

Maine Climate Council

Updated Strategies and Actions Webinar



Melanie Loyzim
Council Co-chair



Hannah Pingree
Council Co-chair



GOVERNOR'S OFFICE OF
**Policy Innovation
and the Future**



MAINE DEPARTMENT OF
Environmental Protection

September 10, 2024

Agenda

1. Welcome
2. Updated Climate Plan Framework
3. Council Members Q&A



Maine is already seeing impacts from climate change.

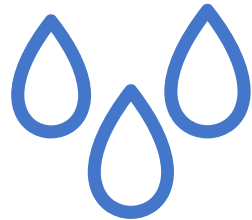
Warmer temperatures

The past four years have ranked among the ten warmest on record



More precipitation

1-2 additional days per year with 2+ inches of precipitation



Shorter winters

Winters now are 2 weeks shorter than the period between 1901-2000



Rising sea levels

Sea levels are 8 inches higher than a century ago



Source: Maine Climate Council Scientific and Technical Subcommittee, *Scientific Assessment of Climate Change and Its Effects in Maine - 2024 Update*

80% of Maine's carbon dioxide emissions from fossil fuels come from transportation and buildings.



49%

Transportation



19%

Residential



12%

Commercial



10%

Industrial



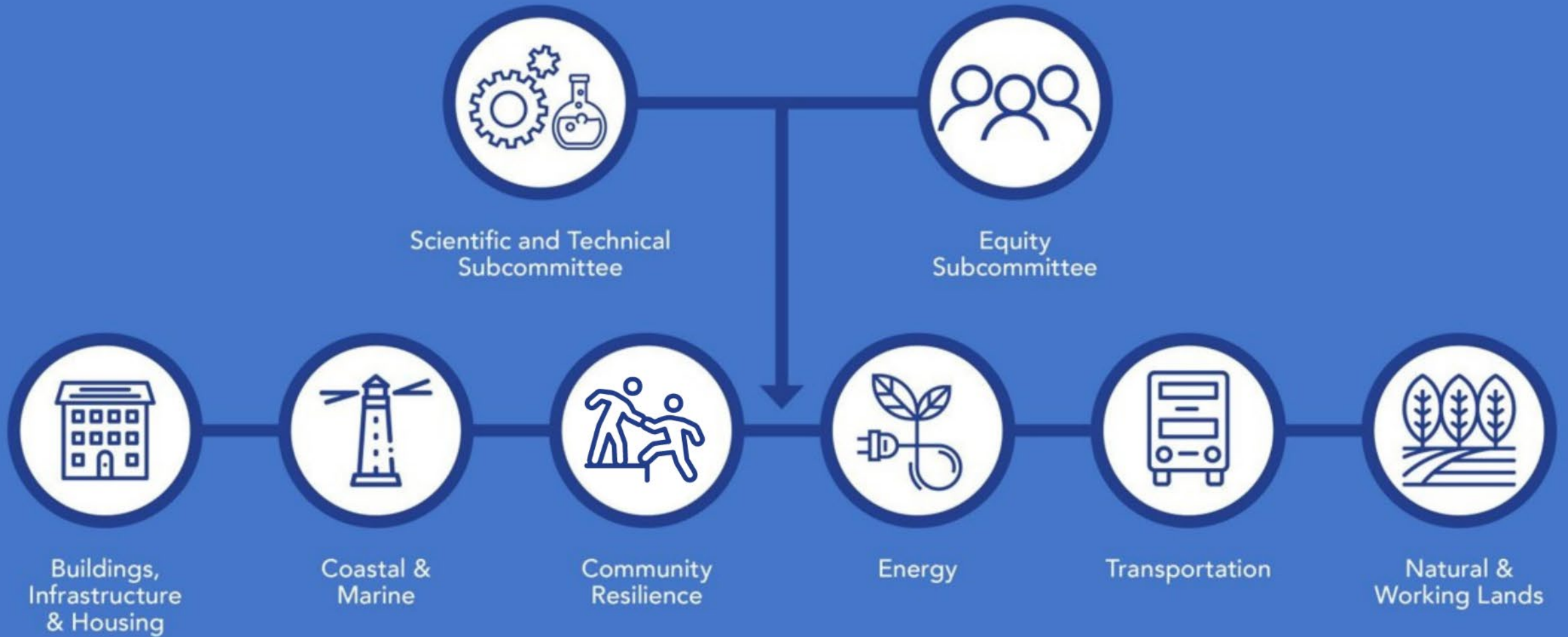
9%

Electric Power

Source: Maine Department of Environmental Protection 10th Biennial Greenhouse Gas Emissions Report



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.

Maine's Climate Action Plan Goals:



1. Reduce Maine's **greenhouse gas emissions**
2. Make Maine more **resilient** to the impacts of climate change
3. Foster **economic opportunity** and **prosperity**
4. Advance **equity** through Maine's response



Maine Climate Council by the Numbers

100

**Maine Climate Council & Working Group
meetings between September 2023 and
June 2024**



222

Working Group
members



7,300+

Working Group
participant hours



Up to

450

members of the
public attended MCC
meetings



Climate Action Plan Timeline



We are here.

Maine Climate Council Public Meetings

- Sept. 4th @ 6pm | Zoom
- Sept. 5th @ 6pm | Presque Isle Community Center
- Sept. 10th @ 6pm | Lewiston Public Library
- Sept. 12th @ 6pm | Portland (King Middle School)
- Sept. 17th @ 6pm | Bangor Public Library
- Sept. 18 @ 6pm | Ellsworth Public Library
- Sept. 19th @ 6pm | Biddeford Middle School

Register at www.maine.gov/climateplan



**Tell us
what you
think!**

**Maine Climate Council
SURVEY**



www.maine.gov/future/climate/council/workinggroups/2024strategies



Maine Won't Wait 2.0

DRAFT Updated
Framework

September 2024

This Draft Framework

- Integrates working group and task force recommendations from June 18 with the structure of *Maine Won't Wait* (2020)
- Does NOT include targets (to be finalized when emissions modeling is complete)
- Will be further refined based on Climate Council discussion, public input, and emissions modeling



Maine Won't Wait 2.0 Climate Action Strategies:

A _____

Embrace the future of transportation in Maine



B _____

Modernize Maine's buildings: energy-efficient, smart, and cost-effective homes and businesses



C _____

Transition to clean energy



D _____

Create jobs and grow Maine's economy through climate action



E _____

Protect Maine's environment and working lands and waters and increase resilience of coastal, marine and inland habitats



F _____

Build healthy and resilient communities



G _____

Engage with Maine people and communities about climate impacts and program opportunities





Embrace the Future of Transportation in Maine



Accelerate Maine's Transition to **Battery Electric** and **Plug-in** **Hybrid Electric** **Vehicles.**



Actions:

- **Targets for EVs**, including for **low- and moderate-income** drivers
- Expand **EV charging stations** statewide
- **Lower the cost of new and used EVs** for low- and moderate-income drivers
- **EV education** for drivers, dealers, and employers
- **Support EV adoption** through **policy**



Accelerate Maine's Adoption of **Zero-Emission** **Medium- and** **Heavy-Duty** **Vehicles.**



Actions:

- Pilot projects for **electric** and **hybrid buses** and **ferries**
- Launch **fleet advisory services** to help medium- and heavy-duty fleets adopt clean vehicles
- Develop an incentive program for **electric vans, trucks, and buses**
- Support **zero-emission medium- and heavy-duty vehicles** through **policy** and **regulatory** options
- Implement the **Clean Transportation Roadmap** for medium- and heavy-duty vehicles (2024)



Reduce Vehicle Miles Traveled by Investing in **Public, Active, and Shared Transportation** and **Smart Land Use Policies**.



Actions:

- **Improve bus service** to be **easy, affordable, and fast**
- **Invest in low carbon transportation** when expanding roads
- **Expand education and awareness** about transit and active transportation
- Launch innovative intercity and rural **van and bus pilots**
- Make roads **safer** for **biking** and **walking**
- Launch a program to help low income and other Maine people **try and buy e-bikes**
- **Increase shared commuting** through **GO MAINE** and other programs
- **Study the emissions impacts** of shared and active transportation





Modernize Maine's Buildings



Continue the progress on making homes and businesses more **energy efficient** by investing in **weatherization** and **heating systems**.



Actions:

- Targets for **heat pumps** and **weatherization**, including in **low-income households**
- Extend **funding and financing** for weatherization and electric heating and water heating systems **beyond 2030**
- Increase participation by **renters, low-income households**, and **rural residents**
- **Education and outreach** on the benefits of energy efficient appliances, clean energy, and weatherization
- **Fair sales taxes** for **electric heat**
- Continue to explore state **emissions standards** for heating appliances



Establish strong systems and processes to support rapid **adoption** and **compliance** with **climate-friendly building codes and standards**.



Actions:

- Commit to adopt **net-zero emissions building codes by 2035**
- **Strengthen building code adoption, compliance and training** through the Maine Office of Community Affairs
- Increase **training, technical assistance, and contractor licensing**, particularly in **small and rural communities**
- Support the purchase of **Zero-Energy Ready manufactured homes**



Promote the manufacture and use of **climate-friendly building products**.



Actions:

- Encourage **cross-laminated timber** (CLT) and other **bio-based materials manufacturing** in Maine
- Increase **awareness** and **education** about **embodied carbon**
- Use demonstration projects and incentives to lower the cost of **climate-friendly building materials**
- Design buildings for **deconstruction**
- Encourage **salvage** and **reuse** of building materials



Support measures
that both **reduce
carbon** and
improve resilience.



Actions:

- Help Mainers to **prepare** their homes and businesses for **climate impacts**
- Increase **funding and financing** options for **solar and storage** for homes and businesses
- Expand **education and outreach** about solar and storage incentives and benefits
- Manage the impact of **building loads** on the **grid**
- Fund the cleanup of **residential oil tank** spills



Accelerate decarbonization technologies in industrial processes.



Actions:

- Promote **emerging technologies** such as industrial heat pumps and membrane filtration
- Continue **energy efficiency** upgrades at **small and mid-sized facilities**
- **Maximize federal grant-funding** opportunities
- Incentivize **demand management**, including behind-the-meter **batteries** and **thermal energy storage**



Continue to **lead by example** in publicly-funded buildings.



Actions:

Schools:

- Fund and support the new **Green Schools Program** to reduce energy costs in Maine schools

Local government:

- Funding for **efficiency** and **renewable energy** in municipal and tribal buildings

State buildings:

- **Zero-emissions heating and cooling** in state buildings
- Reduce GHG emissions from state buildings **50% by 2034**
- Include **"EV ready"** parking spaces
- Encourage **climate-friendly building products**



Build more housing that is affordable, energy efficient, and close to vibrant community centers.



Actions:

- Renovate or build ____ **clean and energy efficient affordable housing** units per year
- **Promote compact development** near community services and transit, consistent with Strategy F





Transition to Clean Energy



Decrease energy burdens while transitioning to clean energy.



Actions:

- **Better understand energy burden** across all energy costs
- **Reduce capital and financial barriers** through expanded financing options and ownership models
- Launch an **energy navigator** program
- Ensure adequate funding for **energy assistance programs**



Plan and build the infrastructure needed to achieve **100% clean electricity by 2040.**



Actions:

- Establish a **regular cadence of clean energy procurements** at least every two years
- Maximize use of **federal funds**
- **Develop community-informed resources** to assist Maine towns in supporting clean energy
- **Improve state policies** for permitting, siting and procurement of clean energy and transmission projects
- **Plan for future grid needs** in transmission and distribution
- Improve and **modernize the process of connecting clean energy projects to the grid**
- Invest in a sustainable, Maine-based **offshore wind industry**



Manage the impact of **buildings, vehicles, and industry** on the grid with innovative **demand management and load flexibility strategies**.



Actions:

- **Adopt software and technologies that enable signals** based on electricity grid conditions to manage demand and supply
- **Help customers to participate** in demand management through policies, programs, markets, and regulatory mechanisms
- **Ensure equitable access** and **benefits** from demand management programs
- Provide **meaningful education and communication** around the opportunities and benefits of demand management



Grow Maine's clean energy economy with a goal to support 30,000 clean energy jobs by 2030.



Actions:

- Support ongoing **state workforce initiatives**
- Support **clean-tech innovation** programs and partnerships
- **Expand apprenticeships** and other earn-and-learn models
- Maintain an online **clean energy jobs and training database**
- Create tools, resources, trainings, and apprenticeship programs to **support disadvantaged students and job seekers**
- Identify **pathways into clean energy careers** for workers most impacted by climate change





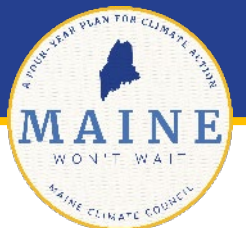
Create Jobs and Grow Maine's Economy through Climate Action





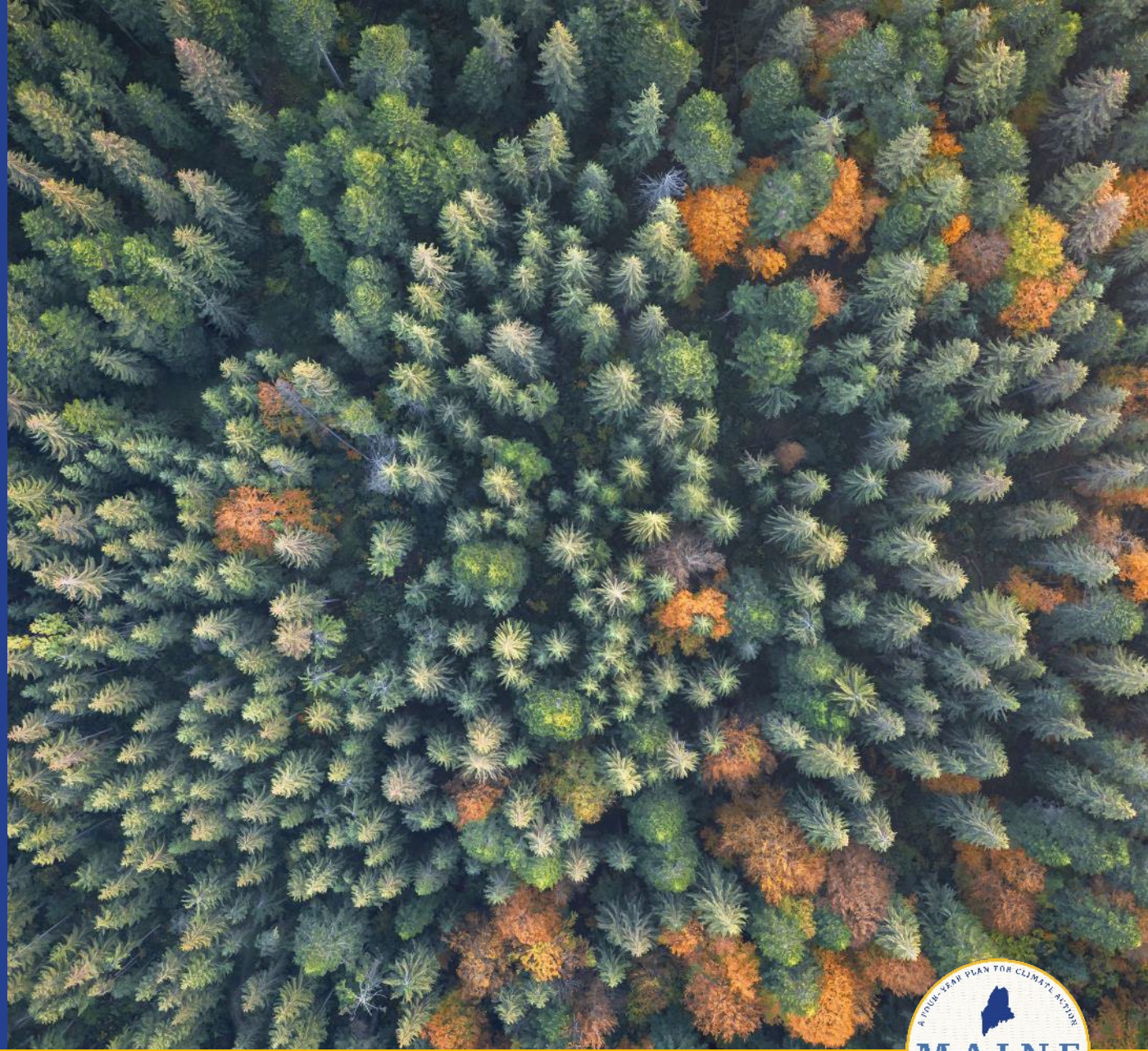
Recommendations:

- Invest in **climate innovation** and **new technologies**.
- Support the growth of **Maine businesses** that help **reduce emissions** and increase **resilience** to climate impacts.
- Increase the workforce needed to achieve Maine's climate strategies, including through the **Maine Climate Corps**, investing in **apprenticeships and pre-apprenticeships**, and through partnerships with employers, Maine's **Career and Technical Education (CTE) Centers**, and **higher education institutions**.





Protect Maine's Environment and Working Lands and Waters



Increase the total acreage of conserved Natural and Working Lands in the state to 30% by 2030.



Actions:

- Protect areas of **cultural, economic, and ecological** importance
- **Double permanently protected farmland** in Maine by 2030
- **Expand funding for land conservation** through new and existing programs
- **Expand public and private capacity** to support conservation



Increase the amount of food consumed in Maine from state food producers to 30% by 2030.



Actions:

- Create a **Maine Food Plan**
- **Strengthen** Maine farms, fisheries, and other food producers with **funding, technical assistance**, and processing and distribution **infrastructure**
- Create more Maine **markets** for Maine producers and **increase access** to local food



**Reduce food loss
and waste 50% by
2030.**



Actions:

- Require large generator **food waste reporting**
- Maximize **food rescue, recovery and donation** of edible food



Develop new incentives to **increase carbon storage.**



Actions:

- Provide **incentives** to forest **landowners, foresters, and loggers**
- Increase **technical assistance, training, and education** opportunities
- **Improve forest carbon data**, monitoring, and verification to support policymaking
- Continue to engage in **multistate discussions** about forest carbon

Support **climate adaptation** of **Maine's fisheries, aquaculture and seafood industries.**



Actions:

- Help fisheries and aquaculture businesses to **diversify** and **adapt** to a changing Gulf of Maine
- **Expand equitable access** to traditional and emerging industries
- Focus efforts communities with **little economic diversity** and **disadvantaged** communities and households



**Monitor, conserve
and increase
resilience of coastal
and marine
ecosystems.**



Actions:

- **Enhance data and monitoring** of climate impacts
- **Restore and increase resilience** of coastal, marine, and inland habitats
- Increase **technical assistance** and service provider capacity focused on **nature-based solutions**

Reduce and capture **methane emissions** from Maine's **waste sector**.



Actions:

- Develop a plan to **reduce and capture methane** from landfills
- Provide incentives for **methane capture, anaerobic digestion**, and keeping food, manure, and other high methane producing materials **out of landfills**



Build Healthy and Resilient Communities



Increase **local capacity** for **climate resilience**.



Actions:

- Help communities **share information** before, during and after disasters
- Help communities and people **"get out of harm's way"**
- Expand **grants and assistance** to communities
- Increase capacity to **manage storm debris**



Enhance the State's ability to **prepare for and recover from natural disasters.**



Actions:

- **Increase capacity for disaster planning** and management at state, county, and local levels
- Support communities to plan for and **reduce exposure to natural hazards**
- **Measure the effectiveness and equity** of adaptation and resilience actions



Expand access to **funding and financing** for climate adaptation and emissions reduction.



Actions:

- Establish a “**resilience bank**” to fund and finance climate-ready infrastructure and adaptation projects
- **Simplify state grant application processes**
- Develop a **long-term funding plan** and investment strategy to support *Maine Won't Wait* goals

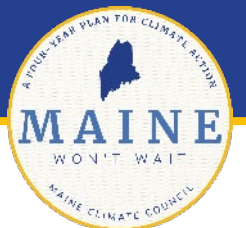


Strengthen **Public Health** Monitoring, Education, and Prevention.



Actions:

- Improve air quality by providing funding for **mold abatement**, **weatherization**, and **heat pumps**
- Increase the number of **air quality monitoring stations**
- Help communities address extreme heat through **tree planting** and **emergency warming and cooling centers**
- **Monitor water quality** to prevent the spread of illness

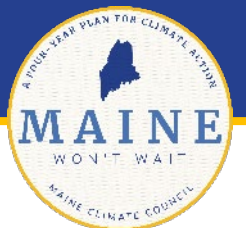


Increase **awareness**
and **action** on the
mental health
impacts of climate
change.



Actions:

- Incorporate **mental health services** into emergency response planning
- Provide **mental health resources and training** to healthcare workers
- Support schools to build students' **resiliency, agency, and hope**



Promote **smart growth** to reduce emissions, prevent natural and working land conversion, and create affordable housing.



Actions:

- Promote **compact development**
- Integrate **housing** and **climate goals**
- Promote **clean energy investments** that minimize land impacts
- Avoid growth in **vulnerable areas**



Build healthy and resilient coastal communities and protect critical place-based infrastructure.



Actions:

- Empower communities to **protect working waterfronts**
- **Increase resilience** of public and private **working waterfront infrastructure**
- Create a statewide working waterfront strategy to **preserve and expand** waterfront access



Provide **technical assistance** to communities and use proactive **communication and engagement** to support effective **land use planning**.



Actions:

- **Proactive messaging** about land use planning and housing and climate goals
- **Align local land use policies** with community and state priorities
- **Local engagement** to build consensus
- **Technical assistance** for implementation



Use incentives and regulations for land use policies that reduce emissions, foster vibrant community centers, reduce sprawl, and provide measurable benefits.



Actions:

- Support **affordable housing** in locations **near services**
- Protect **natural and working lands**
- Develop **financial solutions**
- Prioritize projects that **mitigate environmental and community risk**
- Use **high-resolution data** for land use planning



Advance Policies and Deploy Funding to **Reduce Emissions** Across Product Lifecycles by **Growing Maine's Circular Economy.**



Actions:

- Support **reuse, refill, and repair**
- **Lead by Example** at state facilities through food waste prevention, reuse and repair



Regionalize and scale-up access to waste prevention and diversion services.



Actions:

- Invest in **regional waste prevention** programs
- **Coordinate** between **regional** and **local** governments
- Ensure **equitable access** to **waste prevention and diversion**





Engage with Maine People and Communities





Recommendations:

- **Raise awareness** about **climate change impacts** and **opportunities**
- Increase **public education** offerings related to **climate and energy**



EXAMPLES of actions from 2020 that are completed or ongoing (not a complete list)

- ✓ Implement Maine Appliance Standards requirements by 2022
- ✓ Adopt hydrofluorocarbons phasedown regulations in 2021 to be implemented by 2022
- ✓ Revise scoring criteria for state conservation funding to incorporate climate mitigation and resiliency goals.
- ✓ Inventory carbon stocks on land and in coastal areas to provide baseline estimates for state carbon sequestration (by 2023)
- ❑ Investigate options for establishing a Renewable Fuels Standard (RFS) for heating fuels
- ❑ Increase fuel efficiency and alternative fuels
- ❑ Encourage Highly Efficient Combined Heat and Power Facilities



What's Next

- Sept. 25th @ 9am | Maine Climate Council Meeting
- Oct. 16th @ 12pm | Emissions Modeling Webinar
- Oct. 23rd @ 9am | Maine Climate Council Meeting
- Nov. 21st | Maine Climate Council Meeting and *Maine Won't Wait 2.0* Release

See all upcoming meetings: www.maine.gov/future/meeting-calendar



Climate&Me Art Challenge

Are you a Mainer between the ages of 9 and 22? Or know someone who is?

We want to feature your talent in the update to Maine Won't Wait, the state's climate action plan.

Questions? Contact Abigail.Hayne@maine.gov



[www.surveymonkey.com/r/
climateartchallenge](https://www.surveymonkey.com/r/climateartchallenge)

Find out more information and enter the challenge here by October 1st.

Maine Climate Council Public Meetings

- Sept. 4th @ 6pm | Zoom
- Sept. 5th @ 6pm | Presque Isle Community Center
- Sept. 10th @ 6pm | Lewiston Public Library
- Sept. 12th @ 6pm | Portland (King Middle School)
- Sept. 17th @ 6pm | Bangor Public Library
- Sept. 18 @ 6pm | Ellsworth Public Library
- Sept. 19th @ 6pm | Biddeford Middle School

Register at www.maine.gov/climateplan



**Tell us
what you
think!**

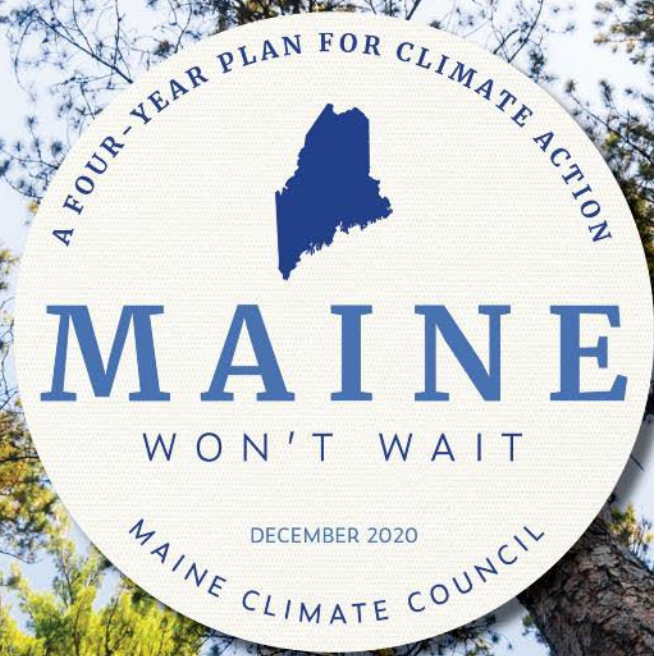
**Maine Climate Council
SURVEY**



www.maine.gov/future/climate/council/workinggroups/2024strategies

Q&A





A FOUR-YEAR PLAN FOR CLIMATE ACTION



MAINE

WON'T WAIT

DECEMBER 2020

MAINE CLIMATE COUNCIL