

Maine Climate Council

Buildings, Infrastructure & Housing Working Group

Co-Chairs:

Kathleen Meil, Maine Conservation Voters

Michael Stoddard, Efficiency Maine Trust



GOVERNOR'S OFFICE OF
Policy Innovation
and the Future



MAINE DEPARTMENT OF
Environmental Protection



November 14, 2023

Meeting Goals

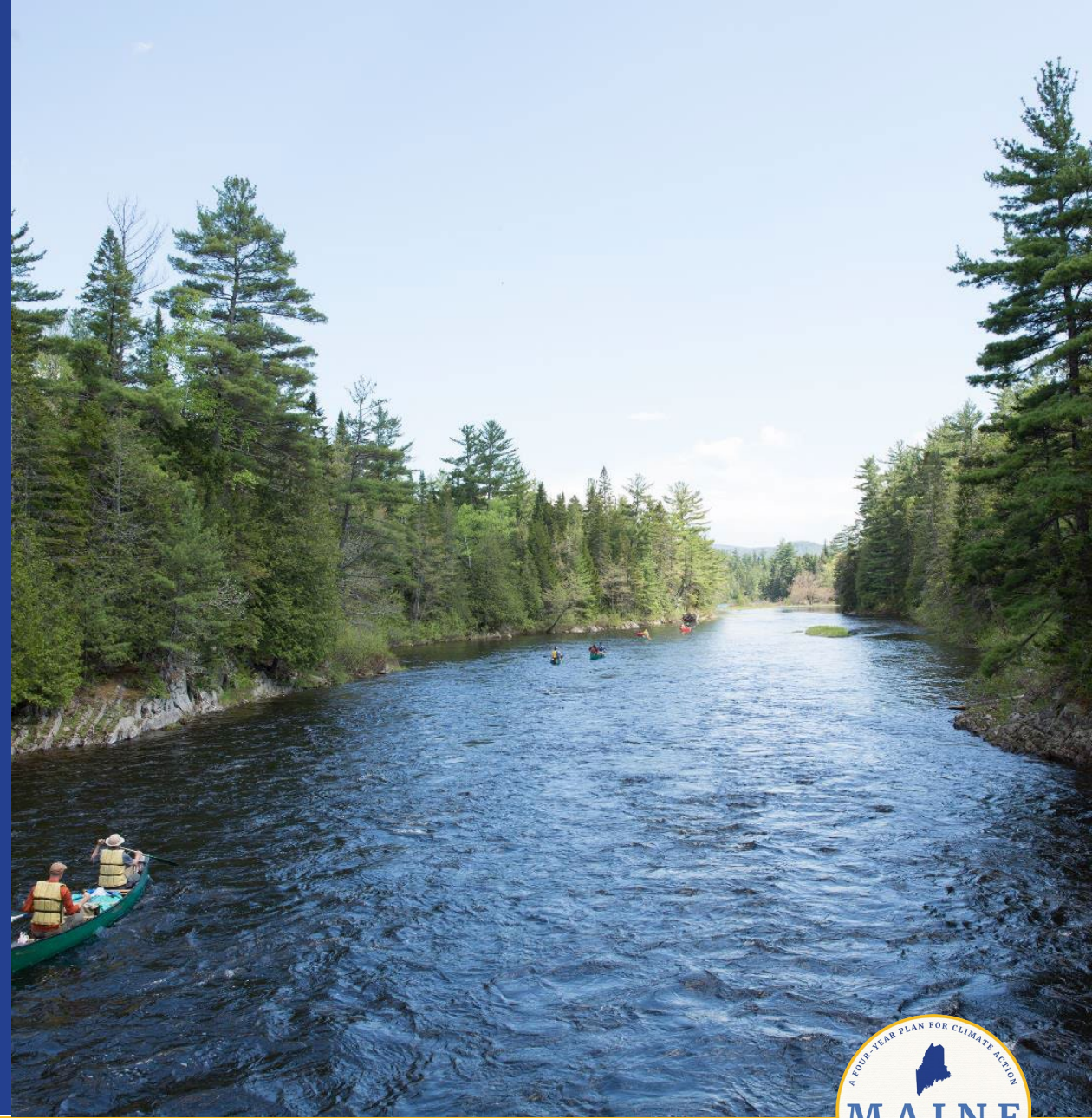
- Build a shared understanding of:
 - The Working Group's task
 - The relevant strategies in *Maine Won't Wait* and progress towards achieving them
 - Recommendations from the Equity Subcommittee

Meeting Agenda

1. Welcome and get to know one another
2. Setting the Scene - Overall Maine Climate Council Update Process
3. Taking Stock - Buildings strategies to date
4. Next Steps



Welcome & Introductions



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Buildings, Infrastructure & Housing Working Group Meeting



Maine Climate Council Process

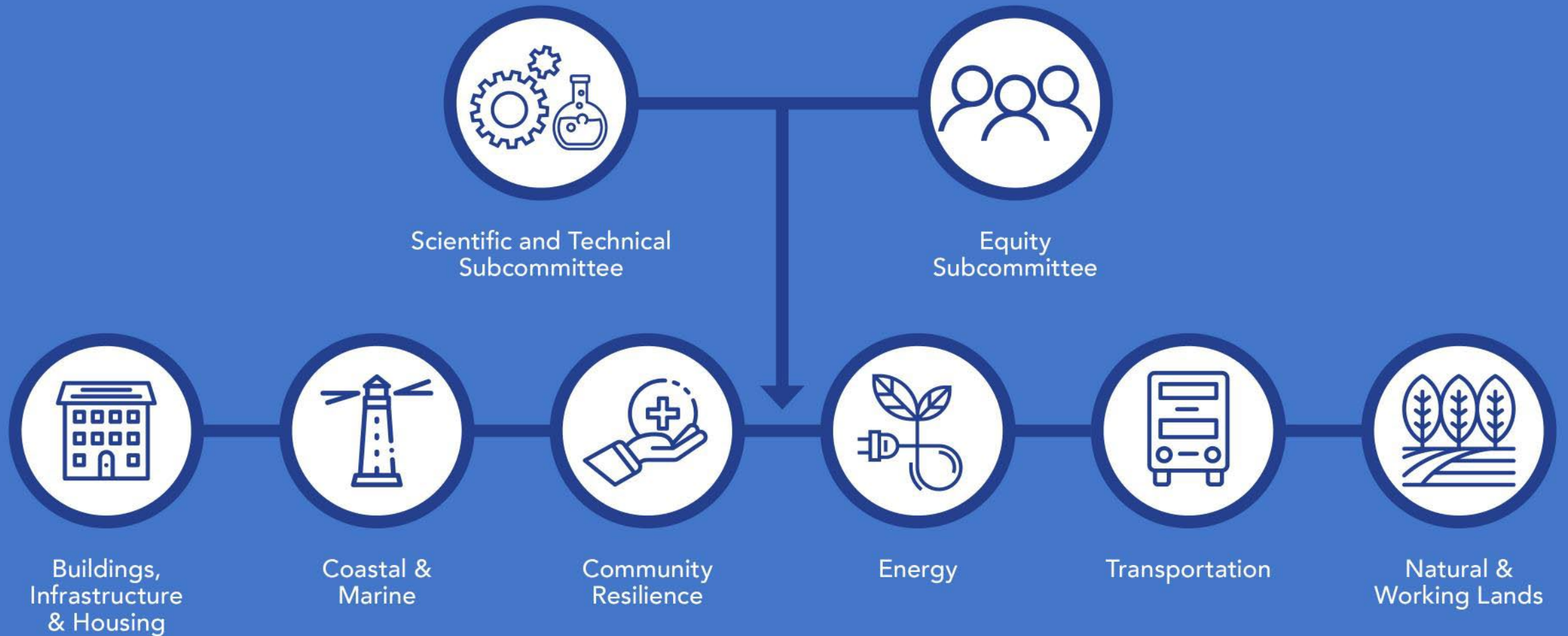


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Maine Climate Council



CLIMATE COUNCIL GOALS



12.01.24

Updated Climate
Action Plan Due



Achieve State
Carbon Neutrality by

2045

Reduce Maine's Greenhouse Gas Emissions
by Targets Outlined in State Law

45%

BELOW 1990
LEVELS BY 2030

80%

BELOW 1990
LEVELS BY 2050



ENSURE MAINE PEOPLE, INDUSTRIES, AND COMMUNITIES ARE
RESILIENT TO THE IMPACTS OF CLIMATE CHANGE.

2024 Plan Timeline



DEC 1, 2020

Maine Won't Wait Climate
Action Plan Delivered to
Legislature



MAY 2023

Governor Announces
New and Returning
Appointments to
Climate Council



SEPT 2023 - JUNE 2024

Working Groups &
Subcommittees Meet to Update
Mitigation and Adaptation
Strategies



SEPT 2024

Climate Council
Meets to Consider and
Adopt Strategies



DEC 1, 2024

Updated Climate
Action Plan Delivered
to Legislature

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The Working Group Process

1. **Taking Stock** of progress to date, existing *Maine Won't Wait* strategies, and equity recommendations
2. **Prioritizing** Working Group (WG) effort—where will the WG spend its time?
3. **Updating Strategies** using guided templates for discussion
4. **Reporting** back to the Climate Council a list of updated strategies using similar language and detail to *Maine Won't Wait*



The *new, additional* charges of Working Groups

1. Consult with priority populations to make equitable recommendations
2. Review and consider **equity monitoring metrics** to track progress towards equity outcomes
3. Establish numeric goals and targets for priority **equity outcome metrics**

Taking Stock - Buildings, Infrastructure & Housing Strategies to Date



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21%

Residential

12%

Commercial

12%

Industrial

Maine can reduce greenhouse gas emissions by using cleaner energy, increasing energy efficiency, and utilizing lower-carbon building materials

Data source: Maine Won't Wait

Residential, commercial and industrial emissions account for 45% of all carbon dioxide emissions in Maine

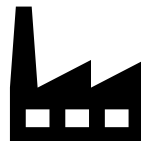
Data source: Maine Department of Environmental Protection 9th Biennial Greenhouse Gas Emissions Report



Lower-carbon building materials



Energy efficiency

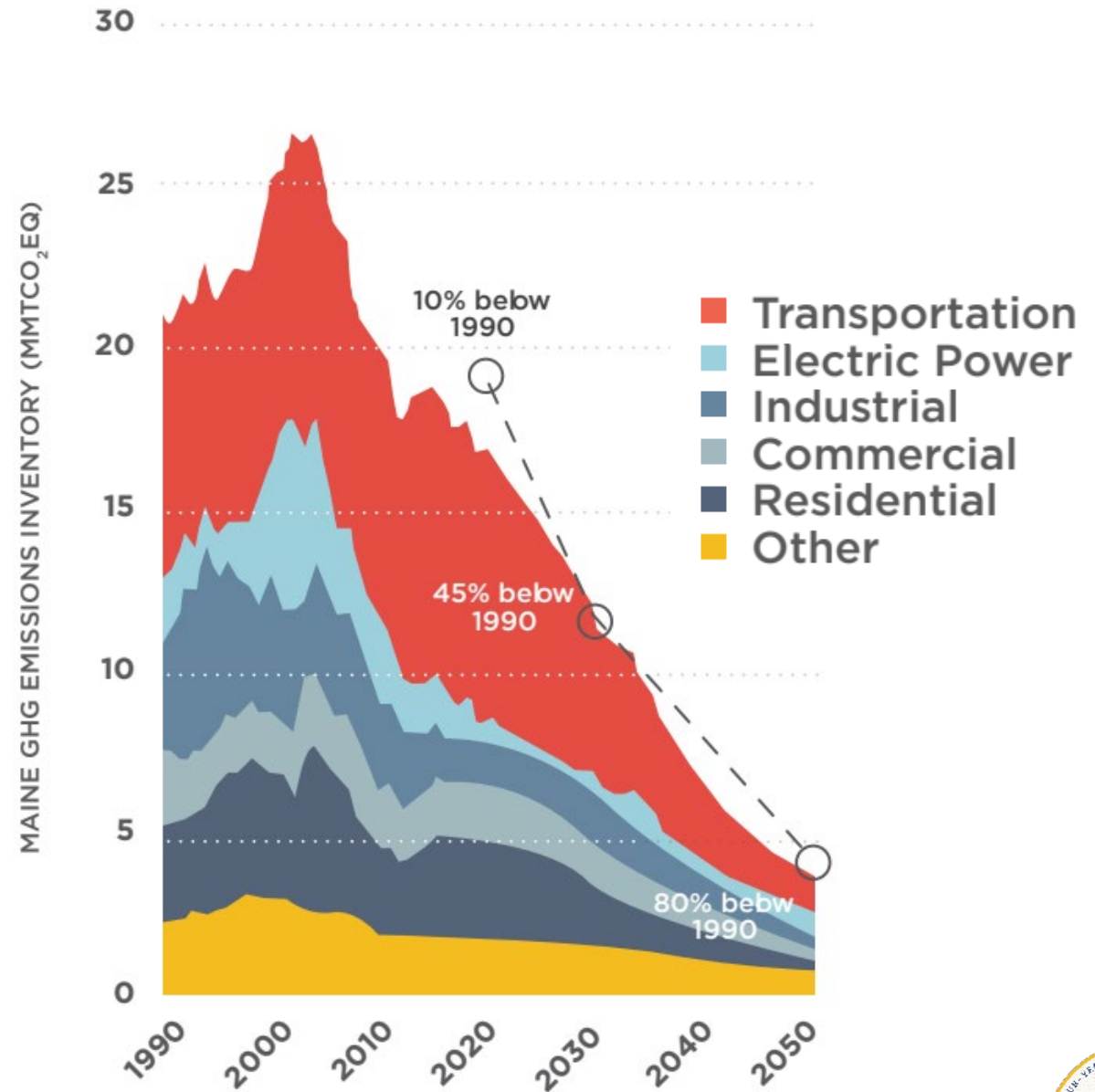


Cleaner energy



Pathways to meeting Maine's emissions targets

Maine Emissions by Source, 1990-2050 Modeling



Source: Synapse Energy Economics.

Challenges to heating Maine's homes



Nearly 60%

of Maine households use fuel oil as their primary energy source for home heating, more than any other state

Data source: Maine Won't Wait

Thousands

of Mainers rely on kerosene—a product with a very limited market and small supply

Data source: Maine Won't Wait

Maine has some of the oldest housing stock in the country

with 23% of homes being built before 1940

Data source: Maine Won't Wait

Most of the buildings-related recommendations in *Maine Won't Wait* are part of Strategy B: “Modernize Maine’s Buildings,”

with one additional recommendation in Strategy C: “Reduce Carbon Emissions in Maine’s Energy and Industrial Sectors through Clean-Energy Innovation”

Strategy B

Recommendation #1: Transition to Cleaner Heating and Cooling Systems, Efficient Appliances

Progress to date

- Over 100,000 new heat pumps installed through existing Efficiency Maine and MaineHousing programs and new goal of 175,000 heat pumps by 2027
- LD 1724, The Beneficial Electrification Policy Act
- Efficiency Maine Green Bank launched Maine's Commercial Property Assessed Clean Energy (C-PACE) program in spring 2023
- \$71 million expected to come to Maine from US Department of Energy for home energy rebates through the Inflation Reduction Act (IRA)
- IRA increased and expanded Energy Improvement Tax Credits for both homes (Sec. 25C) and commercial (Sec. 179D) buildings for energy efficient heating systems

Strategy B

Recommendation #2: Accelerate Efficiency Improvements to Existing Buildings

Progress to date

- Over 12,000 homes weatherized through MaineHousing and Efficiency Maine programs since 2019, including over 3,000 low-income homes
- Expanded low and moderate income weatherization program at Efficiency Maine, funded by \$25 million from Maine Jobs & Recovery Plan (MJRP)
- New weatherization incentives for multifamily buildings with 3+ units through Efficiency Maine
- \$31 million from Bipartisan Infrastructure Law (BIL) to expand MaineHousing low-income weatherization program



Strategy B - Equity Recommendation

Goal #1: Increase weatherization, home retrofits, and heat pump installation for low-income households, renters, and in rural communities

Monitoring Metrics:

- Housing assessment study among low-income households, renters, multifamily homes, older and health-vulnerable people, and priority communities
- Low-income energy efficiency spending v low-income population

Equity Outcome Metric:

- Weatherization, energy efficiency projects, and heat pumps (# and %) in low-income households
- # and % of weatherization projects among energy bill assistance recipients

Strategy B - Equity Recommendation

Goal #2: Increase enrollment in energy bill assistance among income-eligible households

Monitoring Metrics:

- # and % of income-qualified households enrolled in energy bill assistance
- Gap between eligibility and enrollment in energy assistance (# and characteristics of non-enrolled eligible households)

Equity Outcome Metric:

- Energy cost burden (% of income) among households eligible for fuel assistance

Strategy B

Recommendation #3: Advance the Design and Construction of New Buildings

Progress to date

- Maine Technical Building Codes and Standards Board is adopting the 2021 International Energy Conservation Code (IECC) and American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 90.1-2019 standard
- MaineHousing adopted 2021 IECC for new construction and is required by law to achieve passive house standard equivalency in all new construction by 2024
- Building code trainings for contractors, code-enforcement officers and building officials through the Office of the State Fire Marshall, Efficiency Maine and passivhausMAINE

Strategy B

Recommendation #4: Advance the Design and Promote Climate-Friendly Building Products

Progress to date

- **Forestry Recovery Initiative** funded by MJRP - \$20 million to support forest products industry businesses impacted by the pandemic

Strategy B - Equity Recommendation

Goal #3: Incorporate clean energy and energy efficient building practices and equipment in affordable housing and housing in rural and disadvantaged communities

Monitoring Metrics:

- Number, location, and attendees in state Building Codes training (including county/region, town size, and job title)

Equity Outcome Metric:

- # and % of affordable housing units built or renovated with clean or efficient energy technologies

Strategy B

Recommendation #5: “Lead by Example” in Publicly Funded Buildings

Progress to date

- Efficiency Maine “Lead by Example” incentives for state agencies, funded by Volkswagen (VW) settlement
- New initiatives at Efficiency Maine- energy efficiency improvements for schools, towns, cities, and tribal governments using \$15 million from MJRP
- 2023-2024 state budget includes Green Schools Director position at Department of Education
- Community Resilience Partnership established at GOPIF
- Efficiency Maine Green Bank Municipal Lease financing initiative

Strategy B

Recommendation #6: Renewable Fuels Standard

Progress to date

- The Maine Legislature has considered but has not advanced a Renewable Fuels Standard

Strategy B

Recommendation #7: Replace Hydrofluorocarbons with Climate-Friendly Alternatives

Progress to date

- The Maine Department of Environmental Protection (DEP) has finalized regulations to implement the phase-down of hydrofluorocarbons, also known as climate super pollutants, beginning on January 1, 2022.

Strategy C

Recommendation #8:

Accelerate Emissions Reductions of Industrial Uses and Processes

Progress to date

- \$6 million Energy Efficiency Initiative for Manufacturers at Efficiency Maine, provides financial incentives to support high-efficiency & clean energy upgrades for businesses in Maine's manufacturing sector
- Industrial Innovation Task Force met between September-December 2021 to explore opportunities to support energy efficiency and reduce emissions in the industrial and large business sector
- New Wood-fired Combined Heat and Power Program directs the Maine Public Utilities Commission (MPUC) to procure renewable energy from highly efficient combined heat and power (CHP) projects

Strategy D - Equity Recommendation

Goal #3: Attract, prepare, and position people and businesses in disadvantaged communities for jobs and economic growth in clean energy and energy efficiency industries

Monitoring Metrics:

- # of licensed electricians
- # of priority population trainees and participants in state-funded clean energy industry workforce development programs

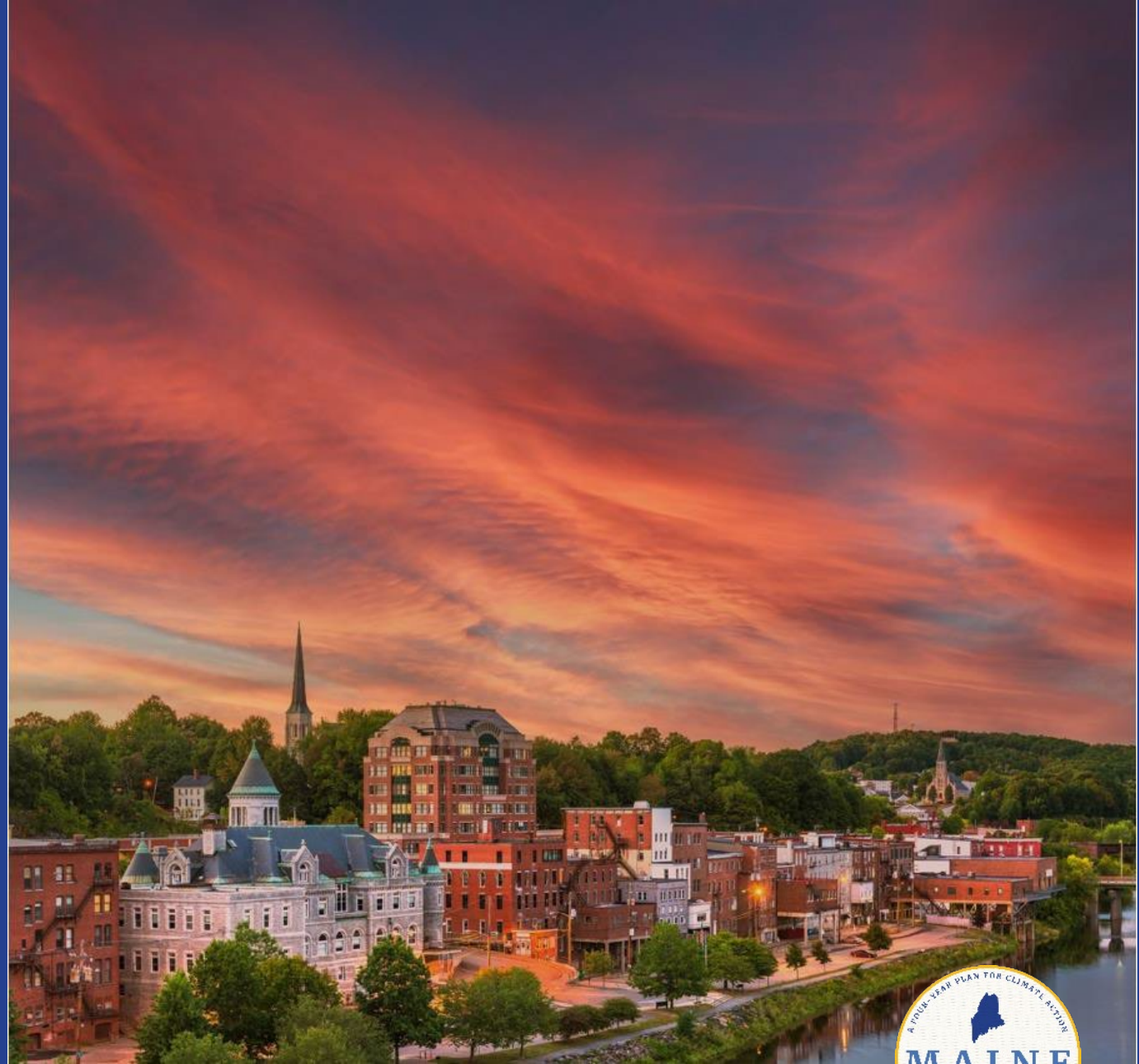
Equity Outcome Metrics:

- # and % of clean energy jobs held by priority populations
- Geographic distribution of clean energy jobs

Discussion - What other progress have you seen?



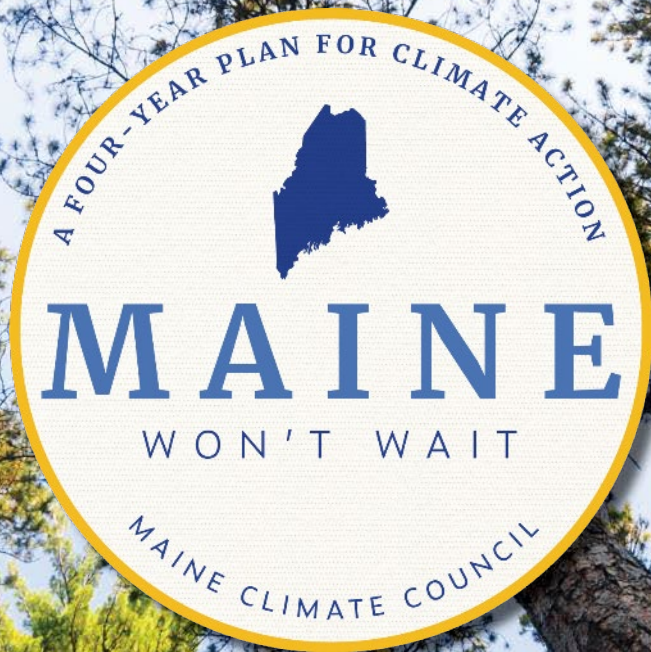
Next Steps and Adjournment



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A FOUR-YEAR PLAN FOR CLIMATE ACTION



MAINE

WON'T WAIT

MAINE CLIMATE COUNCIL