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ACT

The Alliance for Climate Transition

# Workforce Development

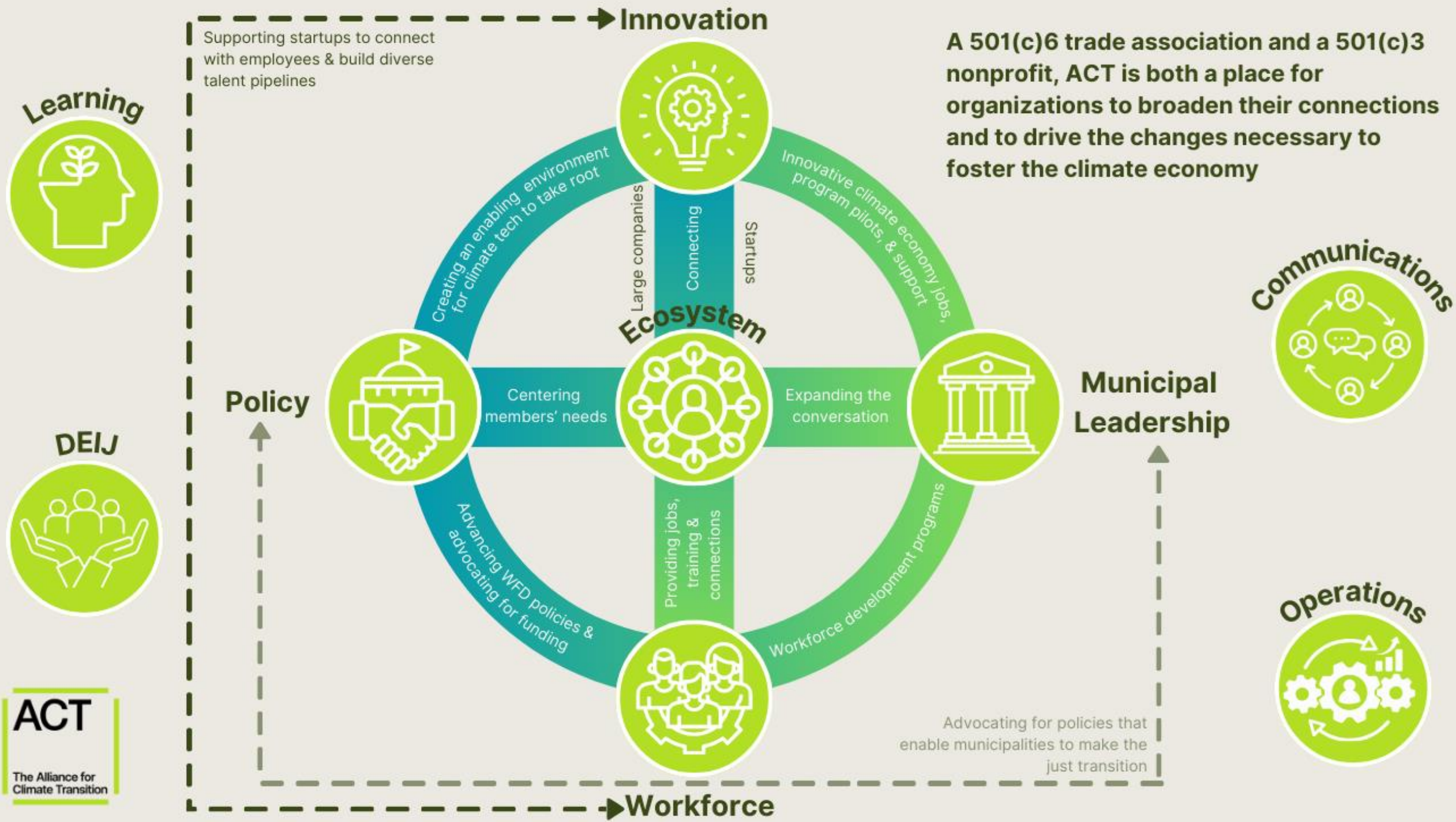
## At The Alliance for Climate Transition (ACT)

Workforce Development

Website URL

# About ACT

**A 501(c)6 trade association and a 501(c)3 nonprofit, ACT is both a place for organizations to broaden their connections and to drive the changes necessary to foster the climate economy**




ACT
The Alliance for Climate Transition

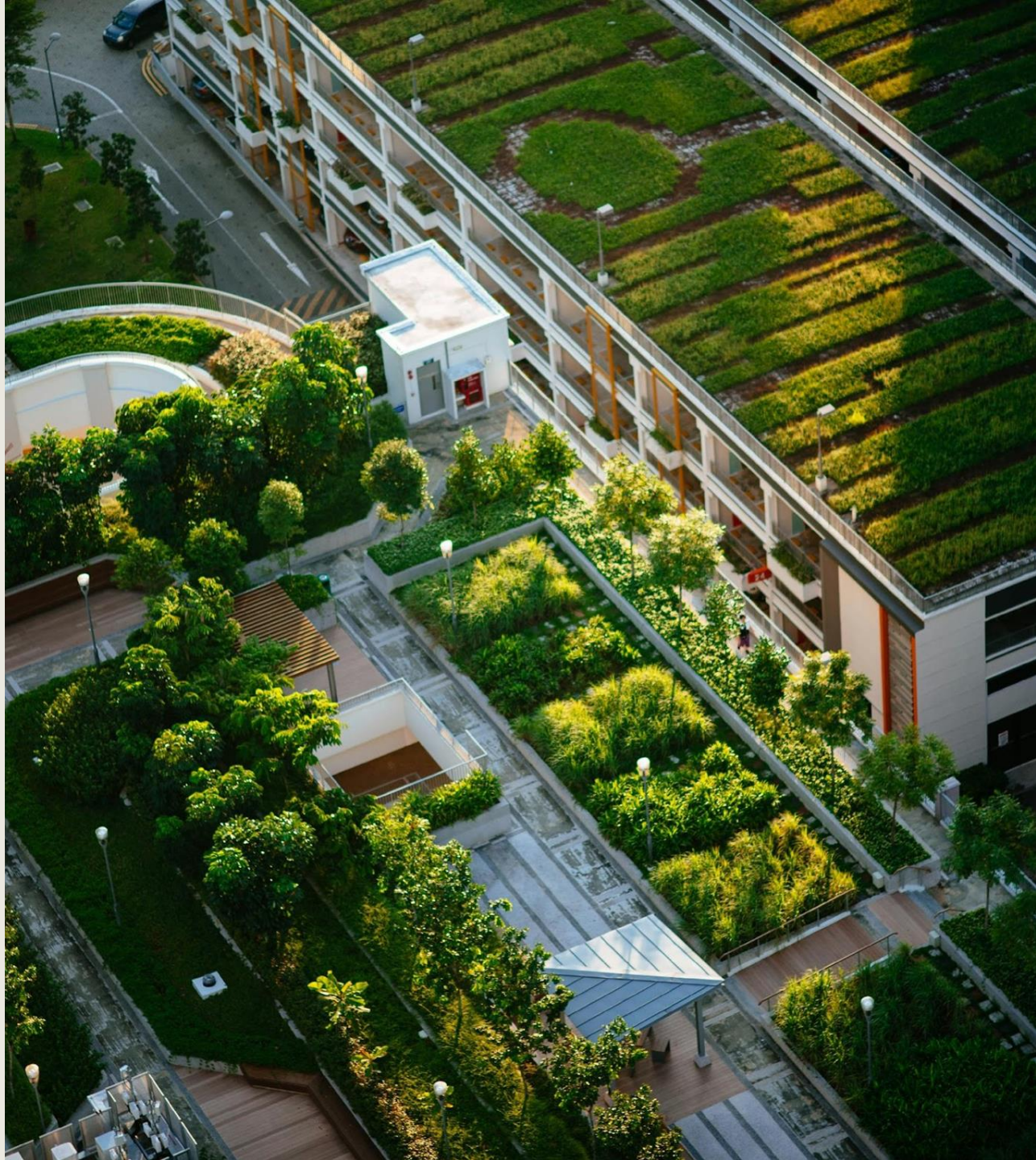
# Workforce Development at ACT

# Our Mission

**ACT creates and sustains a climate economy ecosystem, through a comprehensive network of service providers, employment and training services, and strategic partnerships with the region's employment, educational, economic development, and labor organizations to ensure it is responsive to the dynamic demands of businesses, job seekers, incumbent workers, and youth throughout the Northeast.**

# Objectives

- ➔ Prepare workforce with necessary skills
- ➔ Job-specific, soft, and life skills
- ➔ Meet current and anticipated labor needs
- ➔ Remove barriers to employment
- ➔ Expand labor force
- ➔ Support job retention and career advancement
- ➔ Connect workers and employers
- ➔ Build talent pipelines



# Challenges

- The Northeast is lacking long-term strategies to stabilize, retain, and grow the climate economy workforce
- Employer expansion is limited due to their inability to find qualified workers.
- Strong candidates view employment in the industry as requiring advanced degrees.
- Effective economic development strategies are needed in urban and rural areas alike: 2/3 of the nation’s private sector workforce are employed by small business.
- The system-level change we envision will require massive regional cooperation: State agencies need to align services,  program eligibility, funding, and basic terminology.
- Workforce development efforts must function at state and local levels simultaneously.

# Our Approach

- **Action Area 1:** Unite workforce development partners around regional cluster strategies.
- **Action Area 2:** Prepare workers for a career, not just their next job.
- **Action Area 3:** Connect job seekers with employers.
- **Action Area 4:** Ensure organizations have the capacity to embed DEIJ values into their operations.
- **Action Area 5:** Advocate for state workforce policies, legislation, and the creation of workforce board and councils.

# Building Pipelines


## Introduction

- Participatory design with our partner- and NECEC-recruited audience to ensure program resonance
- Strong partnerships that reach a majority minority population of learners
- Data driven assessment ensures pathway programs are a great match

## Exploration & Development

- Coaching ensures that job seekers are efficiently provided with career assistance
- Career maps help participants explore career options by understanding in-demand jobs, occupational requirements, trainings, and career pathways
- Personalized learning paths teach industry fundamentals, job specific training, and power skills based on individual needs

## Execution

- Placement support ensures each participant is placed in a job or development opportunity that fits within their career plan and provides opportunities for advancement
- Post-placement coaching and follow-up activities ensure retention and career advancement

# Thanks!

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The Alliance for Climate Transition

# REV 2024: Transition to the Future Grid Series Recap

Sarah Cullinan, Sr. Program Director, Net Zero Grid

MASSACHUSETTS CLEAN ENERGY CENTER®

October 2024

Image Credit: DOE

# MassCEC's Work Spans Four Main Areas of Climate Impact for MA

## Climatetech Innovation & Investment


**We help new climate-focused businesses grow faster** by backing a vibrant community of researchers, startups, and established industry players - creating an ecosystem where they connect and thrive.

## Accelerating Decarbonization

**We contribute to meeting our state's ambitious climate goals by tackling barriers to widespread use of clean energy and climate technology** in buildings, transportation, and the grid.

## Large Scale Deployment: Offshore Wind

**We're building a cutting-edge offshore wind industry, marshaling world-class ports** while addressing supply chain and workforce development challenges**.**

## Clean Energy & Climate Workforce Development

**We're growing a diverse and talented clean energy workforce** by supporting a dynamic network of community-based organizations, labor, training providers, schools and employers committed to a sustainable future for all.

# How MassCEC's NZG Team Works: Our Tools & What We Do

## HOW WE WORK:

**Bring private-sector, tech sector perspective**

**As a neutral entity, convene stakeholders around barriers**

**Evaluate, champion early-stage solutions**

**Collaborate on studies & pilots**

**Center equity in the grid transition**


## OUR WORK:

### ➤ Utility and Regulatory Innovation

- Gridtech Launch Pad
- Grid Collaboration Lab

### ➤ Diversifying Grid Infrastructure

- Enhancing Grid Resilience & Reliability
- Generation & Storage Solutions

# MA’s Electric Sector Modernization Plans (ESMPs)

**The Climate Law requires that the state's EDCs prepare ESMPs to proactively upgrade the distribution system and meet multiple objectives**

- Improve grid reliability, communications, and resiliency;
- Enable increased, timely adoption of renewable energy and DERs;
- Promote energy storage and electrification tech for decarbonization;
- Prepare for climate-driven impacts on T&D systems;
- Accommodate transportation, building electrification, and new loads;
- Minimize or mitigate impacts on ratepayers.

# MA Grid Modernization Advisory Council (GMAC)

## What does the GMAC do?

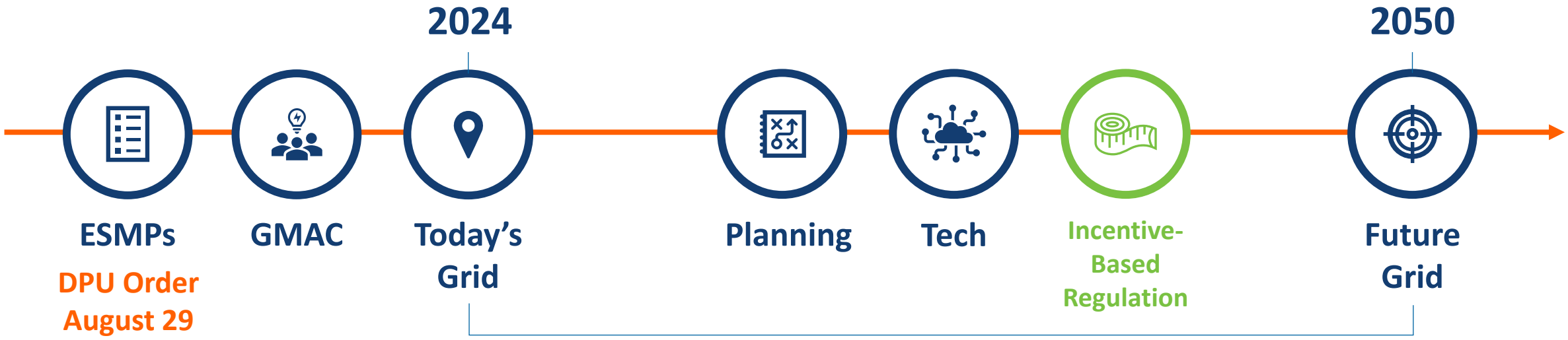
- GMAC reviews and provides recommendations to the EDCs on the ESMPs.
- It is an integral part of **increasing transparency and stakeholder engagement** in the grid planning process.

## Who is on the GMAC?

- GMAC members, 15 voting and 2 non-voting (electric utility representatives), represent a wide array of organizations and interests.
- Members are appointed by the Governor and serve five-year terms.
- The Commissioner of the DOER chairs the GMAC, which is supported by DOER staff.

# Getting to the Future Grid: Recap

**The future grid needs to be efficient, flexible, and democratized.**




**The only way to solve for these challenges is with new levels of collaboration and innovation.**

# Transition to the Future Grid Event Series

## The Challenge

The grid transition ahead is **uncharted**

Navigating the transition requires

- **new ways of thinking**
- **new processes**
- **new relationships**

## The Objective

Develop strategies that lean into

- **Collaboration**
- **Innovation**

to help make the transition to a future grid **more efficient and effective**

## Events

**March**: Brainstorming on the major transition challenges, as stakeholders experience them

**May**: Knowledge-building and small group, solutions-based conversations

**September**: Presentation of stakeholder recommendations + debrief on DPU ESMP Order

# Transition to the Future Grid Event Series Summary

## Incentive-Based Regulation

**Tools & Best Practices** (Cara Goldenberg, RMI)

**History and Current Practice in MA** (Sarah Cullinan, MassCEC)

**Discussion focus**: Goals & desired outcomes from our grid, ideating around PIMs

## Fostering the Adoption of Gridtech

**DOE Innovative Grid Deployment Liftoff Report** (Ariel Horowitz, GDO)

**CT Innovative Energy Solutions Program as Model** (Josh Ryor, MA EEA)

**Gridtech Spotlight Series**

**Discussion focus**: gridtech applications and “sandbox” model for MA

## Democratizing Grid Planning

**New Approach to Fleet Load Planning** (Collette Lamontagne, National Grid)

**Change Management** (Alison Magoon, MassCEC)

**Discussion focus**: information flow from grid users to planners, stakeholder mapping exercise

# Transition to the Future Grid: Recommendations

**Incentive-Based Regulation**

- Event Series Takeaways
- ESMP Order Context

**Recommendations**

Rec. 1: Metrics Working Group

Rec. 2: Peak demand management targets

**Fostering the Adoption of Gridtech**

- Event Series Takeaways
- ESMP Order Context

**Recommendations**

Rec. 3: Develop sandbox program

Rec. 4: Develop gridtech look-book

**Democratizing Grid Planning**

- Event Series Takeaways
- ESMP Order Context

**Recommendations**

Rec. 5: Define critical engagement gaps

Rec. 6: Change management skills-building

CLIMATEWORK MAINE

# REV2024 Conference

## OCTOBER 16, 2024

**Jeff Marks**

Executive Director, ClimateWork Maine

# MAINE'S ECONOMY & CLIMATE CHANGE

ClimateWork Maine (CWM) is a support network of businesses to help businesses:

- Take action on climate change
- Meet its challenges and
- Seize the opportunities it presents to build a more sustainable economy for the future.

Our purpose is to:

- Provide services and networking to educate, connect, champion, and promote Maine companies with products, services, or projects related to climate solutions, and
- Support and assist companies that want to do more on climate change and related work.
- Address conflicts at the intersection of climate, energy, and the economy.

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It's Everyone's Business!

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# It's Everyone's Business!

Attorneys
Chambers of Commerce
Consultants

Medical & Healthcare

Renewable Energy

Architecture & Design
Construction & Builders
Contractors
Engineers
Manufacturing

Marine Resources,
Fisheries, & Aquaculture

Economic Development
Financial Institutions
Professional Services

Artists
Media & Broadcasting

Farming & Agriculture
Forest Products

Entrepreneurial & Startups
Insurance

Breweries
Grocery & Food
Production

Laboratories &
Research

Hospitality (Lodging)
Tourism

# Maine Energy Plan – 100% Clean Electricity by 2040

## 1. Renewable Energy

- Offshore Wind
- Renewable Portfolio Standard
- Solar
- Storage

## 2. Energy Efficiency

- Building Codes
- Heat Pumps
- Weatherization

## 3. Clean Transportation

- EV Incentives
- Infrastructure
- Solar
- Storage

## 4. Clean Economy

- Economic Development
- Innovation
- Workforce

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# Desired Outcomes of Grid Modernization

| | |
|---|---|
| Reduction in greenhouse gas emissions 45 percent by 2030 and 80 percent by 2050 | Regional electricity market integration that harnesses innovation and emerging technologies |
| Increased renewable resources to account for 100 percent of electric sales by 2040 | Enhanced focus on consumer needs related to climate requirements, safety, reliability, resiliency, and other quantifiable benefits |
| Accelerated deployment of electrified transportation and buildings, distributed generation, load flexibility, and renewable electricity supply resources, including grid-scale wind and solar | Siting of distributed and grid-scale renewables and storage where they bring the greatest benefits to the grid and least adverse impacts to Maine's natural resources |

# 5. Grid Planning, Transmission, & Modernization

## Maine PUC – Integrated Grid Planning Stakeholder Process

- Reliability and resilience improvements
- Improve data quality and integrity to maximize its use in distribution system planning
- Promote flexible management of consumers' resources and energy consumption

## Northeast States Collaborative on Interregional Transmission

Improved regional planning of electricity transmission to create a stronger, more reliable, and more efficient grid and accelerate the clean energy transition. 10 states, 3 grid operators.

## Federal-State Modern Grid Deployment Initiative

Bring together states, federal agencies, and power sector stakeholders to help drive grid adaptation quickly and cost-effectively to meet the challenges and opportunities that the power sector faces in the twenty-first century.

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# Maine Utility Regulatory Reform & Decarb Initiative

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- Strategic Grid Planning Process
- Expand PUC Decision-Making Framework

Endorse regional planning vision

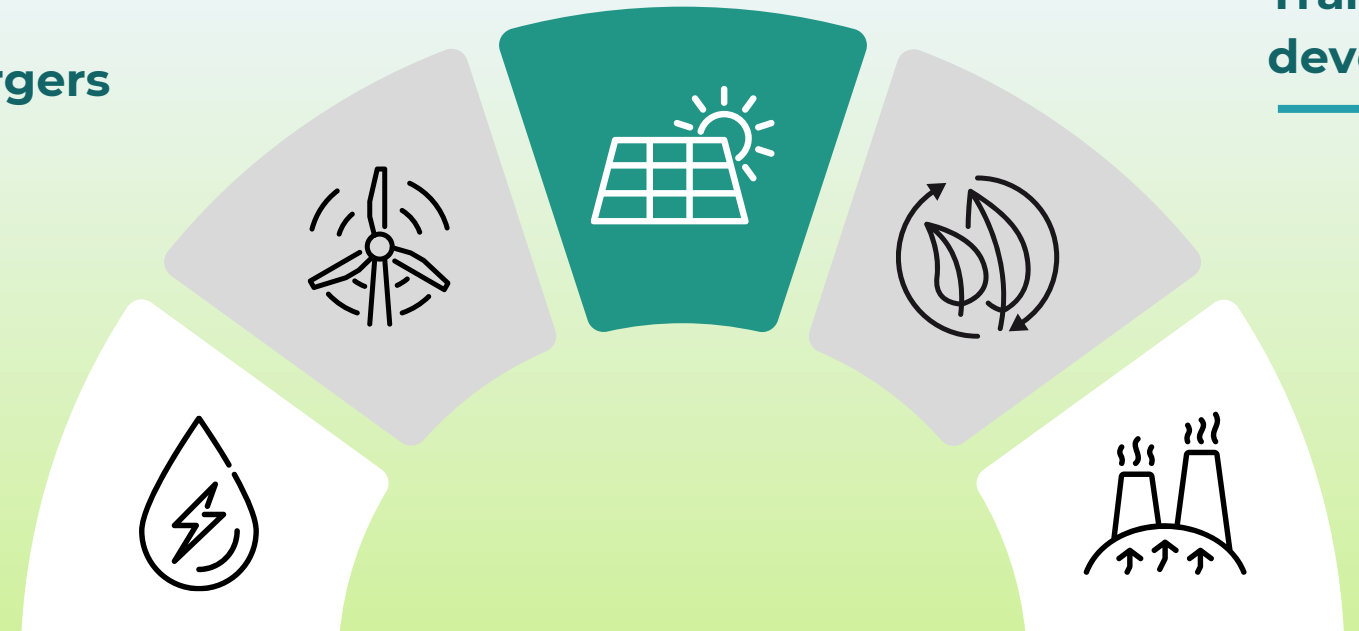
Transmission sited to minimize enviro impacts

Transparent info to developers & customers

Advance EV fast chargers

Dynamic grid & rate design

Pilot projects @ distribution level



# Integrated Grid Planning – Maine PUC

**Priority: Reliability and resilience improvements:**

- Make investments that cost-effectively maintain or improve reliability;
- Reduce barriers to promote cost-effective NWA solutions and identify any process improvements & efficiencies;
- Build climate adaptation into the investment solution mix.

**Priority: Improve data quality and integrity to maximize its use in distribution system planning:**

- Leverage investments in Advanced Metering Infrastructure (AMI);
- Improve mapping of the distribution system and develop a governance policy or protocols for maintaining the integrity of the data on an ongoing basis;
- Develop initial roadmap for advancing time-series planning1 models;
- Enhance hosting capacity maps to benefit stakeholder decision making by standardizing them across utilities.

**Priority: Promote flexible management of consumers' resources and energy consumption:**

- Improve forecasting electric vehicle (EV) load, distributed energy resources (DER) adoption, and climate parameters;
- Support integration and utilization of DERs to enable load flexibility and resilience;
- Technologies or programs to shift load from system peak to reduce Maine's share of the Regional Network Service (RNS) charge.

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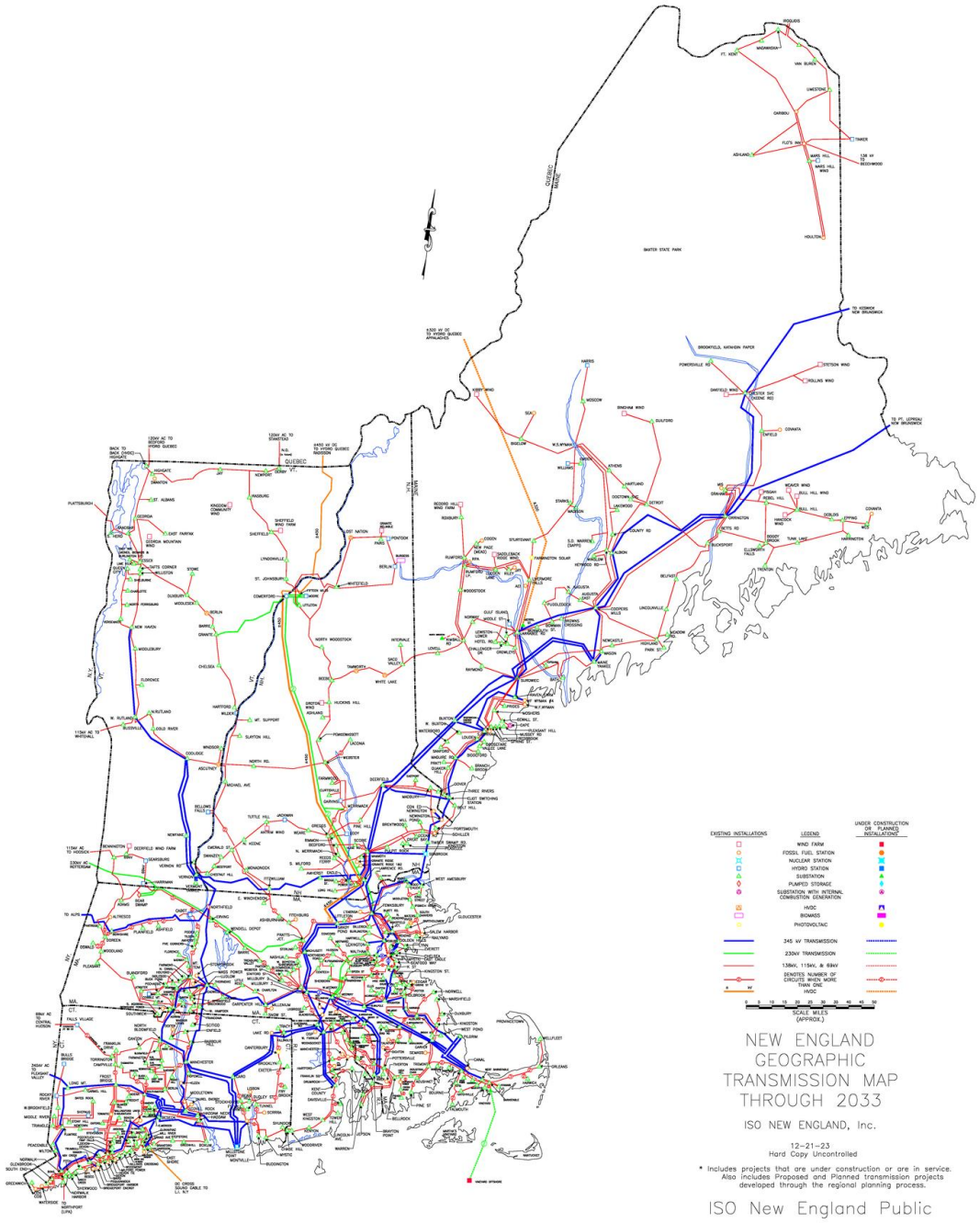
# PUC Reform

- Reduce cost of energy
- Ensure reliability
- Guarantee profit to utilities
- Consider equity & environmental justice
- Consider GHG emission reductions & climate

# New England Geographic Transmission Map through 2033

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# PROJECTS

NECEC

Aroostook Renewable Project

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# NEW ENGLAND CLEAN ENERGY CONNECT

**Timeline:**
- Construction began: January 2021
- Projected completion: Late 2025
- Construction is approximately: 25% complete

**Project:** A 233 km high-voltage line that will transmit renewable energy from Quebec, Canada to Maine, USA, and the New England grid. The project will reduce carbon emissions by 3.1 million tons annually.

**Delays:**
- Political: A Maine citizen's initiative on state ballots in November 2021
- Legal: Rulings in favor of project issued 2023.
- Regulatory: Permitting, DEP suspension, ongoing discussions on cost adjustments
- An agreement to extend the timeline under power contracts

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# Aroostook Renewable Project

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- 2021: Maine Legislature tasked the PUC with soliciting bids for both power generation and transmission for the project.
- LS Power awarded the transmission portion.
- Longroad Energy's King Pine Wind selected to generate the power with wind turbines. Touted as the largest land-based wind project east of the Mississippi River.
- Cost and transmission route issues plagued LS Power's bid, despite efforts by the company to meet with the public in a series of information gathering sessions along the proposed route.
- December 2023: PUC killed the project.
- October 2024: DOE  selected Avangrid for a $425 million capacity contract. It is one of the largest federal investments in energy development in Maine.

# FINDING COMMON GROUND

## How can we move forward more quickly and minimize delays, referendums, and lawsuits?

Joe Purington
President & CEO
Central Maine Power

Patrick Woodcock
President
Maine State
Chamber of Commerce .

Celina Cunningham
Deputy Director
Maine Governor's
Energy Office

Jack Shapiro
Clean Energy &
Climate Director
Natural Resources
Council of Maine

CLIMATEWORK MAINE

SUMMIT
ON MAINE'S ECONOMY
& CLIMATE CHANGE

Rolf Nordstrom
President & CEO
Great Plains Institute

**MODERATOR**

# Finding Common Ground

- How do you see the increasing use of AI impacting the current grid in Maine?
- Why hasn't Maine provided more State incentives to support on-site renewables?
- Is CMP considering a residential battery storage program similar to the one in VT?
- Do you feel the current level of collaboration and planning of infrastructure to support electrical consumption/supply are adequate?
- How is the lack of EV charging stations being addressed in Maine?
- Can you speak to renewable energy siting decisions and the relationship between balanced siting and minimizing delay and the potential for lawsuits?
- Has Maine leveraged the knowledge of EU countries like Norway in planning the needed expansion of key infrastructure to support electrical expansion?
- What impacts do federal actions on grid expansion have on Maine?
- Misinformation is a challenge to progress on many clean energy solutions. What can we do to reduce misinformation and allow the truth about the climate urgency and most effective solutions to spread?
- Having seats at the table and not making assumptions are key to inclusion. What are some concrete ways that these organizations are doing that?
- What are the most important resilience-based actions Maine should take to address the increasing storm frequency and intensity?
- In the Downeast region, frequent and long power outages are a significant impediment to acceptance of e-tech solutions. What needs to happen to improve the reliability of the system to make electrification a realistic option for rural Mainers?
- How do we keep the cost of upgrading the grid of tomorrow off the shoulders of ratepayers?
- Until we involve the fossil fuel suppliers, the fuel dealers, the building association, the realtor association, among others, what is in it for them?
- How can the energy transition support low-income Mainers and those with no income or homes to even heat?
- How do we overcome the constant NIMBY-ism that arises to oppose, slow down, or defeat the infrastructure you all agree is necessary?
- The referendum showed that many Mainers don’t trust CMP. What message do you want them to hear about how their concerns and needs are being addressed while we build the grid of tomorrow?
- Is reconductoring being fully incorporated into CMP's grid planning and cost models?
- How much of an impediment is it to accommodate the shareholder capitalism model of energy companies like CMP with stakeholder models of energy transmission and distribution?
- Can electrical transmission be buried?
- It is my understanding that financial incentives for utilities are misaligned with the most effective progress on climate.
- How much backlog connecting solar exists and what can be done about getting these resources substituting for fossil fuel?

# BUILDING THE GRID WE NEED

Is it possible to expand and modernize the electricity grid and electrify everything beyond a snail's pace?

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SUMMIT

ON MAINE'S ECONOMY & CLIMATE CHANGE

Eliza Donoghue
Executive Director
Maine Renewable Energy Association

John Flynn
President
Versant Power

Carolyn Gilbert
Commissioner
Maine Public Utilities Commission

Tom Welch
Former Chair
Maine Public Utilities Commission

Henry Clauson
Northeast US Regional Director, Ramboll

**MODERATOR**

# Building the Grid We Need

- What are we waiting for?
- What are the primary obstacles?
- How can we help Mainers understand that transmission lines are necessary to decarbonize the grid?
- Should the state select and own public transmission corridors?
- Should the state require host community benefits for transmission lines?
- Where are we in the grid infrastructure planning process?
- What is the realistic optimistic view of the grid in 2030, 2040, and 2050?
- Who should be the leadership organization for modernizing the grid?
- Are some RECs better than others?
- Is there a good, better, best option for being powered by renewables for companies?
- Are microgrids part of the picture?
- Would underground utilities be less susceptible to storms?
- How will the grid manage intermittency and maintain reliable power delivery?
- Does grid planning incorporate more distributed generation?
- Why has the beginning of the renewable energy transition resulted in large costs to utilities?
- Should battery storage be considered a grid asset and owned by utilities?
- Should Maine be part of Maritime Canada's Atlantic Loop project?
- How do we get buy-in to land offshore wind cabling?
- Why does nobody talk about wireless transmission?
- What can be done at the local level to make the grid more resilient?
- What controls are in place for managing the financial benefits of infrastructure investments?
- How can we get Mainers on board with transmission line development? How do we overcome the NIMBY mindset?
- Should the financial benefits of infrastructure investments go to Mainers and Maine businesses?
- How can we realistically expect to decrease our peak load given climate migration?
- What are the timelines for expanding access to community resources for EV charging?
- How do we ensure companies are prepared to maintain increased demand with electric vehicles and heat pumps?
- How can we help Mainers understand the value of additional business and resilience in grid investments?

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# Powering Future Engagement

### Engage

Engage businesses, communities, and policymakers on climate change and solutions

### Strengthen

Strengthen partnerships within Maine's business, innovation, and entrepreneurial ecosystem for the economic, energy, and environmental security benefit of the State

### Support

Support the growth and deployment of companies, products, and solutions devoted to climate and sustainability solutions.

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# CLIMATEWORK MAINE

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**CLIMATEWORKMAINE.ORG**

**Jeff Marks**
**Executive Director**
**(207) 956-1264**
**jeff@climateworkmaine.org**

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