

# Connecting the Dots Between Grid Investments and Energy Affordability

July 22<sup>nd</sup> at 2PM ET

# Introduction

Kristen Soares



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# 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](http://www.climate-xchange.org/network)

# Pro Bono Policy Assistance

We specialize in state climate policy design and analysis.  
Reach out to [kristen@climate-xchange.org](mailto: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

# Connecting the Dots Between Grid Investments and Energy Affordability



**Zach Zimmerman**

*Research and Policy Manager  
Grid Strategies*



**Abby Watson**

*President of  
The Groundwire Group*

## Agenda

1. How Transmission Investments Save Money
2. Communicating on Grid Investments and Affordability
3. Q&A

# Speaker

Zach Zimmerman



**Research and Policy Manager**

Grid Strategies

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## **Large Scale Transmission Deployment Saves Consumers Money**

Zach Zimmerman, Michael Goggin, Rob Gramlich, and Gretchen Kershaw

# Report covers:

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- 1) **Transmission facts and misconceptions**
- 2) **Consumer benefits of transmission and why it delivers electric bill savings**
- 3) **Analysis of consumer savings from transmission plans underway or completed around the country**

<https://gridstrategiesllc.com/reports/>



**LARGE-SCALE  
TRANSMISSION  
DEPLOYMENT  
SAVES CONSUMERS  
MONEY**

**JUNE 2025**

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GridStrategies 

 Americans for a  
Clean Energy Grid

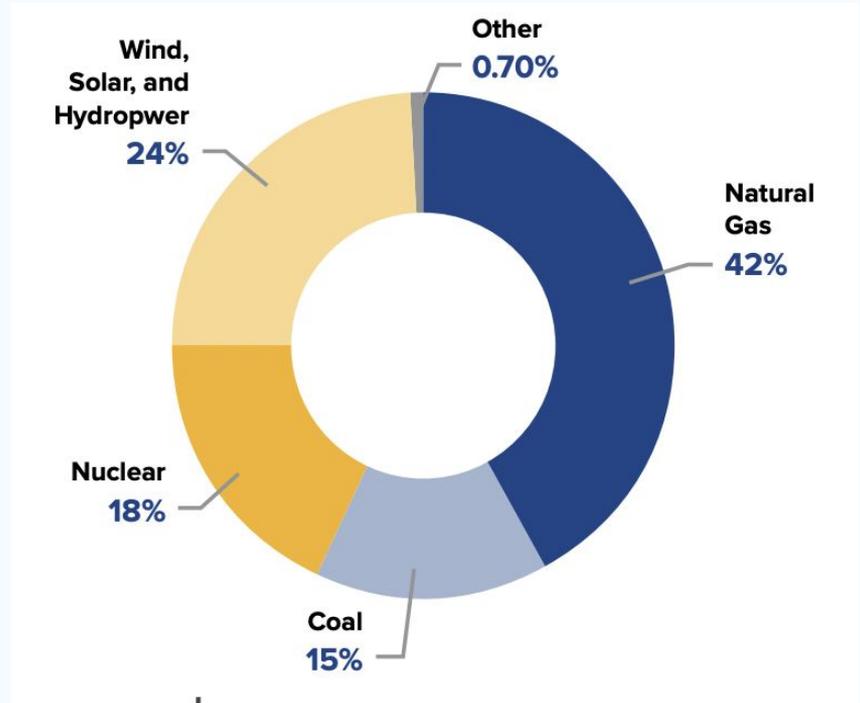
*This report was sponsored by Americans for a Clean Energy Grid (ACEG). ACEG is a non-profit broad-based public interest advocacy coalition focused on the need to expand, integrate, and modernize the North American high-capacity grid.*

# Transmission benefits all generation technologies as well as all consumers

Transmission is resource-agnostic and technology neutral. Once generators produce electricity, it is impossible to differentiate where the electricity originated, meaning the power grid supports the delivery of electricity from all types of generation.

Transmission enables the most economical and reliable generation at any moment to be delivered to consumers, providing system-wide benefits. These benefits accrue to all consumers regardless of the generation mix, making transmission a broadly beneficial public investment

2024 U.S. energy generation by resource type

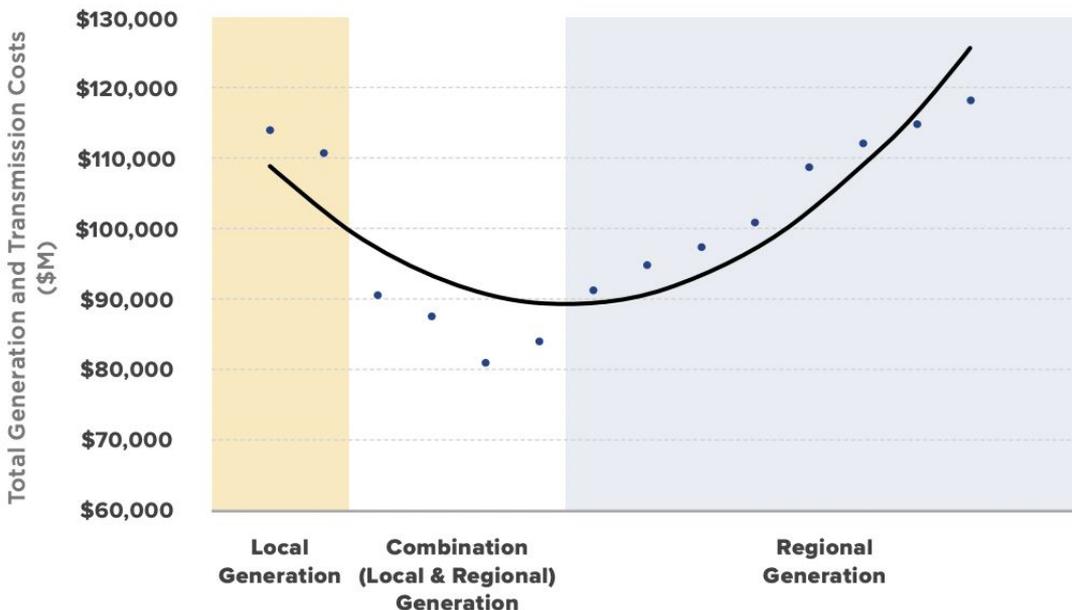


# Transmission costs may rise, but overall, bills will be lower due to access to lower cost generation

Transmission is currently only around 14% of residential electric bills. Generation comprises 60% of an average U.S. consumer's electric bill.

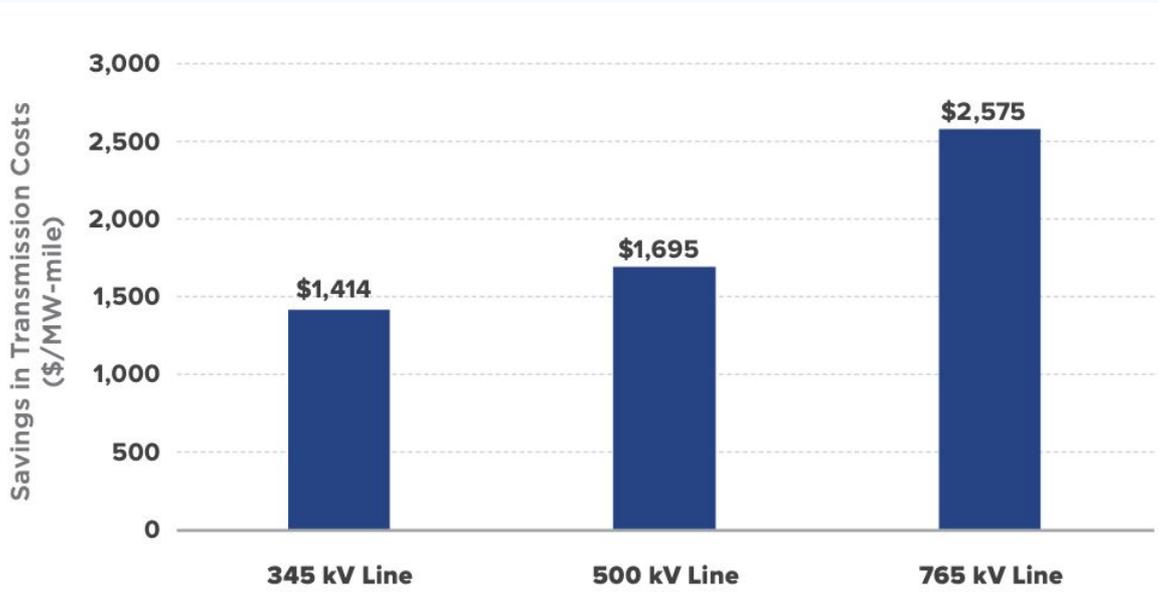
Building well-planned, high-capacity transmission lines, by optimizing transmission and generation, allows consumers to use cheaper sources of electricity and delivers the lowest overall system cost.

**Total system cost based on relative generation location (Source: MISO)**



# Economies of scale in high-capacity transmission drive 75% savings to consumers over the life of the investment

Savings (\$/MW-mi) compared to 230 kV transmission lines (Source: MISO)



ERCOT recently demonstrated the savings achieved by using 765 kV transmission lines compared to 345 kV:

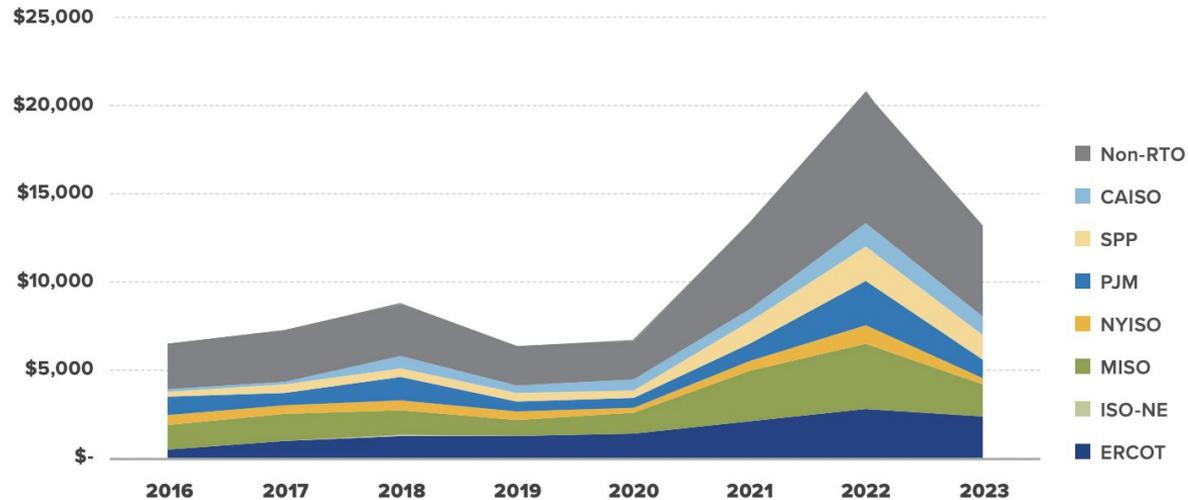
- ➔ \$229 million more in annual consumer energy cost savings
- ➔ \$28 million more in annual production cost savings
- ➔ \$890 million in reduced construction-related outage cost savings

# Congestion costs alone increased energy prices by an estimated \$11.5 billion in 2023

Limited transmission capacity restricts the flow of the lowest-cost electricity to consumers, resulting in higher electricity prices.

ISO-NE saw congestion costs fall from over \$700 million annually in 2005 and 2006 to \$100 million during the past decade once targeted transmission projects were deployed.

Estimated transmission congestion costs for the entire U.S. (\$ Millions)



# Transmission reduces the need for excess power plant capacity

Transmission ties allow utilities to diversify the timing of peak electricity demand and supply shortfalls among their footprints.

These ties decrease the need for excess power plant capacity, lowering overall system costs for consumers.

**Regional load as a percentage of maximum load (2014-2022)**

	ERCOT	SPP	MISO S	TVA	MISO N	PJM	NYISO	ISO-NE	Carolinas	SOCO	Florida
1/17/2014 7 AM ET	58%	60%	74%	86%	75%	100%	68%	64%	88%	87%	60%
1/17/2018 10 AM ET	60%	67%	100%	81%	61%	70%	61%	63%	56%	85%	61%
1/18/2018 6 AM ET	58%	50%	65%	76%	55%	66%	51%	55%	63%	100%	79%
2/15/2021 10 AM ET	100%	99%	83%	61%	69%	63%	56%	59%	58%	68%	55%
12/23/2022 6 PM ET	68%	87%	88%	99%	86%	85%	60%	56%	88%	91%	65%
12/24/2022 6 AM ET	63%	87%	87%	91%	77%	85%	49%	50%	100%	95%	66%

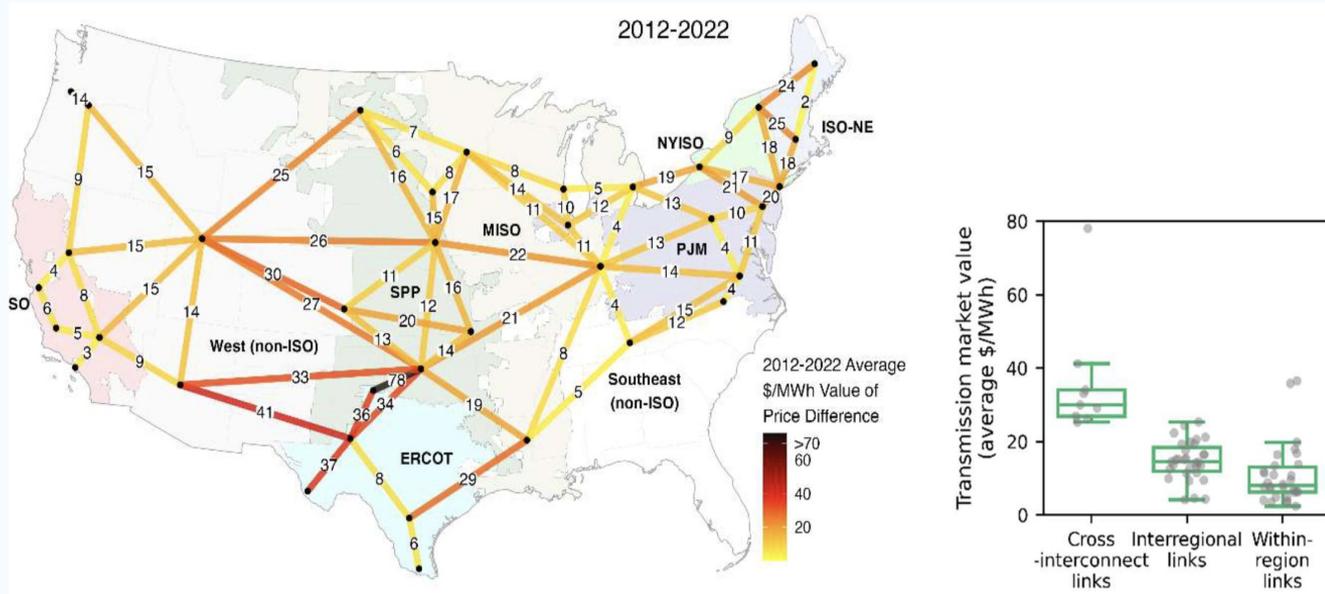
*The table illustrates each region's net load as a percentage of its peak net load over nine years. Regions with high percentages are under significant strain, while those with lower percentages typically have surplus capacity.*

# Half the value of transmission comes from a small number of hours

Transmission can prevent rate shock or widespread blackouts during rare but catastrophic weather events, providing particular value for vulnerable customers by powering needed heating and cooling resources and refrigeration for food and medication.

LBNL found that 50% of the value from a typical transmission line accrued in just 10% of hours.

**Average value of transmission in \$/MWh (2012-2022) (Source: LBNL)**

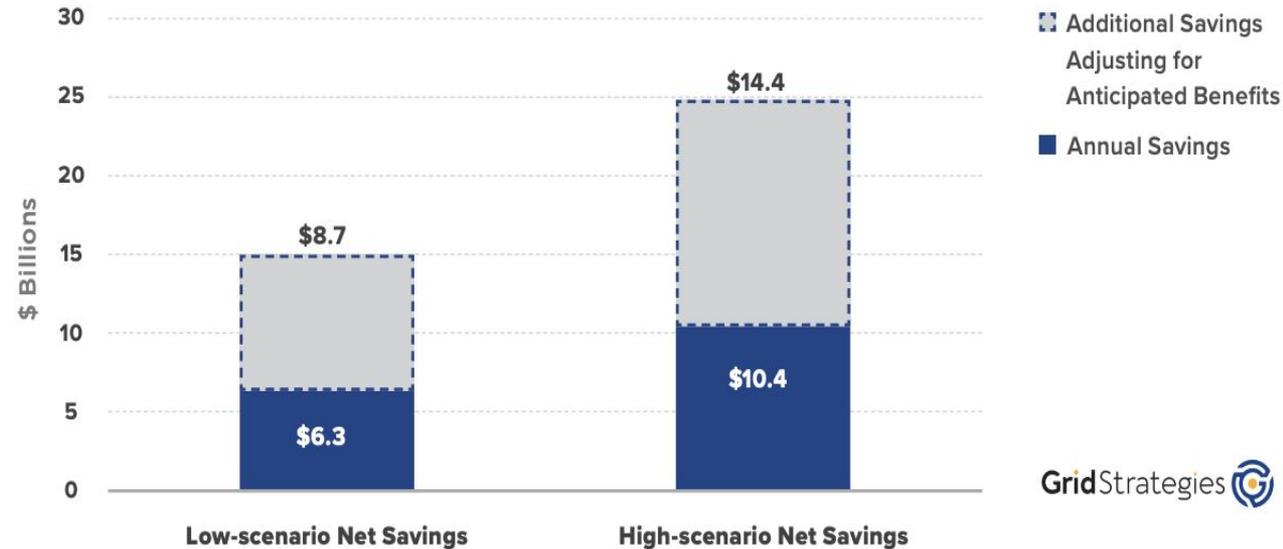


# Transmission expansion could save U.S. households **on net \$6.3-10.4 billion annually**

For every \$1 invested in transmission lines, consumers receive between **\$3.80 to \$4.70 in benefits.**

Initial analysis often underestimate benefits; ex-post assessments of consumer savings are often **20–40% higher than initially projected.**

### National residential electric bill savings from expanded transmission



# Per household, annual net savings are approximately \$44-\$73, and could rise as high as \$200 in savings

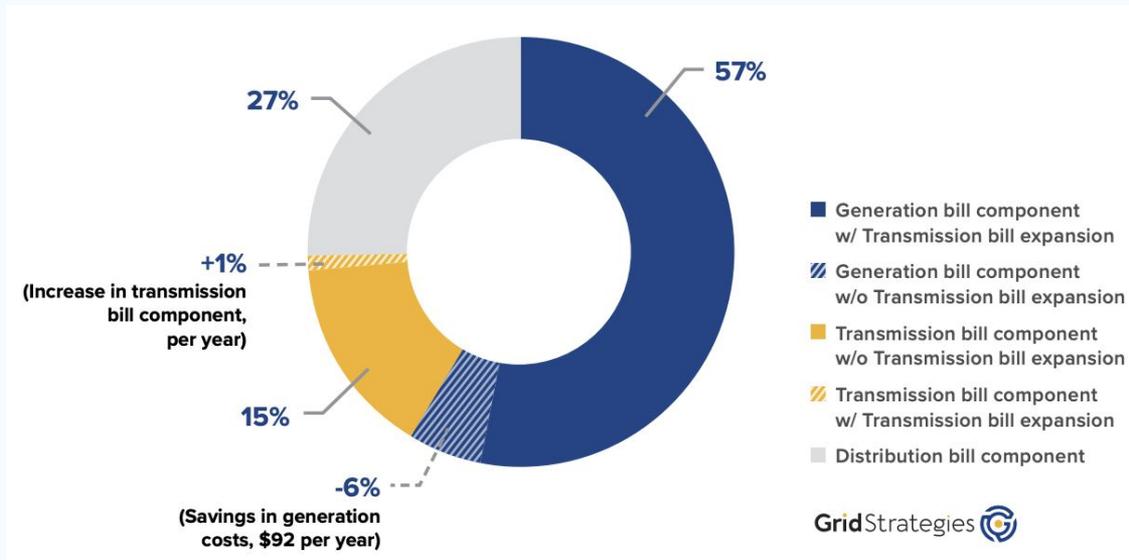
Generation is the largest portion of a household's electric bill, so while households may see the transmission component of their bill rise, the generation portion will decrease, providing overall savings on the total bill.

## High-capacity transmission investments:

Generation cost savings (6%) → \$92/year

Transmission cost Increases (2%) → \$19/year

## Components of an electric bill with and without well-planned transmission expansion



# Thank you!

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Founded in 2017, Grid Strategies works on policy to enable decarbonization and an affordable, reliable electricity system.

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**This report was prepared for Americans for a Clean Energy Grid.**

**The full report is available:**

**[https://gridstrategiesllc.com/wp-content/uploads/GS\\_Transmission-Deployment-Saves-Consumers-Money\\_vf.pdf](https://gridstrategiesllc.com/wp-content/uploads/GS_Transmission-Deployment-Saves-Consumers-Money_vf.pdf)**

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# Speaker

Abby Watson



**President**

The Groundwire Group

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# Make it Personal

Effective messaging for transmission investment  
and energy affordability

# The solution to energy affordability is **investment.**

How do we deliver this message when the subject is so complex,  
when we run the risk of sounding out of touch?

# Tell a Story

## Analogies work best

By relating a complex problem to a system or event more familiar to your audience, the listeners see themselves in the scenario and are better able to focus on the message.



Our old car was still going strong but starting to show its age. After years without a car payment, it was nice to keep one expense low while so many others have risen.



A big repair bill every year or two, better than a new car payment...



Disaster. We invested in new A/C, then needed new breaks at inspection time, before the final straw – the sunroof started leaking.

In the 3 years we've put off buying a new car, prices have gone way up, along with interest rates.

# Make it **Stick**

## Have you ever?

Have you ever put off making a big investment because you wanted to save money, only to end up spending more in the long run?

## It's a lot like

We don't think much about our power grid, but **it's a lot like** the state of our roads and bridges. We've put off major investments for years, and now it's in rough shape.

## Would you rather?

If we have to invest in replacing and upgrading our systems, **would you rather** invest in the latest technology, or double-down on old technology?



# Center the Exciting Solutions

**Our energy bills are already too high, we shouldn't be talking about big investments.**

It's the small, ineffective projects that get executed in a piecemeal fashion that are driving a lot of bill increases today. These big projects come with big numbers, but they're more cost-effective and get paid off over time. **Our grid can do amazing things with the latest technology, including save us money.**

**We shouldn't invest in power lines if we don't know the power generation will materialize.**

Energy projects that take more than one or two years to develop are exposed to all kinds of risks. We can make our best guesses now, knowing that if a transmission line gets built, it never goes unutilized. **Electricity drives the modern economy, and so does our entrepreneurial DNA.**

**Renewable energy resources are too expensive and getting them built takes too long.**

Building anything in this country is hard – ask any housing or commercial real estate developer. Other types of electricity production face the same challenges: inflation, interest rates, and supply chain shortages.

Renewable energy stabilizes prices once it's built, taking a lot of the volatility out of your energy bill. When you pair them with storage options they can even help get us through shortages, **just like how some people are using their EVs as emergency generators when the power goes out.**

# Messaging that Works



## **Tell a story**

Connect the issue to our shared human experiences.



## **Use analogies**

Draw comparisons to a situation anyone can relate to.



## **Make it exciting**

Paint a picture of the brighter future we can achieve.



# Get In Touch

[www.groundwiregroup.com](http://www.groundwiregroup.com)

**Abby L. Watson**

President

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**Email**

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# Q&A

**Thank you for joining!**

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

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