A FOUR-YEAR PLAN FOR CLIMATE ACTION

MAINE WON'T WAIT

MAINE CLIMATE COUNCIL

MAINE WON'T WAIT ONE-YEAR PROGRESS REPORT

DECEMBER 1, 2021

FROM THE CO-CHAIRS

Last year, *Maine Won't Wait* was unveiled with a spirit of urgency, but also some uncertainty. While the plan for climate action was rooted in the most detailed scientific assessment of Maine in years, and its strategies were adopted with broad consensus by the Maine Climate Council, the road ahead for turning this plan into action was not clear.

What a difference a year makes.

Over the past 12 months, the award-winning *Maine Won't Wait* plan has become a blueprint for climate action for communities and organizations around the state, who recognize the urgent need to reduce harmful greenhouse gas emissions and transition to clean energy to fight against climate change.

This has resulted in significant strides for Maine, especially in renewable energy. An independent study released this year shows Maine is on track to meet its goal of using 80 percent renewable sources for our electricity by 2030, the most ambitious target of any New England state.

This embrace of clean energy has been reflected in the record growth of electric vehicles, public electric vehicle charging stations, and installations of high efficiency heat pump installations in Maine, all of which directly address our state's leading causes of greenhouse gas emissions.

It is reflected in the climate leadership of Maine people across the state, such as Doug Van Gorder, a bus driver who helped bring the state's first electric school bus to Mount Desert Island, or Jessie Rule, an apprentice electrician, solar installer, and trailblazer in Maine's clean energy economy.

It is also reflected by the numerous communities around the state taking steps to address climate change, such as Kittery and Dover-Foxcroft, or through innovative regional alliances such as the partnership formed by Bangor, Orono, the University of Maine and Husson College.

Underpinning this momentum are historic climate actions from Governor Janet Mills and the Maine Legislature, which enacted nearly two dozen pieces of legislation this year aligned with *Maine Won't Wait*, including bans on harmful hydrofluorocarbons (HFCs), and adoption of sea level rise projections, appliance efficiency standards, and among the first targets for clean energy battery storage in the country.

Maine's strong economic recovery from the disruption of the pandemic, and federal support from the American Rescue Plan Act and the Infrastructure and Jobs Act, has also made an unprecedented level of funding available to address climate impacts and create good-paying jobs across the state.

In the biennial budget and Maine Jobs & Recovery Plan, Governor Mills proposed and the Legislature approved $50 million to weatherize Maine homes and support efficiency upgrades for communities and businesses, $8 million to develop a clean energy workforce partnership, $50 million for efficient, affordable housing, nearly $25 million for local climate planning and infrastructure upgrades, $40 million for land conservation, and more.

The recent passage of the federal Infrastructure and Jobs Act, which commits more than $2 billion to Maine for infrastructure improvements for climate resilience, low-income weatherization assistance, expanded EV charging, as well as competitive funds for electrifying school bus fleets, electrical grid modernization and more, also represents a historic opportunity for Maine.

Further federal action is possible through the Build Back Better legislation, as well, which is pending before the U.S. Senate at the time of this writing.

While all this action is laudable, it is also desperately needed. This year's report from the International Panel on Climate Change has called this moment a "Code Red" for humanity; in Maine, relentless warming trends on land and sea are driving extreme storms, rising seas, flooding and drought, all of which pose catastrophic risk to our state's environment, heritage, and future.

We're proud of all *Maine Won't Wait* has achieved in its first year. It's no longer uncertain whether we can turn our plan into action, we have proven that we can. What is now certain is that we must continue to act with urgency to protect our state and its people against climate impacts, and make the most of this moment in which we have the methods, and the means, to make a difference.

It is our honor to serve as co-chairs of the Maine Climate Council, and we look forward to another extraordinary year of climate action in 2022.

Regards,

Hannah Pingree, Director
Governor's Office of Policy Innovation and the Future

Melanie Loyzim
Commissioner, Department of Environmental Protection

Cover image: Maine's first electric school bus Mount Desert High School. (Photo by Ashley Conti)

FUNDING TO SUPPORT *MAINE WON'T WAIT*

Climate priorities in Maine are funded by the biennial budget, the Maine Jobs & Recovery Plan, and the Infrastructure and Jobs Act. The infrastructure bill also offers competitive funds for electrifying bus fleets, modernizing the electric grid, school efficiency projects, and more.

CLEAN TRANSPORTATION

$234 million from the Infrastructure Investment and Jobs Act over five years to improve public transportation options across the state.

$19 million from the Infrastructure Investment and Jobs Act to expand public electric vehicle charging.

$8 million from the Maine Jobs & Recovery Plan to expand municipal and public electric vehicle charging.

$150 million from the federal American Rescue Plan Act to create the Maine Connectivity Authority to expand broadband Internet access. Expanding broadband will create greater access to virtual work, education, and health care and help reduce commuting miles and costs.

$100 million from the Infrastructure Investment and Jobs Act to help provide broadband coverage across the state, including providing access to the at least 42,000 Mainers who currently lack it.

$5 million from the Maine Jobs & Recovery Plan for workforce transportation pilot projects to expand public transportation, ride-sharing programs, and develop innovative public transportation options in rural areas to reduce commuting miles and costs.

BUILDINGS & EFFICIENCY

$36.9 million (estimated) from the Infrastructure Investment and Jobs Act for the Weatherization Assistance Program, which helps low-income families improve the energy efficiency of their homes, to reduce energy bills and greenhouse gas emissions.

$50 million from the Maine Jobs & Recovery Plan for energy efficiency programs, such as residential weatherization and efficiency upgrades, matching funds for municipal efficiency projects, and industry and business efficiency incentives.

$50 million from the Maine Jobs & Recovery Plan for affordable housing, which includes assistance for communities, developers, and builders to encourage construction or production of affordable, energy efficient housing units close to service and employment centers and to reduce commuting time and transportation costs.

$20 million in the Maine Jobs and Recovery Act was allocated for forest product innovation, which includes development of climate-friendly building materials such as wood-fiber insulation and cross-laminated timber.

$1.9 million (estimated) from the Infrastructure Investment and Jobs Act for the Energy Efficiency and Conservation Block Grant Program, to provide grants to communities, cities, and tribal governments for clean energy programs and projects.

CLEAN ENERGY

$8 million from the Maine Jobs & Recovery Plan for advancing clean energy partnerships and initiatives to grow workforce and innovation in Maine's clean energy sector, in support of Governor Mills' goal of 30,000 clean energy jobs in Maine by 2030.

$3.1 million from the biennial budget for studies, research, and staff to support power sector transformation, grid modernization and offshore wind.

$4.4 million (estimated) from the Infrastructure Investment and Jobs Act for the Governor's Energy Office to provide grants to develop and implement clean energy programs and projects that will create jobs.

$884,000 (estimated) from the Infrastructure Investment and Jobs Act for the Energy Efficiency Revolving Loan Fund Capitalization Grant Program to support energy efficiency projects.

CLIMATE RESILIENCE

$1.3 billion for federal-aid highway apportioned programs and **$225 million** for bridge replacement and repairs from the Infrastructure Investment and Jobs Act over five years.

$390 million from the Infrastructure Investment and Jobs Act over five years to improve water infrastructure across the state and ensure that clean, safe drinking water is a right in all communities.

$40 million in the biennial budget for land conservation, contributing to Maine's fight against climate change by maximizing carbon storage, supporting working farms and forests, and ensuring valuable ecosystems remain in place for future generations.

$20 million from the Maine Jobs & Recovery Plan to support adaptation and resilience of state and local infrastructure vulnerable to climate change.

$4.75 million from the biennial budget for community, tribal, and regional action grants to prepare for climate change effects, reduce carbon emissions, and transition to renewable energy.

$3 million from the biennial budget to upgrade municipal culverts at stream crossings.

$300,000 for eelgrass mapping; **$200,000** for HFC, sea level rise, and appliance standards rulemaking; and **$400,000** for forest carbon mapping to the Department of Environmental Protection from the biennial budget.

MAINE WON'T WAIT TRACKING DASHBOARD

Tracking numerical progress toward *Maine Won't Wait* goals is critical for informing the public about whether our climate policies are having the intended effects, and for evaluating whether evidence-based adjustments, enhancements or replacements to policies are needed in pursuit of near-term and long-term climate objectives.

5,577
Electric & Plug-in Hybrid Vehicles

+90% since 2019
Goal: 219,000 by 2030

265
Public EV Charging Stations

+62% since 2019

$11.55
Per Capita on Public Transit

Updated Figure for 2021

Path to 80%
Clean Energy by 2030

Maine will Reach 45% in 2021

30,000
Clean Energy Jobs by 2030

Maine had 14,000 in 2019

30%
Land Conservation by 2030

State at 20.1% in 2021

This dashboard tracks 9 initial numerical targets, based on an outline included in *Maine Won't Wait*. It will expand to include other key *Maine Won't Wait* metrics as updated data becomes available, new programs are established, and state and federal climate investments are realized. The dashboard will be updated regularly, with an online version coming in 2022.

40,000
New Heat Pumps since 2019

Goal: 100,000 new by 2025

2,043
Homes Weatherized in 2021

Goal: 17,500 by 2025

NEW
Community Climate Resilience Plans

Goal: 100 Communities by 2023

Greenhouse Gas Emissions

The Maine Department of Environmental Protection is preparing the next biennial greenhouse gas emissions inventory update for release in early 2022. This inventory will include gross and net emissions estimates for the first time. Emissions data will be added to this dashboard in the future to track Maine's goal of achieving carbon neutrality by 2045 and progress toward statutory targets of reducing emissions by 45% by 2030 and 80% by 2050.

STRATEGY A
Embrace the Future of Transportation in Maine

EV registrations, public charging, increase since 2019

Through July 2021, registrations of electric and hybrid-electric vehicles in Maine have increased by 90% compared to 2019. Rebates for EVs through Efficiency Maine increased from just 186 to 1,220 in that same period. However, with 5,677 total EV registrations, more progress is needed to reach the climate plan's goal of 219,000 EVs by 2030 in order to meet Maine's emissions reduction targets.

Since 2019, the number of public EV charging stations has increased by 62% in Maine, from 164 (with 357 plugs) to 265 (with 546 plugs.) The Maine Department of Transportation (Maine DOT) and Efficiency Maine Trust have developed an initial plan to further expand public EV charging stations across the state, which is expected to be supported by $19 million from the federal Infrastructure and Jobs Act and $8 million from the Maine Jobs & Recovery Plan.

Additionally, $234 million is allocated to Maine from the federal Infrastructure and Jobs Act to support improving public transportation options across the state. An $100 million allocation from the federal Infrastructure and Jobs Act and $150 million from the federal American Rescue Plan Act for broadband will support the climate plan's goal of bringing accessible and affordable high-speed Internet access to 95% of Maine homes by 2025.

Electric & Hybrid Vehicle Registrations Through July 2021

Vehicle Type	2019	2020	2021 as of July
BEV	966	1390	2335
PHEV	2010	2294	3342
Total	2976	3684	5677

Total EMT Rebates (9/1/2019 – 9/30/2021)

Year	EMT Rebates for BEV and PHEV Vehicles
2019	186
2020	639
2021	1220
Total	2045

PROGRESS UPDATE

Accelerate Maine's Transition to Electric Vehicles

Expand electric vehicle use in Maine toward a target of having 219,000 on the road by 2030.

- Efficiency Maine offers instant rebates for eligible battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs), including enhanced rebates and rebates for used EVs for low-income drivers. The number of rebates in 2021 was almost double the number in 2020. Efficiency Maine recently announced that EV rebates have been extended another year.

Develop a Clean Transportation Roadmap (by 2022)

- The Clean Transportation Roadmap will be completed by Dec 15, 2021. It will assess how to enhance Maine's electric vehicle market and expand EV charging, evaluate effects on electric utilities and the grid, and how to ensure clean transportation is equitable and affordable for all Maine people.

Encourage Electric, Hybrid, and Alternative Fuel Medium and Heavy-Duty Vehicles (by 2022)

- The Clean Transportation Roadmap is assessing electric and alternative fuel buses, school buses, ferries, and garbage trucks, and MaineDOT is starting to plan for transitioning select transit bus fleets to electric or hybrid vehicles.

Increase Fuel Efficiency and Alternative Fuels

Support Increased Federal Fuel Efficiency Standards

- In concert with other states and organizations, the state is working to support increased federal fuel efficiency standards for all vehicle classes. This work includes engagement with the U.S. Environmental Protection Agency on development of programs and federal rulemaking to reduce greenhouse gases and pollutants from transportation sources.

Increase freight industry participation in EPA's SmartWay program (by 2024)

- A draft plan to increase industry participation in the SmartWay program from the Maine Motor Transport Association is under consideration.

Increase local biofuel and biodiesel production and use (by 2024)

- Maine DOT has expanded its bioheat and biodiesel contracts this year to cover additional locations and added municipal partners.
- Biofine announced a tentative agreement to locate a multi-phase biofuels refinery development on the former mill site in the Town of Lincoln. The state currently has a $.05 per gallon tax credit for biofuel, signed into law March 2020.

Higher-efficiency vehicle incentive program

- The Clean Transportation Roadmap is evaluating this program, building on research completed by Jonathan Rubin at the University of Maine, as part of its report.

Reduce Vehicle Miles Traveled

Encourage development that supports the reduction of VMT (by 2024); Reduce light-duty VMT over time, achieving 10% reductions by 2025 and 20% by 2030. Reduce heavy-duty VMT by 4% by 2030.

- MaineDOT is rewriting the state's Complete Streets Policy to provide safe and accessible streets and highways. Further actions include assessing transportation opportunities in coordination with the Bicycle Coalition of Maine and considering e-bike pilot projects in underserved communities.
- LD 609 established the Commission To Increase Housing Opportunities in Maine by Studying Zoning and Land Use Restrictions. The Commission will recommend methods to encourage density and mixed-use development

in areas where transportation infrastructure exists. The Commission will release its report on December 2.

Deploy high-speed broadband to 95% of Maine homes by 2025 and 99% by 2030.

- With $150 million in American Rescue Plan funds, Governor Mills created the Maine Connectivity Authority to drive broadband expansion in Maine. The Authority is charged with ensuring effective, accessible connectivity be universally available in the state.
- The state is anticipated to receive an additional $100 million for broadband expansion through the federal Infrastructure and Jobs Act.
- A more detailed assessment of Maine homes lacking broadband access became available since the release of *Maine Won't Wait*. The updated figure is 85%.

Increase public transportation funding (by 2024)

- The federal Infrastructure and Jobs Act allocates at least $234 million to Maine over five years to improve public transportation options across the state. Additional competitive funds for transit and ferry programs may be available to enhance public transportation in Maine.
- $5 million from the Maine Jobs & Recovery Plan will support workforce transportation pilot projects to expand public transportation, ride-sharing programs, and innovative public transportation solutions in rural areas to reduce commuting miles and costs.
- MaineDOT is updating its Statewide Strategic Transit Plan to explore new approaches for providing public transportation efficiently and effectively in rural Maine. It is expected by December 2022.
- The targets for per-capita spending on public transit included in *Maine Won't Wait* did not include all public transportation services. The updated spending figure of $11.55 is a more accurate calculation of the state's per-capita spending on public transit.

Relaunch GO Maine (by 2022)

- MaineDOT is leading the GO MAINE program in partnership with the Maine Turnpike Authority. A consultant has been retained and an improved and expanded GO MAINE program is expected to relaunch in early 2022.

Meet the Bus Driver Behind Maine's First Electric School Bus

Maine's first electric bus hit the road this year in Mount Desert Island – and veteran school bus driver Doug Van Gorder drove this clean energy transportation action.

Electric buses were new to Van Gorder when MDI nonprofit A Climate to Thrive (ACTT) first contacted him about the idea. Van Gorder teamed up with ACTT's Electric Vehicle Project Manager, Gordon Beck, Maine's Department of Environmental Protection and school colleagues to evaluate electric bus and grant options. The team won a $280,000 grant from the Maine Department of Environmental Protection, which was funded by the Volkswagen Emissions Fraud Settlement. The grant covered 80 percent of the LionC electric bus' cost – lowering the school's investment to roughly the same as a traditional diesel bus.

In addition to eliminating dangerous diesel emissions, the EV bus is slated to slash the school's annual operating costs by an estimated $5,000 in fuel alone. It's also an excellent example of Maine schools and people adopting *Maine Won't Wait* clean energy and transportation action strategies and driving a greener future.

STRATEGY B
Modernize Maine's Buildings: Energy-Efficient, Smart and Cost-Effective Homes and Businesses

A record pace for heat pumps in 2021

More than 28,000 high-efficiency heat pumps were installed in Maine from July 2020 to June 2021, a record pace that exceeds the pace needed to reach the plan target of 100,000 new installations by 2025. The number of heat pump rebates from Efficiency Maine more than doubled during this period, with significant increases seen in northern Maine and rural areas.

Despite interruptions caused by the pandemic, 2,043 homes in Maine were weatherized by MaineHousing and through Efficiency Maine incentives in 2021. Efficiency Maine estimates weatherizing 14,874 additional homes, with 4,236 of them low-income, by 2025.

An $36.9 million allocation from the Infrastructure and Jobs Act and $25 million from the American Rescue Plan Act will support the climate plan's goal of weatherizing 17,500 homes by 2025 – including 1,000 low-income units annually – and 35,000 homes by 2030.

PROGRESS UPDATE

Transition to Cleaner Heating and Cooling Systems, Efficient Appliances

Install 100,000 heat pumps by 2025 including at least 15,000 in income-eligible households

- 28,000 high-efficiency heat pumps have been installed in Maine buildings over the past year, a significant increase from the nearly 13,000 installed the prior year. This puts Maine on a trajectory to meet its goal of 100,000 new heat pumps by 2025.
- LD 385 established in statute the 2030 heat pump goals from *Maine Won't Wait*.

Maine Appliance Standards (by 2022)

- Governor Mills signed LD 940, An Act To Establish Appliance Energy and Water Standards and funding in the biennial budget will support rulemaking by DEP.

Accelerate Efficiency Improvements to Existing Buildings

Double the pace of weatherization: 17,500 additional homes and businesses by 2025 including 1,000 low-income units; 35,000 by 2030

- EMT weatherized 1,807 homes in FY 2021 (market-based and low-income programs combined) and MaineHousing weatherized 236 homes (Jan 2021 – current) for a total of 2,043 homes. EMT anticipates weatherizing an estimated 14,874 additional homes (4,236 expected to be low-income) by FY2025.
- LD 385 established in statute the 2030 weatherization goals from *Maine Won't Wait*.
- LD 340 established a Commercial PACE (C-PACE) loan program at Efficiency Maine to promote clean energy upgrades, including and energy efficiency upgrades at commercial properties in participating municipalities.

- LD 1659 established the Clean Energy and Sustainability Accelerator ("Green Bank") at Efficiency Maine to promote financing and investment in renewable energy systems, energy efficiency upgrades, fuel switching and electrification, industrial decarbonization, battery storage, microgrids, and clean transportation vehicles and infrastructure.
- $50 million from the Maine Jobs & Recovery Plan will fund energy efficiency programs, such as residential weatherization and efficiency upgrades, matching funds for municipal efficiency projects, and industry and business efficiency incentives through the Efficiency Maine Trust. And an additional $36.9 million is coming to Maine through MaineHousing for the low-income Weatherization Program (WAP) from the federal Infrastructure and Jobs Act.

Advance the Design and Construction of New Buildings

Phase in modern, energy-efficient building codes to reach net-zero carbon emissions for new construction in Maine by 2035

- The Maine Technical Building Codes and Standards Board amended the Maine Uniform Building and Energy Code (MUBEC) to adopt the 2015 International Energy Conservation Code, a code that requires improved energy performance in new buildings. MUBEC also adopted an energy "stretch code" as an additional option for communities to adopt who would like to go further.
- $50 million from the Maine Jobs & Recovery Plan was allocated for affordable housing, which includes assistance for communities, developers, and builders to encourage construction or production of affordable, energy efficient housing units close to service and employment centers to reduce commuting time and transportation costs.
- Efficiency Maine initiated a pilot program in 2021 to provide incentives for developers of multifamily affordable housing to upgrade their new construction designs to meet Passive House standards. Two projects were included in the pilot.

Building code training for contractors and code-enforcement officials

- Efficiency Maine held free workshops for all building professionals involved in design, equipment specifications, construction, and municipal code enforcement on the 2015 International Energy Conservation Code (IECC). As of July 1, 2021, the IECC 2015 became the mandatory baseline energy code for all new construction in Maine.

Advance the Design and Promote Climate-Friendly Building Products

Increase the use of climate-friendly Maine forest products, including mass timber and wood-fiber insulation

- $20 million in the Maine Jobs and Recovery Act was allocated for forest product innovation, which includes development of climate-friendly building materials such as wood-fiber insulation and cross-laminated timber.

"Lead by Example" in Publicly Funded Buildings

"Lead by Example" in state government (by 2022)

- The state's first Lead by Example plan was released in March 2021. The report outlines strategies to curb state agencies' greenhouse gas emissions, sets goals to transition state electricity use to 100 percent clean energy by 2024, and purchase 100 percent electric vehicles for the state fleet by 2030.
- Using Volkswagen settlement funds, Efficiency Maine awarded grants to install 28 public EV charging plugs at 12 state agencies at locations in Rockland, Boothbay, Presque Isle, Wilton, Bangor, and more.
- $4.75 million from the biennial budget will create the Community Resilience Partnership, which will deliver local and regional planning grants to municipalities, regional groups, and tribal governments to prepare for climate change effects, reduce carbon emissions, and transition to renewable energy.

Renewable Fuels Standard (RFS)

Investigate options for renewable Fuels Standard (RFS) for heating fuels

- The Legislature considered action related to renewable fuels, but the legislation was not advanced in the first regular legislative session. Lawmakers and the state may consider options to advance the use of innovative renewable fuels in the future.

Replace Hydrofluorocarbons (HFCs) with Climate-Friendly Alternatives

Adopt hydrofluorocarbons phase-down regulations

- LD 226 An Act To Limit the Use of Hydrofluorocarbons To Fight Climate Change was signed into law by Governor Mills and Department of Environmental Protection is advancing regulations to implement the phase-down of hydrofluorocarbons, also known as climate super pollutants.

STRATEGY C

Reduce Carbon Emissions in Maine's Energy and Industrial Sectors through Clean-Energy Innovation

Maine on pace to meet leading clean energy target

A study completed by a consultant for the Governor's Energy Office, showed that Maine is on track to meet its Renewable Portfolio Standard requirement of 80% renewable energy by 2030 - one of the most ambitious in the country and the highest in New England.

This requirement is supported by the largest clean energy procurements conducted in the state's history by the Public Utilities Commission as required by statute that will advance new renewable resources such as wind and solar. In 2019, Maine had less than 70 MW of solar installed; there was 325 MW installed across the state through October 2021, with more slated to come online every month. More than 3,000 new solar customers have been added in 2021 as well, a figure more than double the previous high for annual growth. There are now more than 12,000 solar customers across Maine.

PROGRESS UPDATE

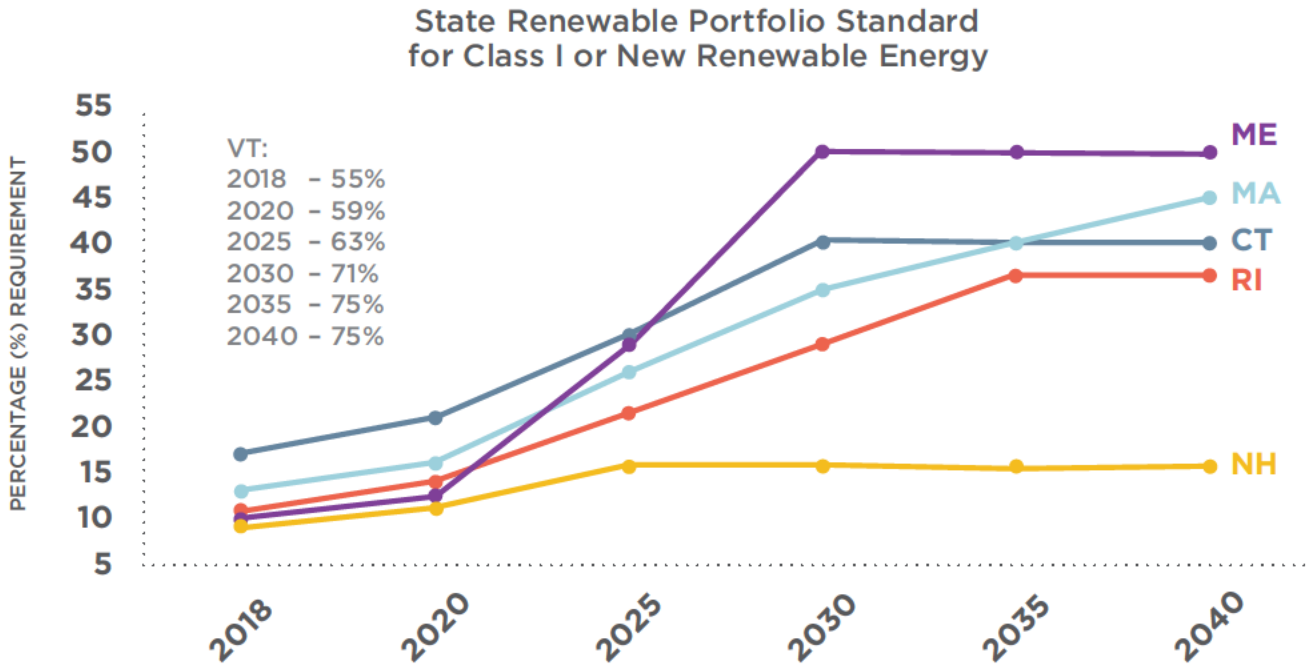
Ensure Adequate Affordable Clean-Energy Supply

80% of Maine's energy usage from renewable generation (by 2030)

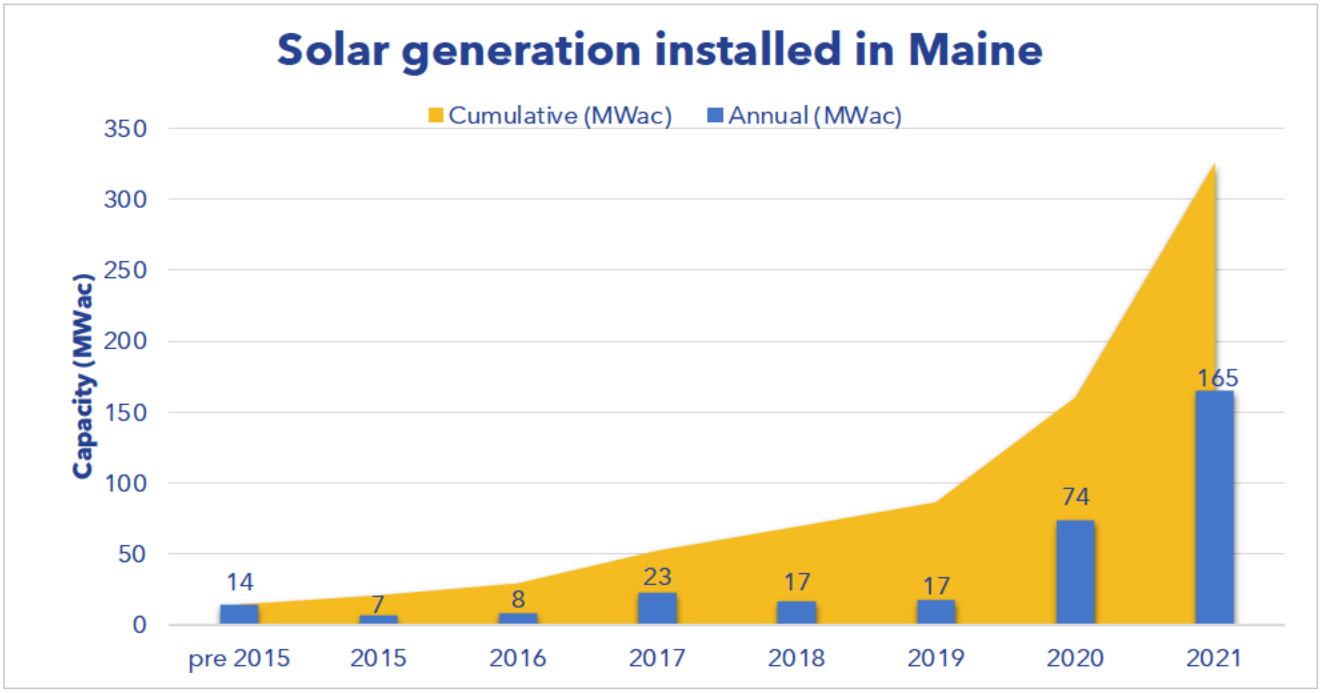
- Maine electric suppliers are required to provide an increasing amount of new renewable energy to Maine consumers, reaching 80% total renewable energy provided by 2030. Maine's standard requires 45% renewable electricity in 2021, which puts Maine to track to meet that 2030 target.

Set achievable targets for cost-effective deployment of technologies such as offshore wind, distributed generation, and energy storage

- **Storage:** The state has now set statutory targets for energy storage (300 MW by 2025, 400 MW by 2030) per the passage of LD 528 As of 2021 there are about 50 megawatts of energy storage operating in the state. The goal of 400 megawatts of energy storage represents about 20% of Maine's peak electric demand in 2020, making these goals some of the most ambitious in the nation.
- **Offshore Wind:** Adopted with bipartisan support in the Maine Legislature, Governor Mills signed LD 336 in June 2021 declaring Maine's offshore wind research array to be in the public interest and authorizing the PUC to negotiate a power purchase agreement of up to 144 MW with the University's offshore wind development partner, New England Aqua Ventus. Additionally, there are wind energy development targets currently in statute, and the Maine Offshore Wind Roadmap is examining aspects of offshore wind energy development for the state that could inform future target setting.
- **Solar:** LD 936 set a statutory goal of 750 MW of distributed generation under net energy billing programs. This legislation also required the Governor's Energy Office to convene a stakeholder group to issue recommendations to support continued development of renewable energy in Maine through cost-effective distributed generation. That process is ongoing, with an interim report expected by January 2022 and a final report by January 2023.



Source: ISO New England.



Source: ISO New England.

- $3.1 million has been included in Maine's biennial budget for studies, research, and staff to support power sector transformation, grid modernization and offshore wind.

Initiate a Stakeholder Process to Transform Maine's Electric Power Sector

Power sector stakeholder process (by 2022)

- Several current efforts are supporting the Power Sector Transformation stakeholder process recommended in *Maine Won't Wait*. This includes a grid modernization and distribution system planning docket opened by the Public Utilities Commission (PUC) at the request of the Governor. The PUC has retained a consultant to review the design and operation of Maine's electric distribution system needed to meet Maine's climate targets. With an initial report due in the coming months, the PUC is conducting an in-depth, structured, and comprehensive examination to determine how best to accommodate increasing amounts of renewable energy, including solar installations and energy storage, and substantial load growth with increasing electrification of our heating and transportation sectors. There are also multiple rate design dockets that are open or ongoing that are related to the Climate Action Plan. The Governor's Energy Office is currently monitoring and engaging in these various efforts and studies and considering next steps for an overarching effort as suggested by the Climate Action Plan.

Accelerate Emissions Reductions of Industrial Uses and Processes

Launch Industrial Task Force (by 2022)

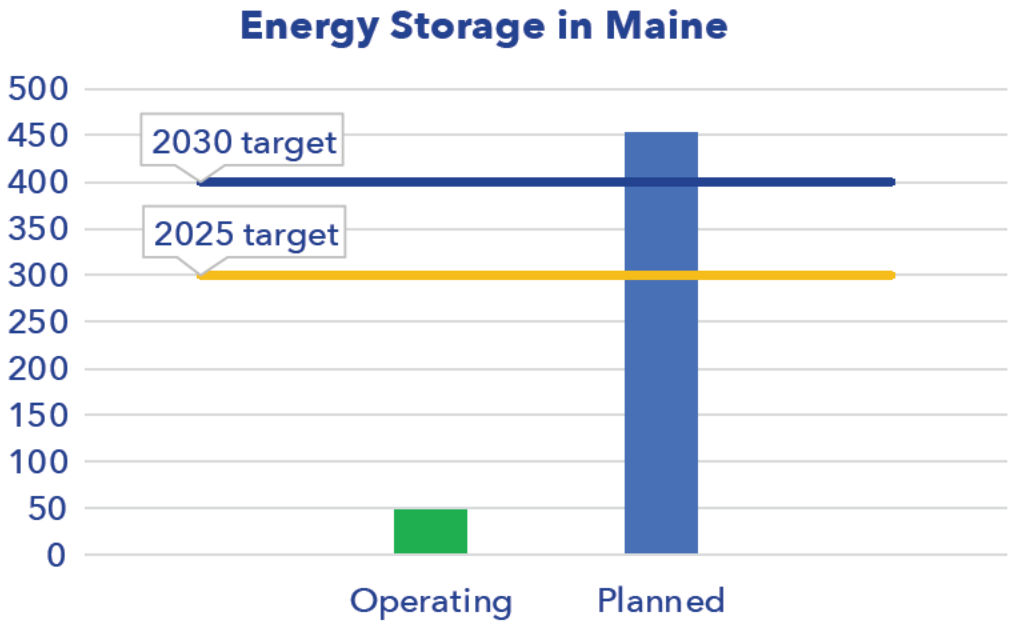
- The Industrial Task Force held its first meeting in September to promote collaboration, innovation and grant opportunities to support greater energy efficiency in the industrial sector and the reduction of industrial and large business emissions. More information can be found at this website:

Industrial Innovation Task Force | Office of Policy Innovation & Future (maine.gov)

Encourage Highly Efficient Combined Heat and Power (CHP) Facilities

Analyze CHP policies

- The Industrial Task Force is considering CHP policies as part of its scope.



STRATEGY D
Grow Maine's Clean-Energy Economy and Protect Our Natural-Resource Industries

New investments for clean energy careers, innovation

With a target of 30,000 clean energy and energy efficiency jobs in Maine by 2030, the state is taking steps to invest in clean energy workforce and innovation. This year, two Maine startups received $250,000 awards from the first Clean Energy Innovation Challenge through the Maine Technology Institute. Next year, the State will launch the Clean Energy Partnership with industry and education partners to support workforce development for clean energy careers, create training, internship and apprenticeship programs, and develop an online platform to attract workers, share training opportunities, and highlight job opportunities in clean energy.

Currently, there are an estimated 14,000 clean energy and energy efficiency workers in Maine. The Governor's Energy Office (GEO) is working to assess Maine's clean energy jobs in 2020 and trends for 2021, to identify pandemic impacts and opportunities for growth. This report will be released in 2022.

PROGRESS UPDATE

Take Advantage of New Market Opportunities

Support Maine's natural resource economies to adapt to climate change impacts

- $30 million in federal funds through Governor Mills' Maine Jobs & Recovery Plan will allow Maine seafood dealers and processors to upgrade their infrastructure ($10 million) and help Maine farmers and food processors upgrade aging infrastructure ($20 million). The pandemic has served as a powerful catalyst as consumers have sought out, and innovative producers have developed, new ways of purchasing Maine-grown foods. Expansion of core processing infrastructure could increase Maine's agriculture and seafood production capacity, unlock new market opportunities, and improve their resilience to climate effects or market disruptions.

Grow Maine's forest-products industry through bioproduct innovation

- $20 million in federal funds through the Maine Jobs & Recovery Plan for The Forestry Recovery Initiative, which will help forest product innovation and the development of climate-friendly building materials such as wood-fiber insulation and cross-laminated timber. The Initiative will be administered by the Maine Technology Institute (MTI) to provide grants to Maine loggers, foresters, lumber yards, and other members of Maine's forest products sector.

Establish the University of Maine as the coordinating hub for state-applied research on forestry, agriculture, and natural land-related climate concerns

- The State and University of Maine are developing a framework for a hub of state-applied research in forestry, agriculture, and other natural resources in support of Maine climate adaptation and mitigation goals. To inform this work, they are assessing how other states coordinate and monitor scientific research in support of climate action, and the role of universities, particularly the land grants, in achieving successful outcomes.

Increase the amount of food consumed in Maine from state food producers from 10% to 20% by 2025 and 30% by 2030

- The pandemic has served as a powerful catalyst for consumers to seek out, and innovative producers to develop, new ways of purchasing Maine-grown foods. The significant investments previously mentioned in the agricultural and seafood sector will support the growth of Maine food products.
- The Department of Agriculture, Conservation and Forestry's "Real Maine" promotion program launched a wholesale page in October specifically aimed at connecting farmers and food producers with wholesale/business-to-business capacity with institutional (including K-12) and retail clients.

Launch the Maine Seafood Business Council by 2022.

- The EDA-funded SEA Maine (SeaMaine - Seafood Economic Accelerator for Maine) market development committee recently issued an RFP for consulting services to research and develop recommendations regarding how a Maine Seafood Council can build off existing efforts. This is anticipated to be completed mid-2022.

Clean-Energy Jobs and Businesses in Maine

Clean energy economy workforce initiative (by 2022)

- $8 million from the Maine Jobs & Recovery Plan was allocated to advance clean energy partnerships and initiatives to grow workforce and innovation in Maine's clean energy sector, in support of Governor Mills' goal of 30,000 clean energy jobs in Maine by 2030.

Clean tech innovation support (by 2022)

- In August, two Maine companies earned $250,000 awards through the first "Maine Clean Energy Innovation Challenge" through the Maine Technology Institute.

Shovel-ready Infrastructure Projects (by 2021)

- Through the Community Resilience Partnership and the Maine Infrastructure Adaptation Fund, the state will identify a pipeline of shovel-ready infrastructure projects.

Rising Renewable Energy Star: Jessie Rule

Scarborough native Jessie Rule witnessed climate change's impact on Maine's fishing families firsthand as the daughter of a lobsterman. Her coastal childhood experiences and learning about climate change effects on Maine's ocean, land and people inspired the now 25-year-old to take climate action and pursue a career in renewable energy.

After earning a B.S. in Ecology and Environmental Science from University of Maine, Jessie volunteered with Americorps, promoting energy efficiency. Jessie joined Revision Energy's Montville branch in 2019 as a solar installer. When she's not leading solar installations on rooftops around the state, Jessie is training to become a licensed electrician through Revision's in-house Energy Electrical Apprentice Program.

"The best part about installing a solar system is walking away knowing that the customer is making their own electricity, and quite possibly making money via credits. Many customers are surprised to learn that their system is immediately operational. I love driving around Maine and seeing arrays that I have installed or been a part of."

STRATEGY E
Protect Maine's Environment and Working Lands and Waters: Promote Natural Climate Solutions and Increase Carbon Sequestration

Historic funds allocated for Land for Maine's Future program

Maine's natural and working lands and waters are key to the state achieving its carbon neutrality commitment by 2045. Maine's percentage of conserved lands is estimated at 20.4 percent, based on a 2019 report. To support the climate plan's land conservation goal of 30% by 2030, the biennial state budget allocated $40 million for the Land for Maine's Future Program, the state's primary funding vehicle for conserving land for its natural and recreational value. These funds will leverage millions in additional dollars from both federal conservation programs and private funds.

PROGRESS UPDATE

Protect Natural and Working Lands and Waters

Increase by 2030 the total acreage of conserved lands in the state to 30%

- Increase by 2030 the total acreage of conserved lands in the state to 30%.
- State agencies continue to work with partners to complete important conservation projects, including approximately 40,000 acres in 2021.
    - Maine Department of Inland Fisheries and Wildlife (MDIFW) has added 900+ acres to its Wildlife Management Areas and land holdings since July 2021.
    - MDIFW has worked with partners Maine Nature Conservancy and Appalachian Mountain Club to secure conservation of approximately 13,000 acres along the Spring and Narraguagus Rivers and 26,000 acres in the headwaters of the Pleasant River.
    - The Bureau of Parks and Lands (at the Department of Conservation, Agriculture and Forestry) is working with conservation partners on more than 15 potential land conservation projects across Maine.
    - In collaboration with the Rangeley Lakes Heritage Trust, a funding proposal to conserve more than 13,000 acres near Rangeley has been submitted to the federal Forest Legacy Program.
- Governor Mills proposed, and the Legislature approved, a $40 million investment in the biennial budget to replenish the Land for Maine's Future fund. This includes $4 million for farmland protection and an additional $4 million for protecting working waterfronts. LMF investments will leverage at least $40 million in public and private matching funds.

Develop conservation targets for Maine's forest cover, agriculture lands, and coastal areas (2021)

- To help inform future conservation targets, the Department of Agriculture, Conservation and Forestry reviewed actions since the 1997 Land Acquisition Priorities Advisory Committee identified goals for acquisition. Results from this review are expected in early 2022.

Focus conservation on high biodiversity areas

- The DMR is creating the framework for distribution of more than $7M in ARPA funds

for stream and tidal restoration projects that improve fisheries, ecosystem function and protect public safety.

Revise scoring criteria for state conservation funding to incorporate climate goals

- State agencies have upgraded the scoring criteria for 6 state grant programs to require applicants to improve climate resilience (such as hazard mitigation and emergency management, resilience, habitat improvement, public safety, and more) into several state conservation programs.

Develop clean energy siting guidelines (by 2022)

- The Agricultural Solar Siting Stakeholder Group will deliver a report to the Legislature in January, suggesting ways to promote solar energy develop while protecting farmland and natural resources in Maine.

Agricultural Solar Stakeholder Group | Governor's Energy Office (maine.gov)

Develop New Incentives to Increase Carbon Storage

Inventory carbon stocks on land and in coastal areas to provide baseline estimates for state carbon sequestration (by 2023)

- The Department of Environmental Protection is preparing the next biennial greenhouse gas emissions inventory update for early 2022. For the first time, the inventory will include gross and net emissions estimates.
- A Maine Coastal Carbon group, which includes the Department of Environmental Protection and Department of Marine Resources, has completed an initial inventory of coastal carbon (including salt marshes). The EPA, with Maine state agencies and other partners, has convened a New England Coastal Carbon group to complete a similar regional inventory.

Engage stakeholders to develop a voluntary, incentive-based forest carbon program for woodland owners of 10 to 10,000 acres (by 2022); Financial incentives for climate friendly land management practices; Update the Open Space Current Use Taxation Program and maintain the Tree Growth Tax Law

- The Governor's Task Force on the Creation of a Forest Carbon Program has made recommendations to encourage forestland management practices that increase carbon storage specifically on woodland owners of 10 to 10,000 acres while maintaining harvest levels overall.
- The Task Force recommendations include to "Encourage, promote, and incentivize the voluntary adoption of climate-friendly forest management practices" and "Promote climate-friendly timber harvesting practices and support the use of low-impact harvesting equipment".
- The recommendations also include to "Identify a suite of potential changes to the Open Space Current Use Taxation program that integrate carbon management elements into the program."

Engage in regional discussions about multi-state carbon programs

- Maine leaders have participated in early regional multi-state discussions about shared goals and policies related to carbon sequestration and potential future program opportunities.

Expand Outreach to Offer Information and Technical Assistance

Increase technical service provider capacity to deliver data, expert guidance, and support for climate solutions to communities, farmers, loggers, and foresters (by 2024)

- Since July, Maine Department of Inland Fisheries and Wildlife has met with 57 private landowners representing 34,755 acres to review land management techniques focused on habitat enhancement and restoration.
- The Maine Natural Areas Program has coordinated the review of more than 500 forest management plans, which include management guidelines for plants, animals and habitats vulnerable to climate change and detection and response to invasive plants.
- The Maine Forest Service has launched an Invasive Plant Academy with the Maine Natural Areas Program to enhance knowledge and control of invasive plants that threaten Maine's habitats and forest economy.

- The Department of Environmental Protection has supported farmers during droughts in 2020 and 2021 to encourage water conservation, off-stream storage development, and soil health improvement, and to improve overall farm resiliency to dry conditions.
- The Department of Marine Resources is collaborating with the City of Bath to address the effects of sea level rise on water quality, which in turn impacts fish spawning and nursery habitats.
- The Coastal Program is funding the Casco Bay Shellfish Working Group to create an information exchange for use by harvesters and municipalities to assist industry in adapting to climate change impacts.
- The Coastal Program's new Tidal Restriction Atlas has identified more than 750 road crossings that are vulnerable to climate conditions.

Launch the Coastal and Marine Information Exchange (by 2024)

- There are several proposals under development for a potential coastal and marine information exchange, including as part of the research and monitoring coordinating hub and they are incorporated into the "coordinating hub" concept in recommendation four.

Enhance Monitoring and Data Collection to Guide Decisions

Establish a "coordinating hub" for key climate change research and monitoring (by 2024)

Create the framework and begin pilot for a coordinated, comprehensive monitoring system (by 2024)

- The state and University of Maine are collaboratively developing a hub to coordinate climate research and monitoring activities across Maine. The University of Maine recently received private funding to support initial work in the marine sector to coordinate the initial phase of building the hub.
- State agencies and research partners are engaged in more than a dozen long-term monitoring efforts related to climate change, including:
  - Air and freshwater quality (Department of Environmental Protection, Maine Center for Disease Control)
  - Enhanced and coordinated ocean acidification monitoring, including the addition of pH, the partial pressure of carbon dioxide (pCO2), salinity, and dissolved oxygen sensors by the Environmental Monitoring Program in Boothbay Harbor (Department of Marine Resources)
  - Eelgrass and salt marsh vegetation mapping along Maine's coastline, beginning with the coast south of Casco Bay in 2021 (Department of Environmental Protection, Maine Department of Marine Resources).

Incorporate climate research and climate change-related technologies into Maine's research and development priorities

- In August, two Maine companies earned $250,000 awards through the first "Maine Clean Energy Innovation Challenge" through the Maine Technology Institute.

STRATEGY F
Build Healthy and Resilient Communities

Direct support for local climate, clean energy planning

Building on local climate planning pilot projects in eight communities in Cumberland, Sagadahoc and Aroostook counties, GOPIF in December 2021 is launching the Community Resilience Partnership to work with municipal and tribal governments across Maine to reduce emissions and plan for climate effects. The Partnership has a target of enrolling 100 communities in 2023.

PROGRESS UPDATE

Empower Local and Regional Community Resilience Efforts

Provide state leadership for robust technical assistance and funding to communities (by 2024)

- $4.75 million from the biennial budget will create the Community Resilience Partnership, which will deliver local and regional planning grants for communities to prepare for climate change effects, reduce carbon emissions, and transition to renewable energy.
- This program learns from and builds upon GOPIF's ongoing Community Resilience Pilot Project which leverages regional service providers and implementation funding to support municipal and regional climate adaptation planning and action.

Adopt Official Sea-Level Rise Projections

Incorporate official state sea-level rise projections into regulations (by 2022)

- LD 1572, Resolve, To Analyze the Impact of Sea Level Rise, was signed by Governor Mills in June 2021. A review of Council and other stakeholder recommendations to identify sections of statute and rules for revision will be delivered to the Legislature in January 2022. Development of rules, policy, and guidance is anticipated through 2024.
- Maine Emergency Management Agency has conducted a preliminary review of Title 37-B Statute and is drafting revision recommendations at this time.

Emphasize Resilience Through Land-Use Planning and Legal Tools

Develop and implement updated land-use regulations, laws, and practices to enhance community resilience to flooding and other climate impacts (by 2024)

- Southern Maine Planning and Development Commission is developing a model coastal Resilience Ordinance to Protect Maine's Coastal Cities, Towns and Residents; funded by a Coastal Communities grant, this model ordinance is in final review and will be finalized with input from the analysis provided to the Legislature pursuant to LD 1572.

Strengthen Public-Health Monitoring, Education, and Prevention

Develop and implement more robust public-health monitoring, education, and prevention practices (by 2024)

- Maine CDC received a 5-year grant to advance public health initiatives related to extreme temperatures and pollen exposure. CDC will develop a dashboard of data related to climate change's health impacts on vulnerable populations, a guidebook and comprehensive public education campaign to help communities become more resilient to extreme temperature events; and a statewide pollen monitoring network.
- Sagadahoc County Emergency Management Agency has partnered with Maine CDC and MEMA to update its extreme temperature response plan, and is engaged in assessing community needs and vulnerabilities through a stakeholder process. Maine CDC and MEMA will work with 2-3 other counties this year to support similar planning and capacity-building activities around extreme temperature response.
- Maine CDC has published near real-time data on the Maine Tracking Network describing daily and weekly counts of heat- and cold-related illnesses at the state and county levels, and is working with the State Climatologist to produce modeled weather data matched to the same time and geographic units as the available health data.

EQUITY UPDATES

Advance Equity Through Maine's Climate Response

- The Equity Subcommittee of the Maine Climate Council was created in Maine's four-year climate action plan, *Maine Won't Wait*.
- It is tasked with setting equity outcomes for climate actions, monitoring progress and making recommendations to the Council to ensure programs and benefits reach diverse and isolated populations and communities.
- Over the past 8 months, the Equity Subcommittee has met to discuss *Maine Won't Wait*, the state's four-year climate action plan, and has developed draft recommendations for ensuring that all people in Maine can benefit from the state's actions to reduce the harms of climate change.
- The Equity Subcommittee will deliver initial recommendations to the Maine Climate Council early 2022.
- In addition to the work of the equity subcommittee, LD1682 directs the state to apply equity in agency decision making through the adoption of a definition of environmental justice (EJ), environmental justice populations, and frontline communities, and to apply those definitions to agency decision making. GOPIF will convene an EJ stakeholder conversation on December 7, 2021.

STRATEGY G
Invest in Climate-Ready Infrastructure

Infrastructure funding will support climate resilience

With approximately $1.5 billion in funding coming to Maine through the Infrastructure and Jobs Act, the opportunity to invest in Maine's infrastructure to improve climate resilience has never been greater. MaineDOT has recently received a $1 million federal grant to assess the vulnerability of state infrastructure to sea level rise and inland flooding. The information will also be made available to help Maine communities protect their critical infrastructure and improve their resilience to effects of climate change.

PROGRESS UPDATE

Assess Climate Vulnerability and Provide Climate-Ready Design Guidance

Complete a statewide infrastructure vulnerability assessment; develop and implement design standards for resilience in infrastructure projects (by 2023)

- MaineDOT earned a $1 million grant from the U.S. Economic Development Administration to develop a hydrodynamic sea level rise model and conduct a statewide vulnerability assessment.
- With $3 million from the Maine Jobs & Recovery Plan, Maine DEP will award grants to upgrade municipal culverts at stream crossings.

State Infrastructure Adaptation Fund & Predevelopment Assistance

Launch a State Infrastructure Adaptation Fund and predevelopment assistance program (by 2022)

- With $20 million from the Maine Jobs & Recovery Plan to support adaptation and resilience of state and local infrastructure vulnerable to climate change, Maine DOT is developing an Infrastructure Adaptation Fund to directly support projects (project scoping, design, and implementation/construction) that adapt critical infrastructure to reduce vulnerability to climate change.

STRATEGY H

Engage with Maine People and Communities about Climate Impacts and Program Opportunities

Continuing *Maine Won't Wait* momentum into 2022

Over its first year, *Maine Won't Wait* inspired Maine people, communities, and organizations to take action to address climate change. New initiatives like the Maine Climate Corps, educational offerings, and a public awareness effort, are primed to keep the momentum going through 2022.

PROGRESS UPDATE

Raise Awareness About Climate-Change Impacts and Opportunities

Launch a multifaceted, ongoing communications effort (by 2021)

- An awareness campaign to promote *Maine Won't Wait* and actions that Maine people, communities, and businesses can take to support it starts in December 2021. See new website at mainewontwait.org.

Increase Public Education Offerings Related to Climate and Energy

Develop enhanced educational opportunities for climate science and clean energy careers in Maine public schools; Launch a process to engage key stakeholders in next steps (by 2021)

- The Maine Department of Education is developing interdisciplinary, project-based PreK-12 climate science modules that will be available to teachers in March 2022.
- The Maine Legislature will consider a bill to establish a state climate education grant program to increase professional learning in best practices in climate science education.

Start the "Maine Climate Corps" for Climate-Related Workforce Development

Launch a Maine Climate Corps program (by 2023)

- Per LD 722, Volunteer Maine is developing a plan for Maine Climate Corps to deliver to the Environment and Natural Resources Committee of the Maine Legislature by January 31, 2022.

Recognize Climate Leadership by Maine Businesses and Organizations

Launch the Governor's Climate Leadership Council (by 2021)

- Maine businesses and non-profit organizations have faced unprecedented challenges due to the COVID-19 pandemic. As the economy recovers, many are taking climate actions or considering opportunities for climate leadership. With funding available in 2022 to incentivize that leadership for a variety of private and nonprofit organizations, the Leadership Council will be launched in Spring 2022.

THE MEMBERS OF THE MAINE CLIMATE COUNCIL

Co-Chairs

Hannah Pingree, Director of the Governor's Office of Policy Innovation and the Future

Melanie Loyzim, Commissioner of the Department of Environmental Protection

Members of the State Legislature:

Representative Lydia Blume D-York

Representative Jim Thorne, R-Carmel

Senator Chloe Maxmin, D-Lincoln

Senator David Woodsome, R-York

Members of the Executive Branch, or their designees:

Amanda Beal, Commissioner of the Department of Agriculture, Conservation and Forestry

Dan Burgess, Director of the Governor's Energy Office

Judy Camuso, Commissioner of the Department of Inland Fisheries and Wildlife

Major General Doug Farnham, Commissioner of the Department of Defense, Veterans and Emergency Management

Kirsten Figueroa, Commissioner of the Department Administrative and Financial Services

Designee: Elaine Clarke, Chief Facilities Officer

Laura Fortman, Commissioner of the Department of Labor

Designee: Kimberly Moore, Director of the Bureau of Employment Services

Heather Johnson, Commissioner of the Department of Economic and Community Development

Patrick Keliher, Commissioner of the Department of Marine Resources

Pender Makin, Commissioner of the Department of Education

Designee: Scott Brown, Director of School Facilities

Bruce Van Note, Commissioner of the Department of Transportation

Jeanne Lambrew, Commissioner of Department of Health and Human Services

Designees: Nirav Shah, Director of the Maine Centers for Disease Control and Prevention

Susan Breau, Hydrogeologist - Water Resources Team Manager, Maine Centers for Disease Control and Prevention

Members of Quasi-Government Agencies:

Dan Brennan, Executive Director of the Maine State Housing Authority

Michael Stoddard, Executive Director of Efficiency Maine Trust

Members Representing Environmental Nonprofit Organizations or Foundations:

Alexander Buck, President, Horizon Foundation

Kate Dempsey, Maine State Director for The Nature Conservancy

Members with Expertise in Climate Change Science:

Ivan Fernandez, Distinguished Professor at the University of Maine's Climate Change Institute & School of Forest Resources

Susie Arnold, Marine Scientist, Island Institute

Members with Expertise in Resilience, Climate Change Adaptation, Emergency Management, or Disaster Risk Reduction:

Judy East, Executive Director of the Land Use Planning Commission

Other Members:

Noël Bonam, State Director, AARP Maine

Jessie Perkins, Executive Director of the Bethel Chamber of Commerce

Expert on State's Energy Sector: Ken Colburn, energy and climate expert

Representative of Manufacturing Industry: Benedict Cracolici, Energy Manager for Sappi North America

Representative of Maine's Tribes: Ambassador Maulian Dana, Penobscot Nation

Representative of Municipal Government: Steven C. Golieb, Town Councilor for the Town of Millinocket

Representative of Small Business: Daniel Kleban, Owner of Maine Beer Company

Representative of Agriculture: Melissa Law, Owner of Bumbleroot Organic Farm in Windham

Representative of Building and Construction Trades: Matt Marks, Executive Director of the Associated General Contractors of Maine

Representative of Marine Fisheries: Patrice McCarron, Executive Director of Maine Lobsterman's Association

Representative of Business: Jeff Saucier, Environmental Control for McCain Foods USA

Representative of Labor: Matt Schlobohm, Executive Director of the Maine AFL-CIO

Representative of Forest Industry: Patrick Strauch, Executive Director of the Maine Forest Products Council

Representative of Maine Youth: Ania Wright, Recent Graduate, College of the Atlantic

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