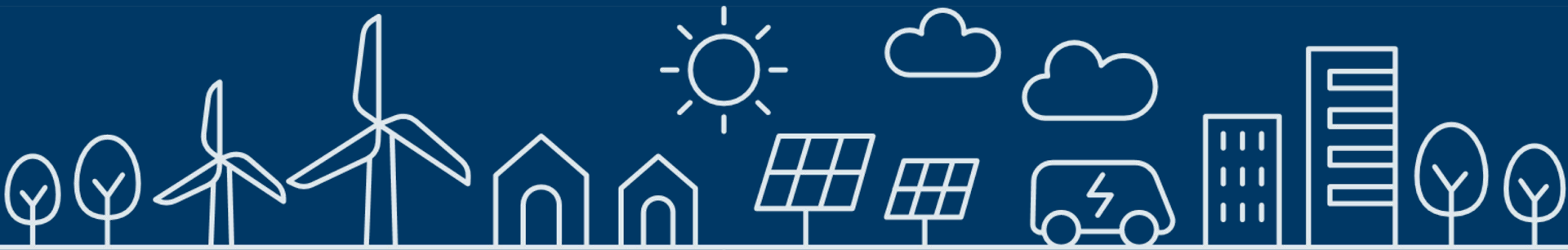
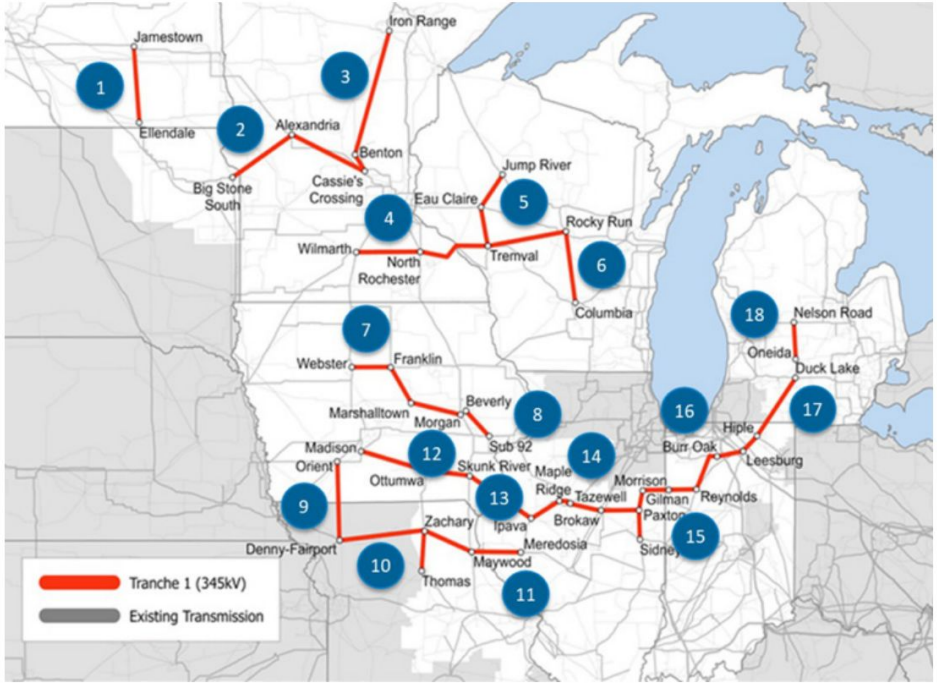
Long Range Transmission Planning



The MISO success story: “Getting the right people speaking the right language in the right room at the right time.”

- 2012 – 2018:
  - MISO South is added, changing MISO’s generation resource mix and cultural makeup
  - Interconnection queues in MISO West, and increasingly elsewhere, congested
  - MISO & stakeholders experience multiple failed attempts “another round of MVP”
- 2019-2022:
  - New state and utility goals and policy drivers
  - Step change in planning as states and utilities demand LRTP
  - States take on cost allocation for LRTP
  - Environmental and consumer advocates engage follow coordinated planning support with permitting support
- LRTP Tranche 1 is approved in August 2022!



Source: MISO MTEP21 Addendum. https://cdn.misoenergy.org/MTEP21%20Addendum-LRTP%20Tranche%201%20Report%20with%20Executive%20Summary625790.pdf

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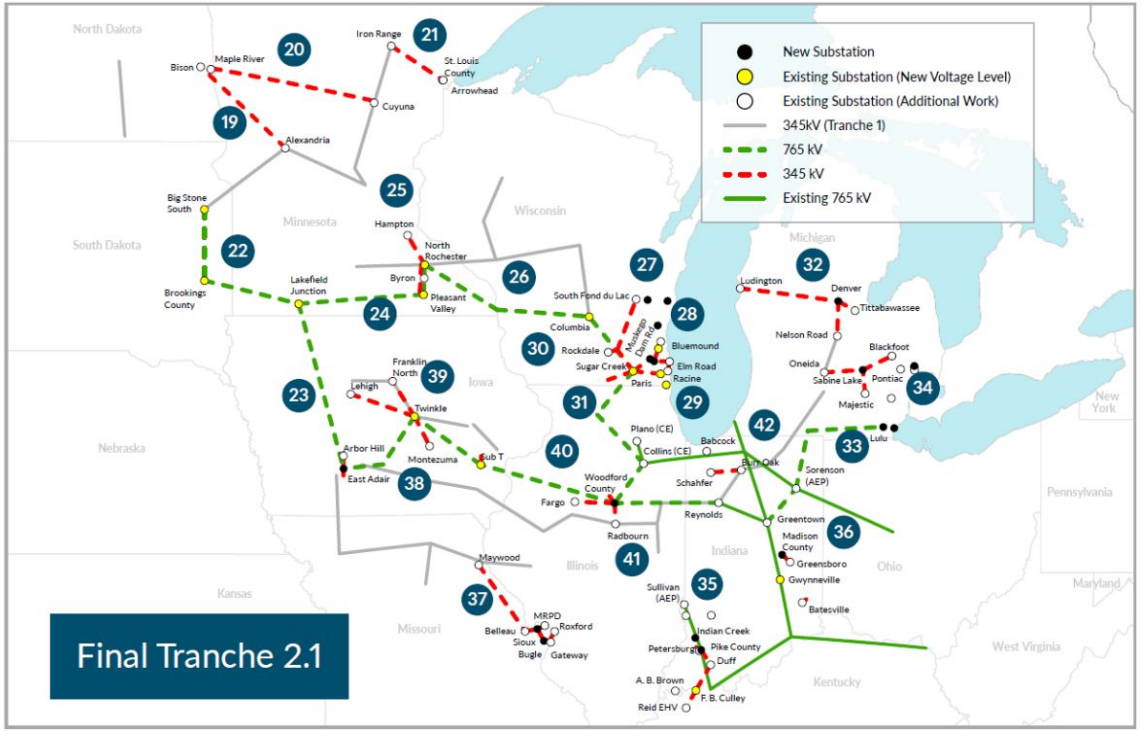
The MISO success story: “Getting the right people speaking the right language in the right room at the right time.”

- 2022 – 2025:
  - As MISO is formed, it responds to state policy needs with innovative regional planning
  - Utilities and states build consensus on need for regional transmission solution AND cost allocation
  - LRTP Tranche 2.1 approved in December 2024
  - 500 kV projects planned in MISO South



Source: MISO MTEP24 Report. https://cdn.misoenergy.org/MTEP24%20Chapter%202%20-%20Regional%20Long%20Range%20Transmission%20Planning658124.pdf

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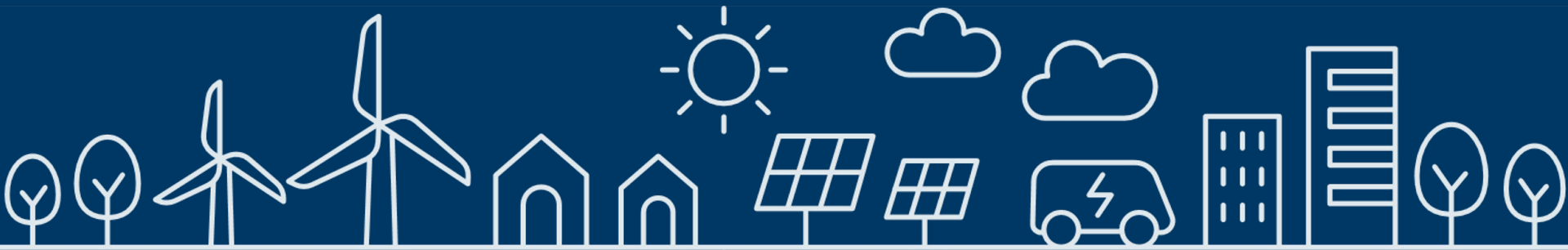
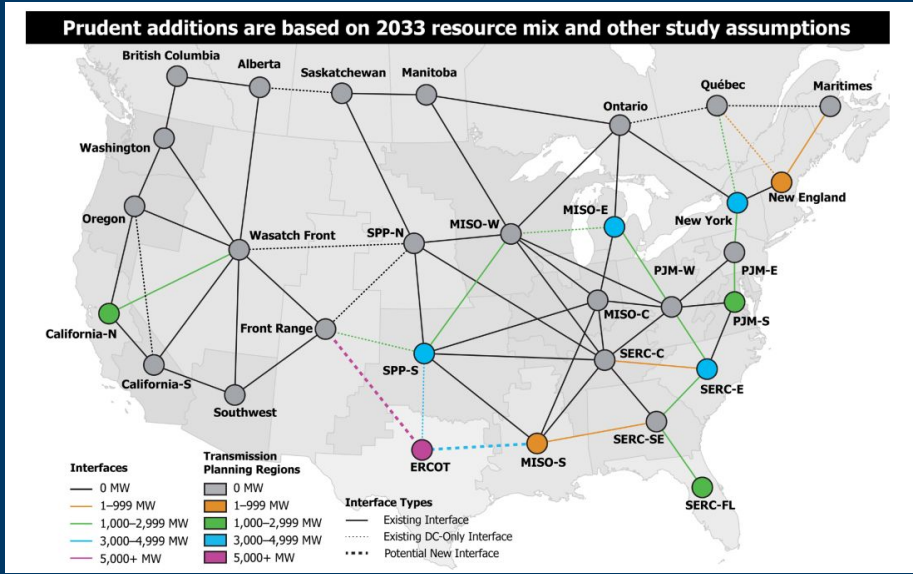
What comes next?





Source: North American Electric Reliability Corp.
https://www.nerc.com/pa/RAPA/Documents/ITCS_Final_Report.pdf

Interregional Planning can be improved.

- Multi-value planning based on economics, reliability, and transfer capacity needs is a novel approach for interregional planning.
- MISO and SPP started a Targeted Market Efficiency Project (TMEP) study in late 2024 focused on the southern interface
- SPP will use its extreme winter weather planning scenarios for the study, increasing likelihood of transmission needs being identified

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Resilience concerns & load growth highlight planning needs.

- NERC Interregional transfer capability report recommends significant transfer capability expansions of 1000 – 5000 MWs across parts of MISO.
- Load is growing again! Data centers,, crypto, advanced manufacturing and electrification require additional transmission and generation capacity.
- RTOs are working to define and quantify “resilience” benefits for project selection and cost allocation.
- LRTP Tranches 2.2, 3, and beyond?

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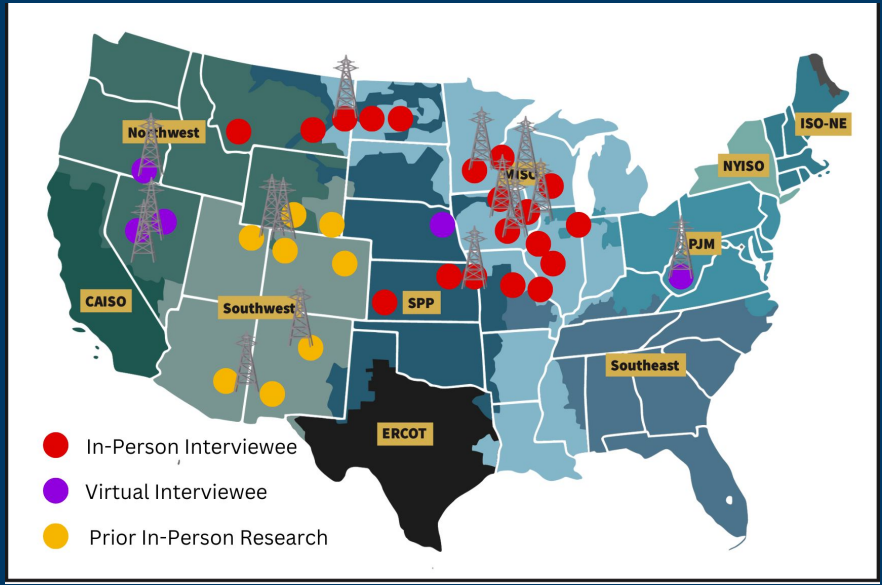
Locations of GPI's Grassroots Stakeholder Research



Source: Josh Rogers, Great Plains Institute. 2025

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Local opposition and state permitting headline siting challenges.

- Types of opposition to transmission projects varies by region.
- Organized opposition in state and local permitting proceedings is often led by agricultural, environmental, and landowner groups.
- State permitting challenges have been most prevalent for merchant transmission projects, in part driven by public opposition.

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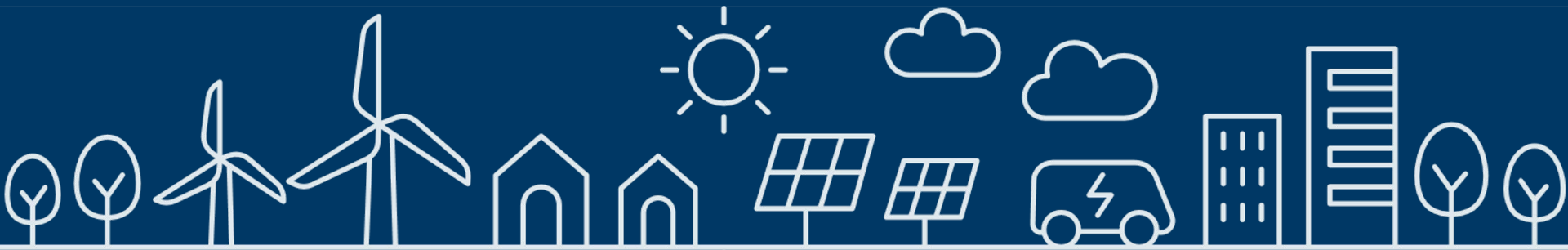
Lessons learned



Q&A

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Thank you for joining!

Reach out to kristen@climate-xchange.org with any additional questions!

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