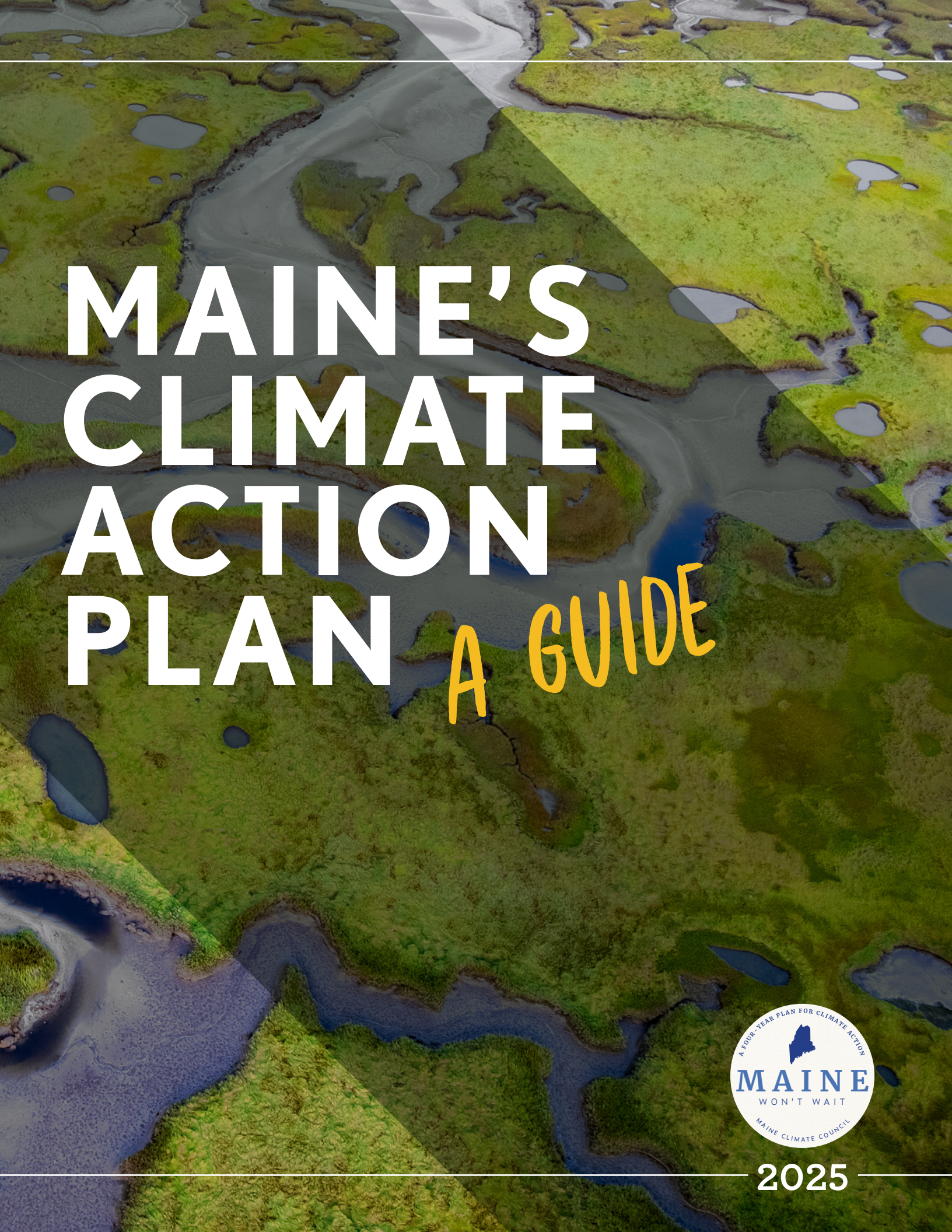


MAINE'S CLIMATE ACTION PLAN

A GUIDE

A FOUR-YEAR PLAN FOR CLIMATE ACTION

MAINE WON'T WAIT

MAINE CLIMATE COUNCIL

2025

TABLE OF CONTENTS

Maine Won't Wait is the work of the Maine Climate Council, which Governor Janet Mills and the Legislature created in 2019.

The council consists of:

- Bipartisan Local and State Officials
- Members of the Executive Branch
- Members of Quasi-Government Agencies
- Members Representing Non-Profits and Foundations
- Scientists
- Resilience Experts
- Industry Representatives
- Youth Representative
- Representative of Maine's Tribes

Together, they developed a four-year plan to address the impacts of climate change in Maine. That plan, Maine Won't Wait, outlines the challenges the state faces from climate change, along with strategies and action steps to tackle them.

To the people of Maine,

When I became governor, I promised that Maine would not wait to take action to protect our state from the ravages of climate change. I promised that we would fight to preserve this special place we call home for the benefit of future generations.

To lead that fight, we created the Maine Climate Council and mobilized experts to write *Maine Won't Wait*, our state's first climate action plan. That plan set ambitious goals to reduce our greenhouse gas emissions over a span of four years. In 2024, the Climate Council updated the plan, building on the progress we had made and recommending more common-sense strategies to reduce emissions, enhance resilience, and grow our economy over the next four years.

Thanks to Maine people, we've met or exceeded many of our climate action goals since the first *Maine Won't Wait* plan was published in 2020:

- We've exceeded our goal of installing 100,000 heat pumps statewide and set a new, more ambitious target of installing 275,000 heat pumps by 2027;
- We've reduced the Maine households that are dependent on heating oil from 70 percent in 2010 to 50 percent in 2024;
- We've grown our clean energy economy to employ more than 15,000 people in rewarding, good-paying jobs;
- We've reduced our greenhouse gas emissions by 30 percent since 1990;
- And we've made the largest investment in state history in our infrastructure, homes, and businesses to make them more resilient to the impacts of extreme weather.

That progress is more important than ever before. Decades ago, our state used to average just one disaster or emergency declaration per year. Between March of 2022 and May of 2024, we experienced nine natural disasters, each devastating enough to merit Presidential Major Disaster or emergency declarations. We're undertaking historic work to rebuild our communities, but as the effects of climate change worsen, we know that there will be more storms ahead that threaten the lives and livelihoods of Maine people.

Whether you're a student, a teacher, or someone who is just interested in learning more about the full plan before you read it, this "Guide to Maine's Climate Action Plan" explains why climate action is important, what Maine's most recent climate goals are, and the climate science we used to determine them. It also features the inspiring stories of Maine people taking climate actions themselves.

By reading this guide, you're taking an important step toward preserving our natural resources and protecting the health and safety of all the people who call this precious place home.

Thank you,

Governor Janet Mills

Governor Mills with Amara Ifeji (left), Youth Representative for the Maine Climate Council

MAINE CLIMATE

Reduce Greenhouse Gas Emissions

Greenhouse gases trap heat in the atmosphere, leading to rising global temperatures and shifts in weather patterns, which impact ecosystems, organisms, and people. The strategies in this plan aim to reduce greenhouse gas emissions, helping Maine contribute to the United Nations' goal of limiting global warming to 1.5°C (2.7°F) by the end of this century.

Protect and Create Jobs

A changing climate negatively impacts some jobs, but it also creates new opportunities, particularly in sectors focused on green technology and clean energy. The strategies in this plan aim to protect jobs at risk from climate change while fostering the growth of businesses that promote climate solutions.

COUNCIL GOALS

Strengthen Our Resilience

Resilience is the ability to prepare for, withstand, and recover from challenges. The strategies in this plan focus on building systems to ensure that Maine's people, environment, economy, and communities can adapt to climate change.

Support All Maine People

Climate change affects everyone, but some individuals and communities experience its impacts more directly, particularly rural, older, and lower-income residents. The strategies in this plan aim to bring climate action to all Maine people with a focus on those most at risk.

The Maine Climate Council established seven strategies to take action toward these four goals, focusing on:

- improving transportation,
- upgrading buildings,
- transitioning to clean energy,
- creating jobs and growing Maine's economy,
- protecting lands and waters,
- strengthening community resilience, and
- engaging people.

Maine Greenhouse Gas Emissions from Fossil Fuel Combustion by Sector

49%
Transportation

19%
Residential

12%
Commercial

Heating and Cooling of Buildings in Maine

10%
Industrial

9%
Electric Power Generation

1%
International Bunker Fuels*

Source: Maine Department of Environmental Protection 10th Biennial Report on Progress toward Greenhouse Gas Reduction Goals

* fuel used for international aviation and maritime transport

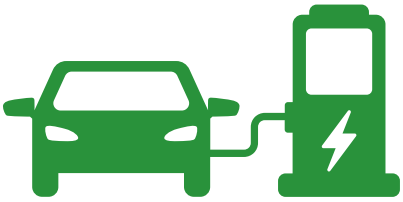

54
4 H
metro
HUSKY LINE
1814


chargepoint
ELECTRIC VEHICLE CHARGING ONLY

Strategy A

IMPROVING TRANSPORTATION

49% of fossil fuel emissions in Maine are from cars and trucks



Electric vehicles (EVs) are the most effective way to cut greenhouse gas emissions from transportation.

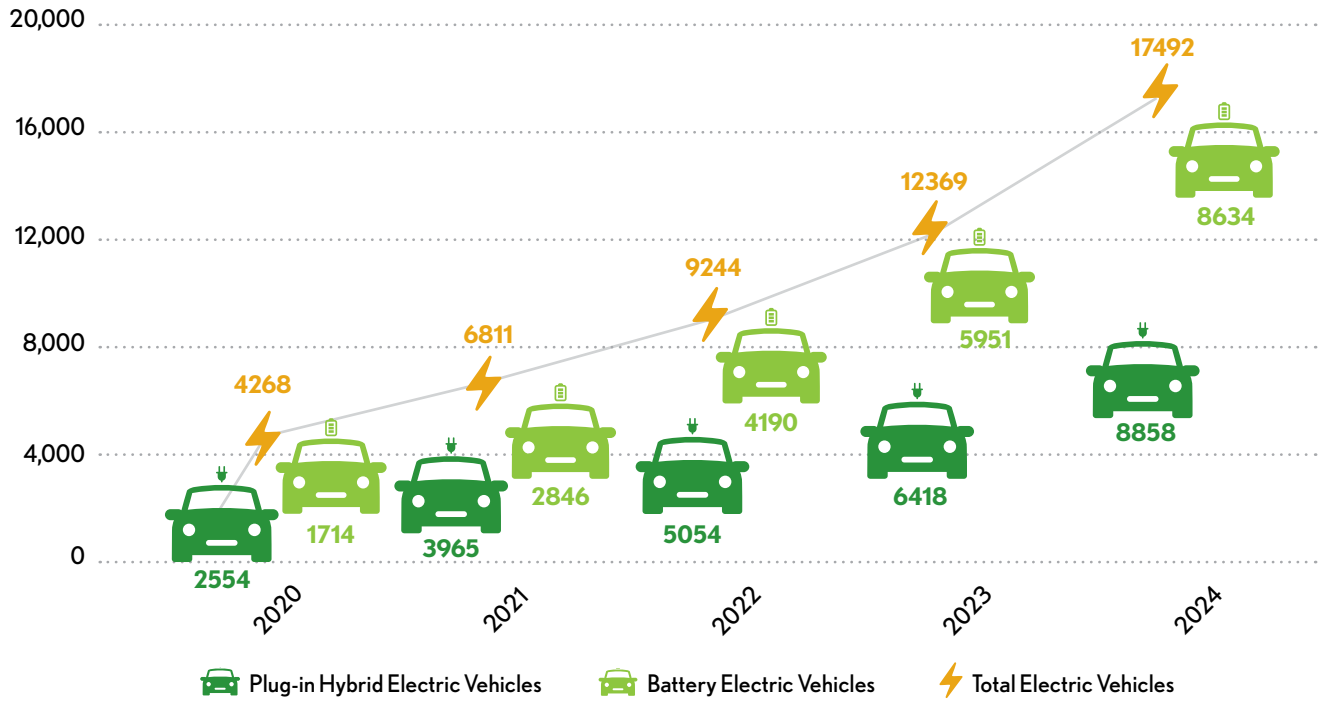
6.5%

New Vehicle Registrations are EVs (2024)

(up from 1.5% in 2020)

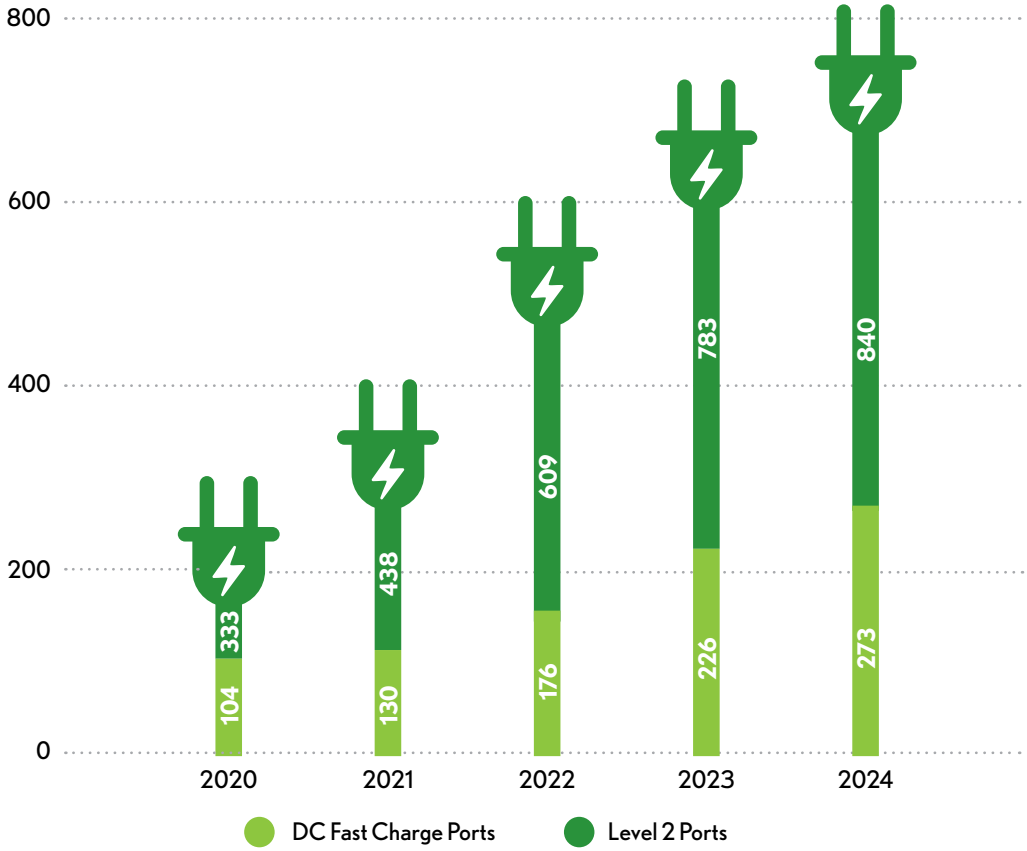
Active transportation like biking and walking connects everyday life with climate action.

Electric Vehicles on the Road in Maine



Source: Maine Department of Environmental Protection and Atlas Public Policy

Public EV Charging Ports



Source: Atlas Public Policy and Alternative Fuels Data Center

Solar panels power these EV charging stations at Oxford Hills High School in Norway.

PEDAL POWER:
HOW A UNICYCLING COLLEGE STUDENT KICKSTARTED A TRANSPORTATION REVOLUTION

Avery Seuter, 22, is on a mission to expand his town's transportation infrastructure. It all started with a unicycle.

Avery, of Wells, spent his college summers working as a tour guide on a lobster boat in Ogunquit. To save money on parking and evade summer traffic, he drew on skills from the circus camp he attended as a child and began unicycling the 1.5 miles to the lobster boat. When school resumed in the fall, he unicycled the 2 miles to York County Community College (YCCC), where he was studying culinary arts.

"With biking and walking, you're not burning gasoline. It's the cleanest form of transportation you can get," Avery said.

Avery quickly ran into a roadblock with his commute to YCCC – literally. A boulder blocked half of the gate of the pedestrian walkway outside of the campus, making it difficult for bike commuters to pass easily. With his friends, Avery sought help from the Wells town planner, ultimately taking his request to the president of YCCC. Their commitment has paid off: currently, there are plans and funding in place by the Maine Department of Transportation to extend a ten-foot-wide trail from the school to the train station.

Feeling energized, Avery took a semester off to ride his unicycle 2,400 miles on the East Coast Greenway. From Maine to Key West, Florida, Avery raised over $5,000 for the non-profit alliance that coordinates the Greenway – a biking and walking trail that connects 15 states across the eastern seaboard.

After officially becoming the first person to unicycle the East Coast Greenway, Avery felt compelled to push for local

"WHEN I GOT BACK, I WAS LOOKING AT THESE THINGS DIFFERENTLY."

action. "That's when I got really involved with trying to fix the local infrastructure," Avery said. "I got the chance to see towns that did their infrastructure really well. When I got back, I was looking at these things differently."

He began attending Wells Energy Committee meetings. "At these meetings, there's 5 minutes at the beginning and end to talk as a public citizen. That's really a powerful thing," he said.

After attending several meetings, Avery applied to join the committee to help drive local change. He was interviewed by the board of selectmen and officially joined shortly after. "When a young person joins a town committee, it brings a whole new force to get something done," he said.

Avery encourages other young people to attend town meetings to voice their concerns: "But bring something actionable for a committee to do. Present the problem, and try to offer a solution, like adding a bike rack at the post office."

Avery's path in local action is far from over – he was recently elected to the Wells Selectboard, and hopes to revive the town's trolley service, which has been shut down since the pandemic.

Avery's advice to other young folks looking to get involved in local transportation action? "Just find something that you can accomplish to start with. Don't start with a massive project that will take years to do. Find something small to get your foot in the door – like that boulder on the road."

PROGRESS REPORT:

New or used, EVs and plug-in hybrids come with deals like rebates and tax credits.

DEFINITON

Recharge Maine:

The state's initiative to create a reliable and accessible EV charging network to help drivers feel confident traveling across our large and rural state.

With nearly $24 million from a federal grant, Maine DOT will roll out 24 electric buses plus charging infrastructure across Downeast and Acadia.

MaineDOT's Complete Streets policy makes sure roads are safe and usable for everyone—whether you walk, bike, roll, or drive.

GOMAINE

MaineDOT is expanding and promoting GO MAINE, the state's free carpool and vanpool matching service.

Because of GO MAINE:

2.2

Million Miles of Driving Avoided

+

1,000

Ton of Carbon Emissions Prevented

ACTION STEPS TO ACHIEVE OUR GOALS

1 Expand opportunities for people to buy new or used EVs or plug-in hybrid vehicles through rebates, tax incentives, and financing for low-to-moderate income residents.

Put 150,000 EVs and PHEVs on the road in Maine by 2030.

2 Invest in public charging by expanding stations at apartment buildings, large workplaces, and community locations, and adding more fast chargers along highways and within communities.

As part of Recharge Maine, the state is investing over $50 million to install more than 700 new charging ports across Maine by 2028.

3 By 2028, begin testing new zero-emission trucks, buses, ferries, and boats to understand their performance and potential cost savings.

4 Put more funding toward safe and accessible sidewalks and bike lanes.

Identify and map priorities for updating walking and biking routes by 2025.

5 Improve commuting options and make public transportation—such as buses and trains—easier to use by organizing routes, streamlining schedules, and simplifying payment methods.

6 Make sure roads and bridges are ready for extreme and frequent storms.

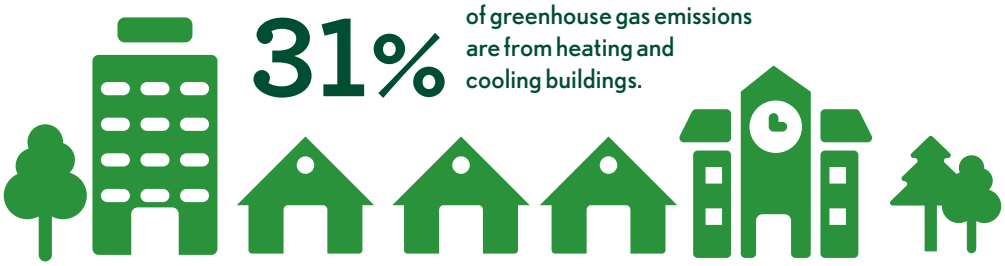
Improve tools and models to identify weak spots in transportation systems and use this information to guide the priorities of local and state planners.


Acadia
Gateway Center
Maine Visitor Information
Inland Explorer Shuttles

Strategy B

UPGRADING BUILDINGS

Maine is the most heating oil-dependent state in the country.



31% of greenhouse gas emissions are from heating and cooling buildings.

$1,000

Efficiency Maine estimates: switching to whole-home heat pumps could save the average Maine home over $1,000 a year vs. oil heat.

$25 Million

Efficiency Maine is putting $25 million toward weatherizing Maine homes—making insulation and air sealing more affordable for low- and moderate-income families.

Maine's population is growing. 38,500 new homes are needed now, with up to an additional 45,800 homes needed by 2030. Maine's future depends on building housing that's affordable and energy efficient.

DEFINITIONS

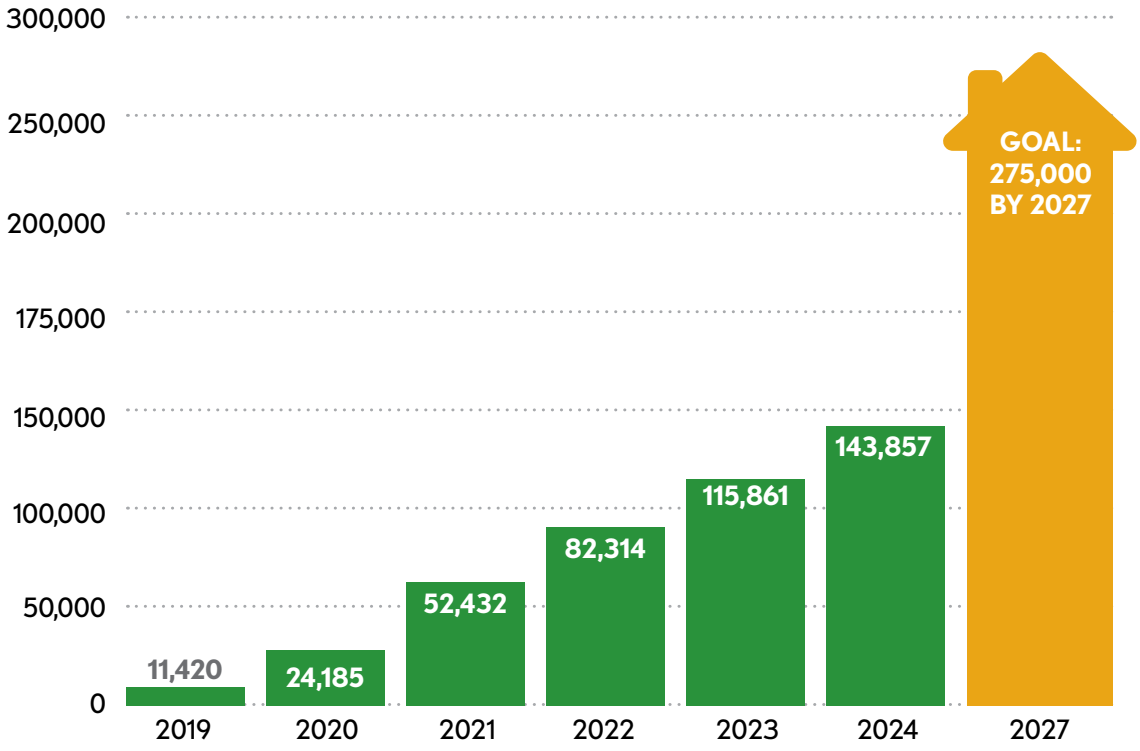
Heat Pump: a heat pump works like a two-way air conditioner. Instead of using energy to create heat or cold air, it transfers it from the surrounding air or the ground (geothermal). Heat pumps are three times more efficient than oil boilers and can provide efficient heat with outdoor temperatures as low as -22°F (-30°C).

Hydrofluorocarbon: a type of greenhouse gas and climate "super-pollutant" commonly used in refrigeration and air conditioning.

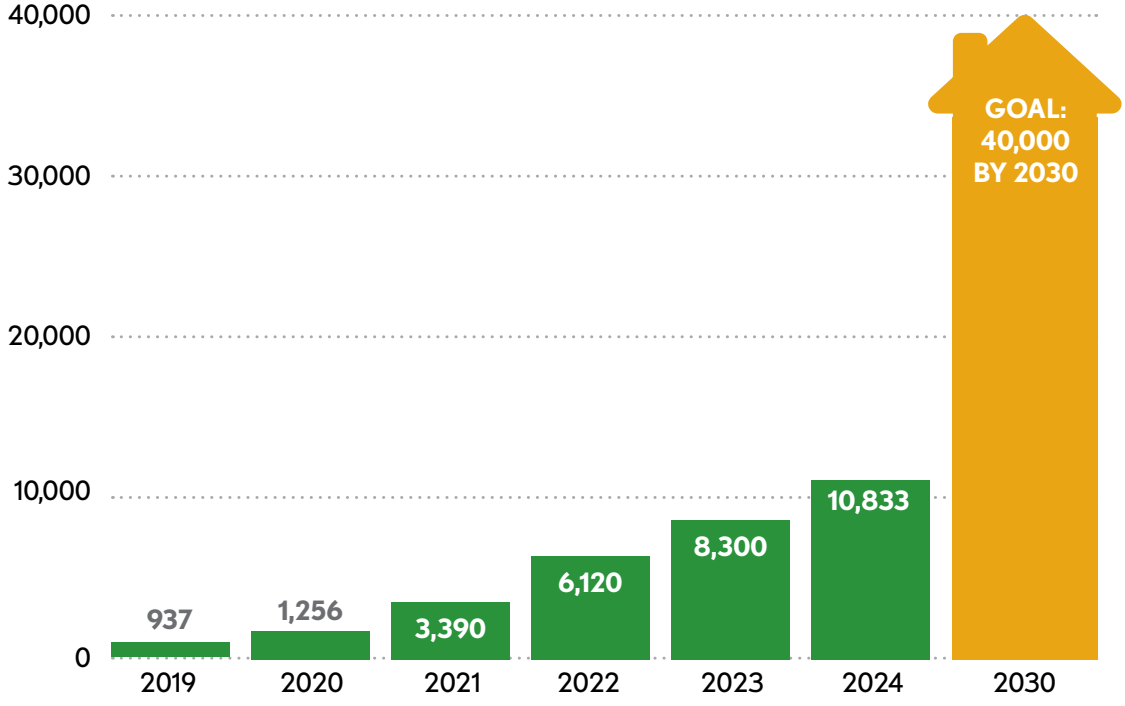
Weatherization: the process of improving homes and other buildings to be more energy efficient, important in reducing fossil fuel emissions from heating and cooling. Examples of weatherization include replacing old and drafty windows and doors, or adding new insulation to walls, ceilings and floors.

Embodied Carbon: emissions associated with the materials, construction and disposal of building products; it accounts for 11% of energy-related global carbon emissions.

New Heat Pumps



New Low-Income Heat Pumps



PROGRESS REPORT:

Maine exceeded its goal early, installing 100,000 heat pumps two years ahead of schedule in 2023.

New target: 275,000 total heat pumps installed statewide by 2027.

In 2010

70%

of Maine homes used heating oil.

By 2023

50%

of Maine used heating oil.

Maine Won't Wait set a goal to weatherize 35,000 homes by 2030—including 10,000 low-income homes.

By 2024, 11,472 homes had been weatherized, and 665 of them were low-income.

2024

Maine passed a law requiring all new affordable housing to meet high energy-efficiency standards.

New affordable homes must rely on electric heating like heat pumps, instead of fossil fuels.

1,500

Homes per year

The goal: build or retrofit 1,500 energy-efficient affordable homes every year.

Maine has adopted the 2021 International Energy Conservation Codes (IECC), leading to energy savings while improving health and safety in new residential and commercial construction.

CLIMATE WIN!

MAINE'S BAN ON CLIMATE-POLLUTING HYDROFLUOROCARBONS KICKED OFF IN JULY 2022, THANKS TO NEW REGULATIONS

HEAT PUMP ENTREPRENEUR

COLE ELLIS

A Mainer with an entrepreneurial spirit, Cole Ellis, 19, of Searsport, seized the opportunity to forge a green career path for himself at an early age — and he's not done yet.

"Maine is important to me because I grew up seeing how beautiful the state can be," he said. "And heat pumps are the most efficient heating source."

Cole owns and operates Keep It Clean Heat Pumps, a business he started as a high school junior in Searsport, with a name his mom helped him devise. Thanks in part to a 40-hour heat pump installation and certification course at Kennebec Valley Community College, funded by the Maine Jobs and Recovery Plan, Cole provides cleaning and air quality services in the Midcoast area to the growing number of heat pump owners to help maximize their home heating efficiency.

"It's important for our generation to get involved with climate change because we're the ones that are going to be living in this environment," he said.

Now a rising sophomore at Thomas College, Cole has two employees and continues to grow his business when he's not at school to keep up with demand. "I would encourage anybody to get into the environmental fields, especially because this is your future."

TO LEARN MORE: WATCH COLE'S VIDEO

ACTION STEPS TO ACHIEVE OUR GOALS

1 Efficiency Maine offers rebates to help homeowners improve their weatherization and heat efficiency through the installation of heat pumps, insulation, and heat pump water heaters.

2 Establish training and technical assistance to support the quick adoption of climate-friendly building codes, aiming for net-zero carbon emissions in new construction in Maine by 2035.

3 Enhance grant and loan programs to support efficiency and renewable energy initiatives in schools and municipal or tribal government buildings.

Advance the Maine DOE's Green Schools initiative to reduce energy costs in Maine's 600 school buildings by installing zero-emissions heating and cooling technologies and renewable energy systems.

Reduce greenhouse gas emissions from existing state buildings by at least 50% by 2034 by installing modern heating/cooling systems, high-efficiency lighting, and weatherization.

4 Reduce embodied carbon emissions by switching to lower-carbon alternative building products, like wood-fiber insulation and structural timber, and by designing buildings to be deconstructed and reused rather than demolished and discarded.


Bingham 10
Brighton 4
Athens 0
151
16

Strategy C

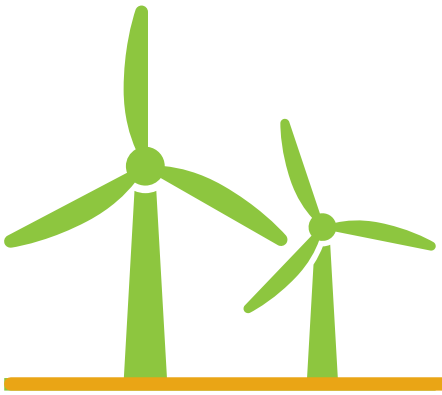
TRANSITIONING TO CLEAN ENERGY

55% of Maine's electricity comes from renewable sources.

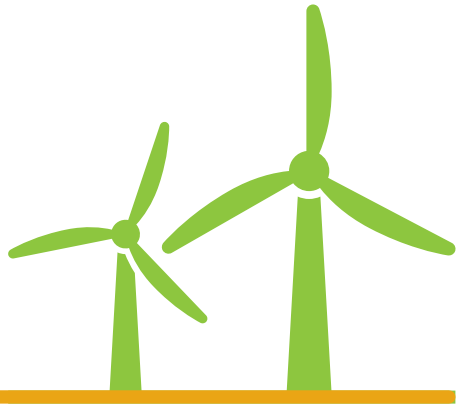
20% Low-income Maine households spend 20% of their income on energy.

4% The average Maine household spends 4% of income on energy.

100% Clean Energy by 2040



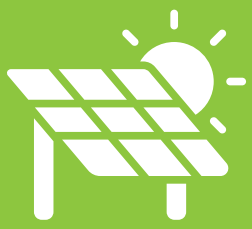
Nearly 70% of New England's wind-generated power was produced by Maine in 2023.



Maine is becoming a national leader in clean energy by pioneering new rules and investments.

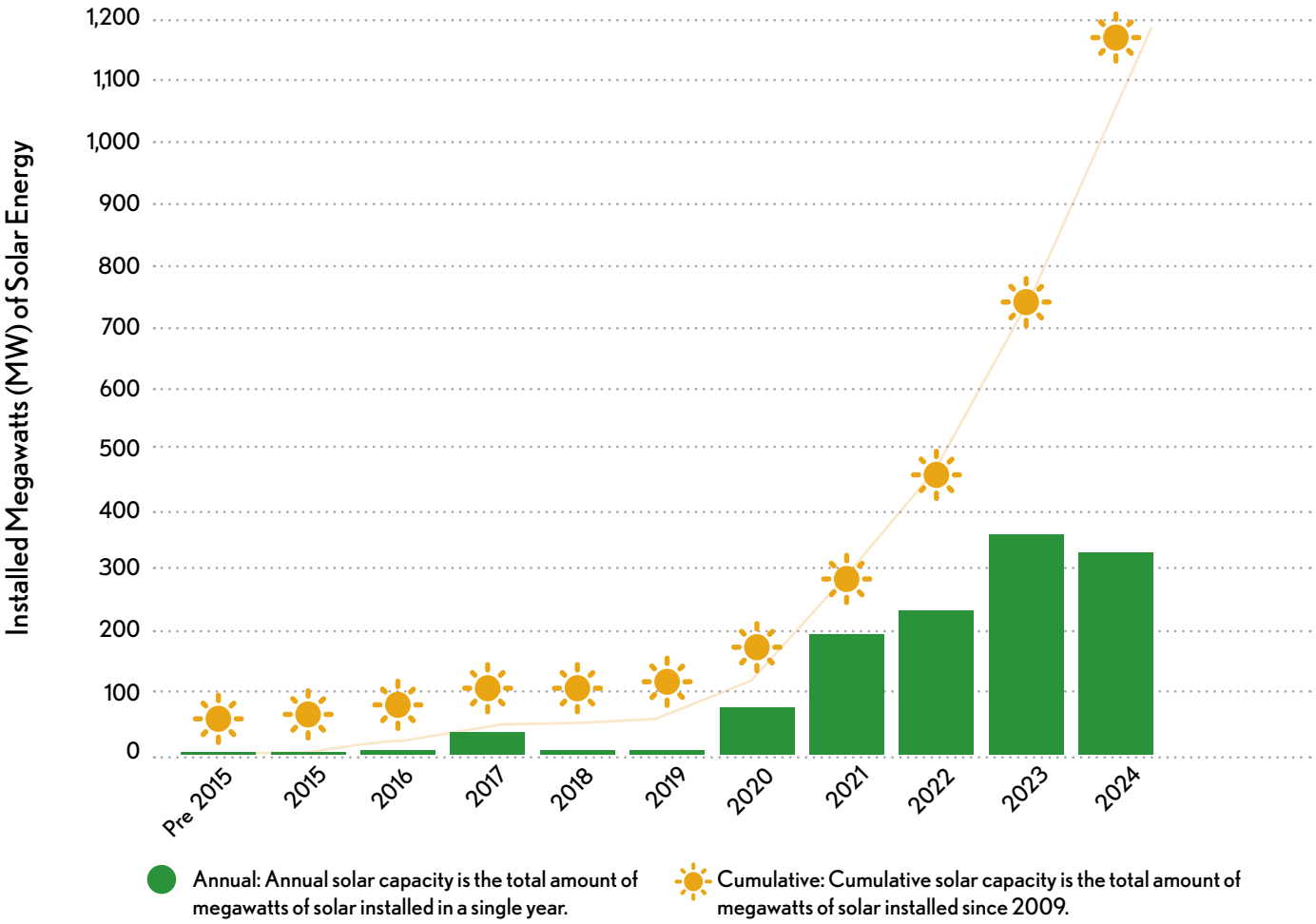
DEFINITIONS

Renewable Energy: Renewable energy comes from sources that can be naturally replenished, such as wind, solar, hydropower and biomass.



Energy Burden: The percentage of their income that a household spends on energy costs.

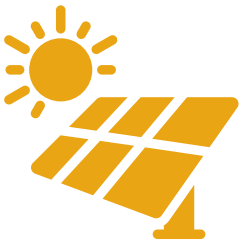
Megawatts of Solar Currently Installed in Maine



Source: Governor's Energy Office. Data from Central Maine Power, Versant Power, ISO-New England, and other sources. Updated October 9, 2024.

The 2,000 new solar panels atop the Jim Robinson Field House at Foxcroft Academy provide enough renewable energy to meet the electrical needs of both the Foxcroft Academy and RSU 68 campuses– the equivalent of burning more than 150,000 gallons of gasoline.

PROGRESS REPORT:



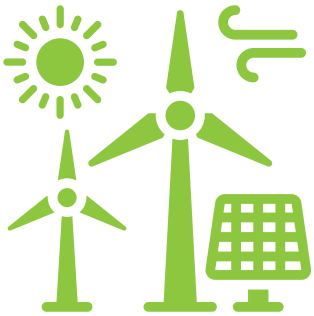
13% of Maine's renewable energy came from solar in 2023

Up from 1% in 2019

That's more than a 13x increase in solar power in just four years.

In 2025, Governor Mills signed legislation to increase the share of renewable and clean electricity used in Maine

90%
Renewable Energy by 2030



Governor Mills set a goal to achieve

100%
Clean Energy by 2040

Renewable energy can be replenished after it is used, like solar, wind, hydropower and biomass energy. Clean energy sources, like nuclear, don't produce greenhouse gas emissions when they're used, but are not naturally replenished.

Maine's 2025 Energy Plan Confirms:

100% clean energy by 2040 is achievable

We are fighting climate change faster

and it's saving Mainers money on energy bills.


WERNER

ACTION STEPS TO ACHIEVE OUR GOALS

1

Reduce energy burden.

Incentives are available through Efficiency Maine to help people get tax credits for clean energy.

Establish an energy coach program to better educate lower-income and underserved people to better understand their options and help them access grants and rebates.

2

Plan and build the infrastructure to have a 100% clean energy grid by 2040 by maximizing federal funds and investing in renewable energy sources.

Ensure the electric grid is increasingly resilient to future storms.

3

As Maine continues to switch from fossil fuels to electricity for heating, cooling, and transportation, its electrical grid will need to be expanded. Using new software and technology to track the grid's needs in real time will help to balance energy use and supply.

4

Continue to grow Maine's clean energy economy by supporting existing workers and providing easy access to apprenticeships.

Create more opportunities in K-12 and higher education to prepare students for green careers.

FROM MYTHBUSTERS TO CLIMATE BUSTER: ONE ENGINEER'S MISSION

Tom Poling, 22, is a self-described geek. Growing up in Readfield, Tom loved watching MythBusters, reading, and learning about anything he could get his hands on.

It's not surprising that Tom knew he wanted to study engineering someday. Tom was always interested in the sciences but grew up in a family that didn't believe in climate change. "From the time I had access to the internet, I was also leaning in that direction," said Tom. But as he progressed through his high school studies, Tom began to notice the impacts that a changing climate had on the world around him.

"We used to get so much snow in the winter, but never the amount of rain we see now," said Tom. "I realized it just isn't supposed to be this way. Lived experience really brought that home to me; that no matter what people are saying on the internet, I see this happening in real time." As he learned more about the science behind climate change, his perspective shifted, and he began to consider how his studies might contribute solutions to the reality of climate change.

Tom arrived at the University of Maine at Orono to study mechanical engineering in 2021 and quickly fell in love with his introductory courses, especially thermodynamics: a branch of physics that studies how heat and energy move through systems. After assisting his professor with their research, Tom knew he wanted to continue on and get a master's degree in engineering. But he also wanted to weave more of his passions into his work, and weave in climate action: "I didn't want to work on abstract, high-minded problems that bring me away from what I really care about."

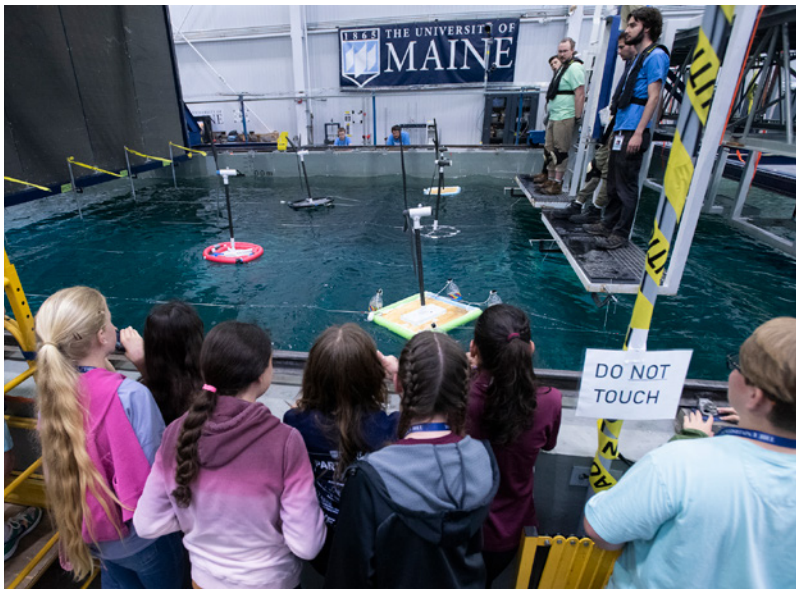
"NO MATTER WHAT FIELD YOU'RE IN, YOU CAN FIND A WAY TO CENTER A CLIMATE SOLUTION IN YOUR WORK. NO MATTER WHAT YOU'RE DOING OR WHERE YOUR INTERESTS LIE: WE ALL HAVE A PART TO PLAY."

Wanting to diversify his studies, Tom spent the summer before his senior year working with the Maine People's Alliance, a grassroots community action organization based in Lewiston. His interdisciplinary internship focused on immigration, housing, climate work, and offshore wind and broadened his understanding of climate action, policy, and how Maine people engage in these issues.

Feeling energized and ready to continue his studies, Tom applied for a graduate research position at UMaine with Dr. Justin Lapp and was thrilled when he was accepted. Part of the Building Science initiative, this position is funded by the Governor's Energy Office to study energy efficiency. In this role, Tom is able to combine housing, energy efficiency – "I get to study refrigeration cycles! I love that!" – and education.

"Electrification is a huge part of this work. Houses in Maine have outdated modes of heating, so there is an obvious transition happening away from that, towards clean energy," said Tom. While he studies to earn his master's in mechanical engineering at UMaine, Tom will contribute towards research to improve electrification and refrigeration in housing to make buildings more comfortable and energy efficient. He also contributes to creating new courses in the Building Science initiative, putting together classes to teach students and technicians about energy efficiency.

After finishing with his master's degree, Tom plans to stay in Maine and continue weaving together his advocacy work with his technical background. He encourages younger students to have an open mind about climate work: "No matter what field you're in, you can find a way to center a climate solution in your work. No matter what you're doing or where your interests lie: we all have a part to play."


THE UNIVERSITY OF
MAINE
DO NOT
TOUCH

Strategy D

CREATING JOBS AND GROWING MAINE'S ECONOMY

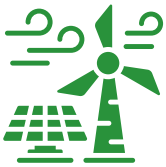
Maine's Climate Solutions = New Jobs & Economic Growth

From clean energy to sustainable materials, tackling climate change means more opportunity across the state.

Climate Innovation
Scientists and engineers are needed to study and create solutions

Wood-Based Plastic alternatives
Careers in sustainable forestry and manufacturing

Solar and Wind Projects
Growing demand for installation and tech roles



Electrifying Transportation
More work in EV maintenance and charging networks

As of 2022, clean energy jobs in Maine have surpassed

15,000

That's over halfway to the goal of

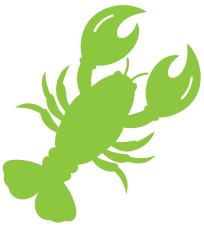
30,000

clean energy workers by 2030

Climate change threatens Maine's heritage industries

Forestry supports 17,000+ jobs, and is vital to rural economies and sustainable materials.

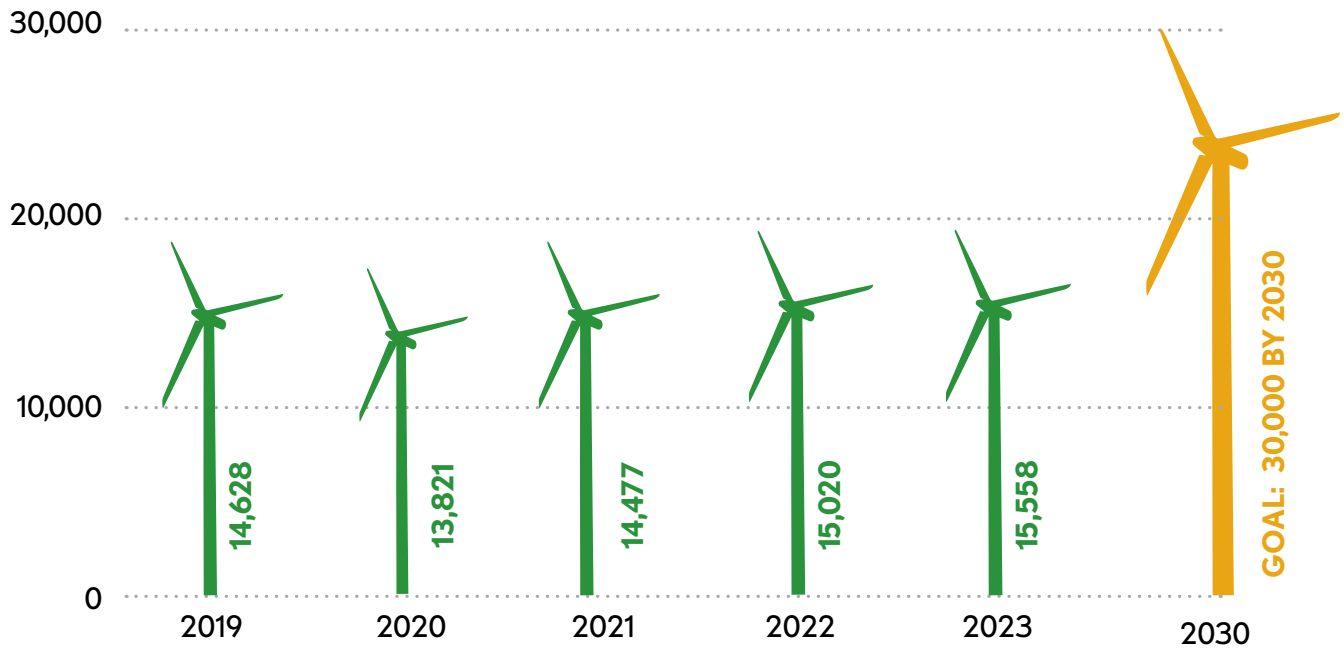
Agriculture supports over 7,600 farms in Maine, 96% of which are family owned. They face extreme weather, droughts, and shifting seasons.



The lobster industry provides 18,000+ jobs and $464 million in revenue and is at risk from rising ocean temperatures and ecosystem changes.

Winter activities brought in $100+ Million in 2023, but winters are now 5°F warmer than a century ago which is impacting ecosystems and economies.

Maine Clean Energy Jobs



Maine Passive House Construction, Inc., based in Bethel, designs and builds energy efficient homes. (credit: Maine Governor's Energy Office)

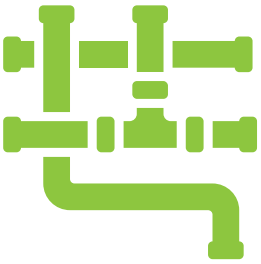
PROGRESS REPORT:

MaineCleanEnergyJobs.com

Launched in 2024, this job board helps people find Maine-based clean energy jobs, employers, and training opportunities.

The Maine Jobs & Recovery Plan and Economic Development Strategy are helping attract more young people to careers in Maine by:

Expanding career exploration and apprenticeship opportunities



Building training-to-job pipelines between schools and businesses

Investing in modern equipment and facility upgrades at tech schools, community colleges, and public universities

Climate Leader Award

The Climate Leader Award, which is one category of the Governor's Awards for Business Excellence, recognizes business leadership, creative thinking, or developing technologies and solutions to combat climate change in Maine.

ACTION STEPS TO ACHIEVE OUR GOALS

1

Maine's Economic Development Strategy focuses on climate-friendly products from the state's natural resources, like its forests and oceans.

Foster partnerships with experts at the University of Maine's Advanced Manufacturing Center, the Roux Institute, Efficiency Maine, and Maine's Manufacturing Extension Partnership to help companies manufacture products in a more energy-efficient way.

Give Maine businesses financial incentives to transition to clean energy and grow the number of new businesses focused on climate solutions.

For businesses and recreation impacted by changes to seasons, expand activities between the peak and off-season and develop durable trail systems to handle increased heavy rainfall and flooding.

2

Support Maine's heritage industries that have been a key part of communities for generations and protect critical areas like working waterfronts and farmland.

3

To strengthen and grow Maine's climate-ready workforce:

Create opportunities for 7,000 new registered apprentices by 2030

Bring more underserved and non-traditional workers to climate-related jobs

Connect Maine youth to climate careers through paid work experiences, pre-apprenticeships, and technical education programs.

A HANDS-ON APPROACH TO CLIMATE ACTION: JAMIE SNOOK

After graduating from Lesley University in 2017 with a degree in environmental science, Jamie Snook, now 29, decided she needed a hands-on job that didn't feel limiting.

"I didn't want anyone telling me that I needed to create differently," she said. "It reminded me that life can be a little bit more grounded in the landscape we're surrounded by."

She eventually found her way to carpentry after moving to Maine, stumbling into an opportunity to gain skills alongside a crew of two men on a renovation project. She's among many women entering the trades to connect with alternative ways to help the environment and improve housing.

"Bringing more diversity into the trades creates a more robust conversation," she said. "Carpentry requires a lot of mental work and presence, and women have this nurturing energy. We're able to think about how we will do this differently, and how we will work with the earth rather than against it and use less energy."

Drawn to sustainable materials, alternative building practices, and energy efficiency, Jamie landed a job with GO Logic, a Passive House builder out of Belfast, five years ago. She's now a foreman, managing her first building project, including crewmembers who are often older than she is. "I fell into it by accident and just fell in love with the work and how it made me feel — how engaging it was. I think there's a stigma around trade work that it's just for brutes. And that's just not true."

She's also part of a group of women in the early stages of forming a nonprofit called Tradeswomen Collective as a landing place for women in the trades to provide resources, connect, and celebrate their work. That potentially includes on-ramp opportunities for young women interested in knowing more about the field as an option for their post-high school years.

"I was definitely pushed into academia after graduating from high school. And I think there was a lot to gain from that; I don't regret my decision there. But I had no idea this field would be an option," she said.

Strategy E

PROTECTING LANDS AND WATERS

Climate change increases risks from pests, invasive species, and disease on Maine's land and aquatic environments.

8”

Sea levels have climbed almost 8 inches (20cm) from a century ago.

The current trend shows an increase of 0.19 inches (0.48 cm) per year.

Rising sea levels are putting vital ecosystems at risk.

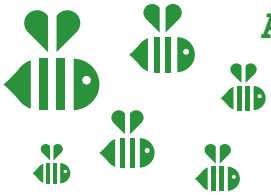
Salt marshes, dunes, and wetlands—essential for carbon capture and flood protection—are all under threat.

97%

The Gulf of Maine is warming 97% faster than the rest of the world's oceans.

This threatens marine life like Atlantic cod, Atlantic puffin, North Atlantic right whales, and American lobster.

As waters heat up, these animals are forced to adapt, move, or disappear.



All eight of Maine's newly endangered and threatened species are at risk by climate change.

These species are the saltmarsh sparrow, Ashton's cuckoo bumble bee, margined tiger beetle, Bicknell's thrush, blackpoll warbler, tri-colored bat, cliff swallow, and bank swallow.

91%

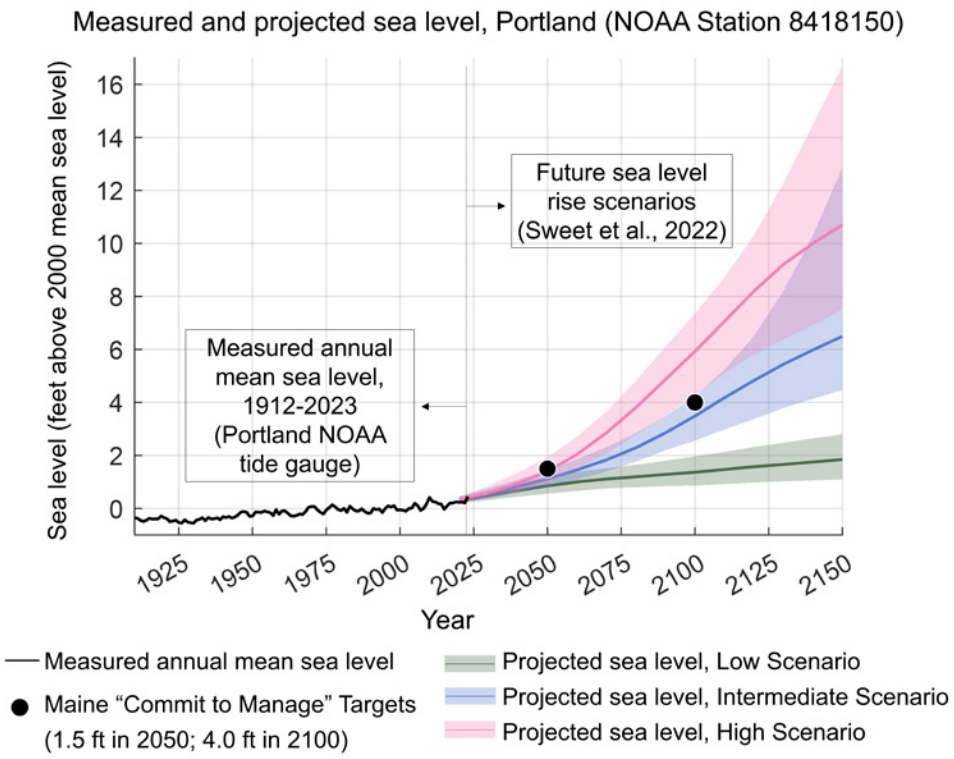
of Maine's annual greenhouse gas emissions are offset by its forests, which absorb vast amounts of carbon each year.

Methane is 80 times more powerful than carbon dioxide when it comes to warming the planet—especially over the next 20 years.

80x

60%

Almost 60% of landfill methane comes from food waste.


Measured and projected sea level, Portland (NOAA Station 8418150)
Sea level (feet above 2000 mean sea level)
16
14
12
10
8
6
4
2
0
1925
1950
1975
2000
2025
2050
2075
2100
2125
2150
Year
Future sea level rise scenarios (Sweet et al., 2022)
Measured annual mean sea level, 1912-2023 (Portland NOAA tide gauge)
Measured annual mean sea level
Maine "Commit to Manage" Targets (1.5 ft in 2050; 4.0 ft in 2100)
Projected sea level, Low Scenario
Projected sea level, Intermediate Scenario
Projected sea level, High Scenario

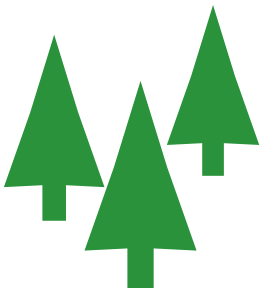
PROGRESS REPORT:

30%
Maine aims to conserve 30% of its land and water by 2030.

22%
Currently, 22% of Maine's lands are conserved.

That means we're nearly three-quarters of the way toward our goal.

$30 million
is being invested in Maine's forests.



In 2024, The U.S. Department of Agriculture awarded a climate grant to improve carbon storage on 12,000+ acres through sustainable forestry.

The 2024 Food Loss and Waste Study Found that

37%
of wasted food in Maine is generated by businesses

vs.

36%
of wasted food in Maine is generated by residences

Maine's 2024 Materials Management Plan lays out new and innovative ways to manage waste and cut methane emissions.

The strategy includes using natural landfill covers, such as compost or yard waste.

ACTION STEPS TO ACHIEVE OUR GOALS

1

Increase Maine's total acreage of conserved natural and working lands to 30% by 2030.

Secure permanent funding for land conservation programs, including Land for Maine's Future, which is the state's primary method of conserving land.

Develop a Maine Farmland Action Plan to protect the state's agricultural resources by doubling permanently protected farmland in Maine by 2030.

2

Develop new incentives, technical assistance, and training to forest landowners, foresters, and loggers to encourage climate-friendly practices and increase forest carbon storage.

3

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

Develop a Maine Food Plan to strengthen the local food system and expand access to Maine-grown foods.

4

Cut food loss and waste by 50% by 2030, while reducing and capturing methane emissions from Maine's waste sector.

By 2030, create a plan to reduce and capture methane by keeping food out of landfills, and other actions identified by the Maine Department of Environmental Protection's methane study.

Require facilities that produce large amounts of food waste to track and report it annually, while promoting food rescue, recovery, and donation through state tax credits.

STUDENT ENVIRONMENTAL RESEARCHER: LEXI MORNINGSTAR

Alexandria "Lexi" Morningstar, 19, discovered her passion for the environment by saying "yes" to new opportunities. After getting adopted with her siblings during her freshman year of high school and moving to Presque Isle from southern Maine, Lexi was inspired by her adoptive mother, who studied puffins on a Maine island. Learning about her mom's work got Lexi more interested in research and how it can help ecosystems and communities.

The fall of Lexi's senior year at Presque Isle High School, she took the opportunity to spend a week at the Hurricane Island Center for Science and Leadership off the coast of Rockland, where she experienced environmental science and sustainability. She learned about solar energy, hiked around the island to clean up marine debris, and saw how scallops are grown near the island through aquaculture. After Lexi left the island, she knew she had to go back.

Using the connections she made with the staff while on the island, Lexi took the initiative to ask about opportunities to return and work on the island the following summer. This landed her a four-week internship with the island's education team. "It was my first outdoor education experience where I was working rather than learning," she said. "I realized I loved teaching and inspiring students."

This formative experience inspired Lexi to enroll at the University of Southern Maine and study environmental science. In her first semester, she took a class about field work, where she learned about different types of research and met Dr. Karen Wilson, associate professor in USM's Department of Environmental Science and Policy and head of the university's Aquatic Systems Lab. Lexi asked if she could help out in Dr. Wilson's lab and landed a job: "I was shocked that I could do that as an undergraduate!" she said.

In Dr. Wilson's lab, Lexi assisted with dissecting blueback herring and alewives to extract tissue. This tissue was then sent off for chemical analysis to better understand how dams on the Kennebec River impact fish movement. Lexi eventually moved on to other laboratory tasks, like data analysis. "I love building connections and learning from the older undergraduates in the lab. It's cool to learn more about the research community and what opportunities are out there," she said.

For Lexi, it's all about advocating for yourself. "Find out what's going on in your area. Curiosity is the most important thing" Lexi said. "Talk to your teachers or the people in your school's science department if you're not sure where to begin." Even if you don't know what your interests are, be willing to reach out and ask about opportunities to get involved, she said. With practice, it becomes easier to talk to more people. "Even if you say yes to an opportunity, and realize you want to do something else? That's okay! It's not a failure. You're learning more about yourself and your interests, which is so important."

Strategy F

STRENGTHENING COMMUNITY RESILIENCE

In the winter of 2023-2024, three storms devastated Maine and claimed four lives.

The storms caused

$90 Million

in damage to roads, utilities, and water systems, not including private homes and businesses.

Investing in climate resilience pays off:

For every $1 we spend, we save around $13 in future disaster costs.

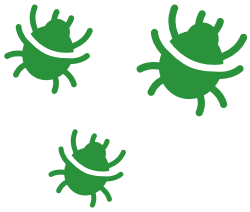
90°F

By the 2050s, models predict that Maine could see 2 to 4 times more days over 90°F (32.2°C).

This rise in temperature poses serious health risks—especially for people in Maine who lack air conditioning, work outdoors, are older, or have chronic health conditions.

Maine's iconic working waterfronts are shoreline properties that support commercial fisheries, aquaculture, and other water-dependent businesses. They are crucial to Maine's identity and are vital to the state, economically and culturally, but are threatened by the increased frequency of storms and flooding.

Warmer weather causes tick populations to grow and spread to new areas, leading to an increase in tick-borne illnesses like Lyme disease.



Lyme disease incidence in Maine is consistently in the top five among U.S. states.

PROGRESS REPORT:

260+ Communities across Maine are taking action through the Community Resilience Partnership (CRP).

CRP funding to municipalities and tribal governments supports:

Moving to clean, renewable energy

Cutting carbon emissions

Strengthening defenses against severe storms, floods, and sea-level rise

$607 Million

in state and federal climate resilience funding has been awarded to Maine communities.

39%

has gone to underserved communities.

New in 2024: The Maine Office of Community Affairs (MOCA) helps towns, cities, and tribal governments plan for the future.

Through funding and technical support, MOCA works on:

Land use and housing

Floodplain planning and building codes

Coastal management and climate resilience

The Maine Infrastructure Adaptation Fund (MIAF) helps communities upgrade critical infrastructure to reduce climate risks.

$76 Million

in grants have been awarded since 2022 to strengthen:

Roads

Wastewater systems

Drinking water systems

These upgrades make infrastructure more resilient to flooding and storms.

The Maine Climate Corps Network was launched in 2023 and links volunteers to local projects tackling big challenges like:

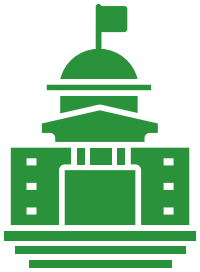
Transportation

Energy

Housing

Climate Resilience

Governor Mills issued an executive order to create an Infrastructure Rebuilding and Resilience Commission in response to the winter '23-'24 storms.



The Commission developed Maine's first long-term infrastructure plan to ensure the state is ready for the harsh storms ahead.

ACTION STEPS TO ACHIEVE OUR GOALS

1 By 2030, ensure 80% of Maine communities are enrolled in the CRP and have received grants from the CRP or the MIAF.

2 Help communities strengthen communication networks before, during, and after disasters, and develop tools to help communities reduce risks to climate-related hazards.

3 Increase funding, financing, and outreach for small-scale clean energy options that can provide homes, schools, and businesses electricity during power outages.

4 Develop a statewide working waterfront strategy by the end of 2025 to address funding and data gaps and increase protection options as well as publicly accessible infrastructure.

5 Strengthen public health monitoring, education, and prevention.

Increase funding for air-quality monitoring stations, support communities to establish emergency warming and cooling centers, and plant trees.

Strengthen monitoring of diseases spread by ticks and mosquitoes and build public understanding of these diseases and their risks.

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

Establish programming and education for schools and communities to build resilience, agency, and hope regarding climate change.

Provide resources and funding across health care services to address mental health impacts related to climate change.

WORKING ACROSS GENERATIONS FOR COMMUNITY RESILIENCE

Students at Shead High School in the coastal city of Eastport are no strangers to resilience. The storms of December 2023 and January 2024 brought widespread damage: local businesses were harmed, newly installed tennis courts at Shead were ruined, and most of the town was without power for a week.

That's why they chose to work on a community resilience project when the Washington County Youth Leadership program (run by Rural Aspirations, a non-profit organization that provides educational offerings in rural Maine) presented them with an opportunity to explore and propose a solution to an issue in their community. "It best fit our community needs," said Jonathan Andrews, a junior. "We wanted to fix what we could after last year's storm damage."

For their project, the students worked with the Eastport Energy Committee and County Economic Council, which recently received funding through Maine's Community Resilience Partnership grant program. The students knew that older adults faced more challenges from the storms and wanted to focus their project on building resilience to support older generations in Eastport. "It's easier for younger people to get used to no power," said Nolan Brown, a junior. "That's why we wanted to work with the elders in our community to see what they need," added Craig Cushing, a junior. The Council connected them to the Eastport Senior Center, where the students met with residents to hear their concerns about storms and how their project could help better prepare residents for future severe weather.

The students realized that creating emergency preparedness kits would be a useful way to support this community. The students wrote a proposal to the Energy Committee, requesting to use some of their fund to create the kits, which included wool blankets, first-aid sets, and battery-operated emergency weather radios.

In addition to the kits, the students created guides on what to do before, during, and after a storm. The students adapted a Red Cross resource, making slight adjustments for their rural community — for example, adding weatherization to homes in the summer to be ready for winter storms.

The project empowered the students, especially in the aftermath of the storms. "It felt like we were doing a good thing. Without this project, I probably wouldn't have known anything about this kind of work," said Lino Perez, senior. The students say it's an easily replicable project for others to work on in their community. "It's really easy for a couple of students at a school to put their voices together and set some attainable goals," said Jonathan. "You can't be afraid to get out there. People will see you and you'll start to make that change," said Isaac Sullivan, junior. "It felt overwhelming at first, but it gets more rewarding. You can see the progress."


21%
12%
12%
5%
TATION · RESIDENTIAL · COMMERCIAL · INDUSTRIAL · ELECTRIC POWER
Data source: Maine Department of Environmental Protection 9th Biennial Greenhouse Gas Emissions Report.
International bunker fuels (1%) are not depicted in the graphic above.


LEADING
on CLIMATE


LIQUIDS
RECYCLE
TRASH
COMPOST
POUR IT OUT!

Strategy G

ENGAGING PEOPLE

Since 2020, *Maine Won't Wait* has inspired thousands to reduce emissions and prepare for climate impacts.

But as the urgency increases, so does the need to reach everyone—especially those who face the biggest challenges in getting information and support.

39 Members

Maine Climate Council includes expertise from the following:

- Scientists
- Industry Leaders
- Government Officials
- Community Voices

200+ Contributors

Working groups and subcommittees met more than 100 times to craft the plan.

15 Youth Reps

Ensure that young Mainers get to participate in climate planning and implementation.

In updating *Maine Won't Wait* for 2024, the Council made it a priority to reach more Maine people and hear from more diverse voices.

1,000+

Mainers shared feedback through a public survey.

350+

attended in-person meetings held around the state to discuss strategies important to their communities.

PROGRESS REPORT:

The Climate Council worked with the Mitchell Center at The University of Maine, Orono to reach communities often left out of climate planning.

Through surveys, focus groups, and listening sessions, they heard from:

Low-income Mainers

Rural residents

Older Mainers

New Mainers

Maine.gov/climateplan

is the Council's website to connect Mainers to climate science, solutions, and action.

$2 Million

in climate education grants launched in 2023 to support Maine pre-K–12 schools with training and programs.

1,500+

young Mainers participate in Climate&Me since its launch in April 2024.

The initiative, led by the Governor's Office of Policy Innovation and the Future (GOPIF), educates, engages, and empowers youth on climate change and action.

April 4, 2025 – GOPIF hosted the first Climate&Me Youth Leadership Summit at the University of Maine, Orono.

250 high school students and teachers

+

27 schools across 12 counties

+

A full day ofempowering youth to build their climate leadership skills

Learn more: maine.gov/climateplan/climateandme

ACTION STEPS TO ACHIEVE OUR GOALS

1

Increase engagement with underserved Maine people and communities.

Ensure that education and outreach about climate change and programs are accessible and available in multiple languages.

Design climate grant programs to be more accessible to under-resourced applicants, like rural towns.

2

Broaden climate and energy education and outreach to individuals, businesses, local governments, and nonprofit organizations.

Raise public awareness and understanding about climate change in Maine, the state's climate actions, and climate-related programs and opportunities.

Build a network of trusted partners that can help relay key messages about climate impacts and opportunities, including municipal and tribal governments, community organizations, and other engaged groups.

3

Continue to engage with Maine youth to support climate action and increase education related to climate change, clean energy, and related careers in PreK-12 schools and higher education.

Provide support and opportunities for Maine youth to engage with the implementation of the state's climate action plan through local climate action projects.

SHIFTING PERSPECTIVES IN RURAL MAINE BY WELCOMING ALL

Bella Sturtevant has a knack for connection. Growing up in Androscoggin County, Bella was always interested in how other people viewed the world and formed their opinions about issues that mattered to them. “I definitely cared about climate, but in high school I was really interested in politics and making my voice heard,” said Bella.

When she arrived at Thomas College to study political science and psychology in 2024, her academic advisor introduced Bella to JustME for JustUS (JMJU). JMJU is a youth-led and rural-led nonprofit that ensures young people in rural Maine have their voices heard throughout the state about issues impacting them and their communities.

Within the next day, Bella interviewed to be a rural youth organizer with JMJU and got the job. Though initially drawn in by curiosity and practicality – “I went into the opportunity knowing very little, it just sounded interesting, and paid well!” – Bella soon found herself deeply invested in climate work.

As a rural youth organizer, Bella’s job is to lead projects in her community that encourage other young people to participate in local issues and nonpartisan civic work, typically through a lens of climate justice. “I want to depolarize climate justice in rural Maine, and make it more digestible and easier to understand. I frame my events to bring in people of all political mindsets,” Bella said. “Honesty, kindness, and curiosity are my approach.”

In her first year of working at JMJU, Bella has hosted events to raise awareness about voting, fast fashion, plastics, and food insecurity. A highlight for Bella was hosting an interactive art and discussion event with 37 attendees at Thomas College about then-current plastic bag legislation. Students took part in respectful, productive dialogue while decorating reusable bags donated by Patagonia.

Bella encourages other young folks to host community conversations and events: “Just use your own lived experiences and storytelling to show people what you think about the world and ask them what they think about the same issues. Climate change is more than science: it’s stories, music, or however you feel comfortable engaging with it.”

As Bella continues her studies and organizing work, she hopes to inspire more rural youth to see themselves as climate leaders, one conversation at a time.

NEXT STEPS

Government Action

Elected officials make decisions and pass laws to address a wide range of needs, preparing us for both current and future challenges. In addition to enacting new legislation, it is essential to provide tools, training, and incentives to individuals, communities, businesses, and nonprofit organizations. To support these efforts, hundreds of millions of dollars have been secured through federal grants. For more information:

https://www.maine.gov/climateplan/

Research-based Decisions

Progress should be guided by credible and reliable evidence, rather than assumptions or personal opinion. Collecting both qualitative and quantitative data on the impact of climate change on the environment, economy, and society will help us gain a deeper understanding of both the challenges and potential solutions. For more information:

https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/STS_2024_digital.pdf

To accomplish the goals and strategies outlined in *Maine Won't Wait*, the state must act in four key ways:

Community Action

Communities need tools and support to prepare for a changing climate. This includes building climate-resilient infrastructure and educating and supporting community members. By collaborating and sharing resources, communities can effect lasting, local change. For more information:

https://www.maine.gov/future/climate/community-resilience-partnership

Individual Action

The support of Maine's people is central to the success of *Maine Won't Wait*. Understanding climate change inspires action that benefits both current and future efforts. This can be achieved by educating yourself, reducing energy consumption, preparing for weather-related challenges, and supporting initiatives focused on environmental and economic sustainability. Individual choices add up to make a significant impact.For more information:

https://www.maine.gov/climateplan/climateandme

Acknowledgements

This guide to *Maine Won't Wait* is a product of the Govenor's Office of Policy Innovation and the Future. Its content was not reviewed or approved by the Maine Climate Council.

The text was adapted by Katie Coppens, who has taught in Maine public schools for over two decades. She is K-8, 6-12 life science, and 6-12 social studies certified and was a 2022 recipient of the Presidential Award for Excellence in Mathematics and Science Teaching. She has published numerous nonfiction books for children and authors a column called "Interdisciplinary Ideas" for the National Science Teaching Association's Science Scope journal. In 2024, she was part of the Maine's Climate Education Action Task Force, and she serves on the board of the Maine Science Teachers Association (MSTA) and the Maine Environmental Education Association (MEEA).

Design and content visualization by Cindy Butler. See more of her work at cindybutlerdesign.com.

Photo Captions

Page 10: Top: Carter Frank, left, waits for the bus to his class at the University of Southern Maine. Lower Left: A pedestrian navigates the crosswalk near Franklin Towers in Portland, Maine. (credit: Greater Portland Council of Governments). Lower Right: One of the many EV charging stations installed along Maine's interstate rest areas. (credit: Maine DOT)

Page 18: Top photo: Avesta Housing's Porter Station in downtown Portland, completed in 2024, now provides 60 new affordable homes. The residences were built to Passive House standards, a rigorous approach that predicts and measures a building's energy performance and exemplifies Smart Growth principles. (credit: Avesta Housing). Lower left: BioHome3D, the first bio-based 3D printed home, at the University of Maine. The home was unveiled in 2022 by the University of Maine Advanced Structures and Composites Center. MaineHousing, the Maine State Housing Authority, is a partner on the project. The house is fully recyclable and highly insulated with 100% wood insulation and customizable R-values. Nearly all construction waste was avoided due to the innovative printing method. (credit: University of Maine). Lower right: Scheduled for completion in 2025, the Acadia Gateway Center in Trenton will incorporate rooftop solar panels, LED lighting, geothermal heating, and energy-efficient insulation. (Credit: Maine DOT)

Page 24: Bottom left: BNRG/Dirigo Solar Array in Augusta. (Credit: Gabe Souza Photography) Bottom right: Construction of Downeast Wind, a 126 MW wind energy project in rural Washington County, Maine, began in late 2023. Turbine deliveries are scheduled for mid-2024, with full commercial operation expected to commence in May 2025. It's currently operating and generating enough homegrown Maine clean energy to power more than 37,000 average homes each year. (Credit: GEO)

Page 28: The three Corners Solar Array in Unity came online last year and is Maine's largest solar farm with 150 megawatts of capacity. It's located on 920 acres of cleared forestland in Unity Township, just a few miles from Unity College. (Credit: GEO)

Page 32: Top photo: Need caption – unless this is a stock photo? BNRG/Dirigo Solar Array in Augusta. (Credit: Gabe Souza Photography) Lower left photo: Students watch their floating offshore wind turbine platforms being tested for performance and survivability at the annual Windstorm Challenge event held at the University of Maine's Advanced Structures and Composites Center. (Credit: University of Maine) Lower right photo: Madison-based startup manufacturer TimberHP is the first and only producer of renewable, carbon-storing wood-fiber insulation in America. (Credit: GOPIF)

Page 38: Top photo: Bombazine Oyster Company (formerly Ferda Farms), an oyster farm on the New Meadows River in Brunswick. (Credit: Max Burtis)

Page 40: Top photo: Measured annual mean sea level at the Portland NOAA tide gauge (black line), showing that sea level was 7.5 inches higher over 2005-2023 than it was in the early-1900s, and future sea level rise through 2150 under the Low, Intermediate, and High scenarios from Sweet et al. (2022). Maine has committed to managing 1.5 ft of sea level rise and 4.0 ft in 2100 (relative to the year 2000). These planning targets are consistent with the Intermediate scenario. (Credit: Gulf of Maine Research Institute). Bottom photo: Marshlands, like this one in the Rachel Carson National Wildlife Refuge in Wells, provide a valuable ecosystem and carbon storage. (Credit: Westend 61 Stock Photo)

Page 44: Top photo: A work crew wraps up installation of the new underground stormwater retention system in Damariscotta. This project will help prevent severe downtown flooding. Stormwater treatment systems are vital for the functioning of society, whose disruption would impact public safety, security, and health. (Credit: Town of Damariscotta). Lower left photo: Damaged working waterfront structures in New Harbor show the force of storm surge on waterfront infrastructure. (Credit: Island Institute) Lower right photo: Sebago Lake State Park – Living Shoreline Stabilization Pilot Project. The Maine Department of Agriculture, Conservation and Forestry partnered with the Portland Water District to stabilize a chronically eroding lakefront shoreline. The US Environmental Protection Agency 319 Grant Program funded the project, which involved the construction of an engineered aggradation structure using natural materials, mainly red oak trees. Construction of this project was completed in December 2022. (credit: Owen Blease)

Page 50: Upper photo: GOPIF's climate outreach coordinator hosts a youth climate workshop at the Thomas Memorial Library. (Credit: GOPIF). Lower right photo: GOPIF staff tabling at Common Ground Fair in Unity. (Credit: GOPIF). Lower left photo: Waste separation and diversion in action inside the cafeteria at Carl J. Lamb Elementary School in Springvale. (credit: EcoMaine)

Page 52: Photos show attendees at GOPIF's Climate&Me Youth Leadership Summit in Orono. (Credit: GOPIF)

Glossary

adapt- to adjust or change to new conditions

agriculture- farming crops or raising animals for food

appliance- a machine, such as a dishwasher or microwave

apprenticeships- learning how to do a job from someone who is currently doing that job

bipartisan- members of both political parties reaching agreement

conserve/conservation- to protect something so it lasts longer

consumption- to use or eat something

economy- the system in which people make, buy, or sell goods and services

emissions- gases that come from things like cars and buildings

fossil fuels- energy sources like coal, oil, and natural gas that add to greenhouse gases

greenhouse gases- certain types of gases that trap heat

heat pump- a machine that works efficiently to make a room warm in the winter and cool in the summer

heritage- an important part of a culture or tradition

hydrofluorocarbons- gases used in appliances like air conditioners to keep things cool

implement/implementation- to put a plan or idea into action

incentives- rewards or motivation to encourage people to do something

industries- groups of businesses or companies

infrastructure- parts of what makes a town function, like roads, bridges, and sewer

legislation- when a group of elected people passes a law

manufacture/manufacturing- to make something, often in a factory

methane- a greenhouse gas that comes from animals and rotting food

metrics- a way to measure things

municipal- a town or city's local government

nonprofit- an organization that helps people or the environment without a purpose of making money

oil boiler- a machine that uses oil, which is a fossil fuel, to make heat

pedestrians- people who walk, instead of drive, from place to place

prevention- taking steps to stop something bad or hurtful from happening

proactive- not waiting, doing something before it becomes a problem or bigger problem

renewable energy- energy from sources like sun and wind, that can be used again and again

qualitative- describing something with words or experience instead of numbers

quantitative- measuring something with numbers

resilient/resilience- the ability to prepare for and recover from challenging events

rural- areas away from cities where there is more open land and fewer people

sustainability- taking care of resources responsibly so they don't run out now or in the future

technologies- tools or machines that make life easier by solving problems

weatherization- improving buildings to be more energy efficient for heating and cooling

zero-emission- something that produces no harmful gases

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