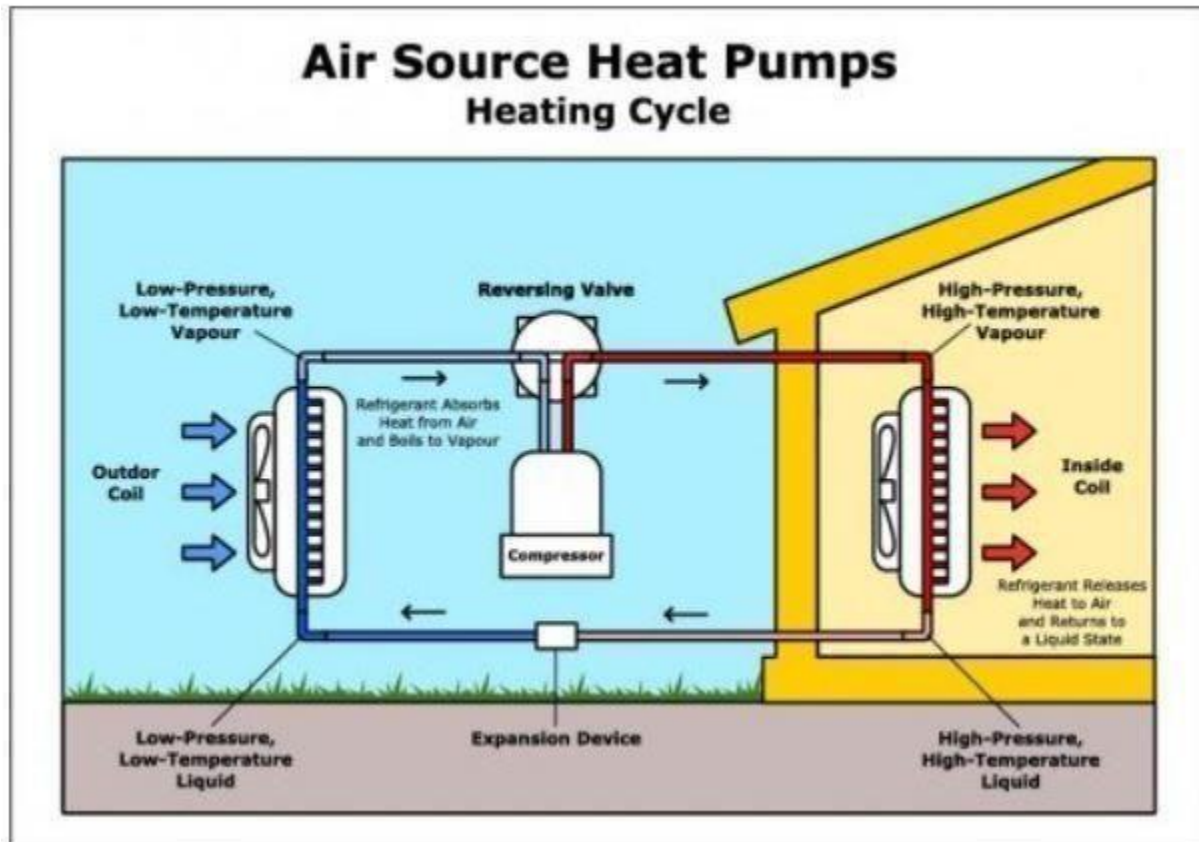


A look at environmental provisions passed by General Assembly



How air source heat pumps work: A heat pump's refrigeration system consists of a compressor and two copper or aluminum coils (one indoors and one outdoors), which have aluminum fins to help heat transfer. In heating mode, liquid refrigerant in the outside coil removes heat from the air and evaporates into a gas. The indoor coil releases heat from the refrigerant as it condenses back into a liquid. A reversing valve, near the compressor, can change the direction of the refrigerant flow for cooling mode as well as for defrosting the outdoor coil in winter.

SOURCE: U.S. Department of Energy and Northeast Energy Efficiency Partnerships

[By Theresa Sullivan Barger, Special to The Day](#)

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Editor's Note: *This is the second of two stories about what's in three bills passed by the state legislature this past spring, known as Senate Bill 4, Senate Bill 9 and House Bill 5004.*

Three major bills passed recently by the state legislature collectively set aggressive goals for the state to reduce its carbon footprint and encourage and fund climate resiliency measures. One bill focuses on how to respond to environmental changes already occurring, while another approaches how to lower carbon emissions.

Senate Bill 9, or Public Act 25-32, outlines a range of measures for municipalities to plan for and mitigate the impacts of sea level rise, flooding, extreme heat, and increased precipitation.

House Bill 5004, Public Act 25-125, supports renewable energy by providing financial incentives to help homeowners, long-term care facilities and municipal and state offices switch to heat pumps and make other energy-saving home improvements.

The third, Senate Bill 4, or Public Act 25-173, focuses on lowering electric bills and increasing opportunities for new forms of nuclear energy.

While they didn't get everything they wanted, environmental groups said the 2025 General Assembly session ended with three bills that balanced electricity bills with increasing energy efficiency measures to help lower the state's greenhouse gas emissions.

"Overall, we saw this session as a big win," said Connor Yakaitis, deputy director of the Connecticut League of Conservation Voters.

Save the Sound applauded the state for setting ambitious goals to reduce greenhouse gas emissions.

While calling it a "compromise bill," Charles Rothenberger, director of Connecticut Government Relations, Save the Sound, said "it didn't go as far as we would have liked to have seen."

He added that the organization was pleased the state adopted regularly spaced and updated targets for emissions reductions.

"It aligns Connecticut's planning efforts with the rest of the states in the region by getting to net zero by 2050," Rothenberger said.

The state Department of Energy and Environmental Protection's (DEEP) climate planning office leader was also pleased with the updated goals for reducing the state's greenhouse gases and the steps to reach those goals.

"We have to go faster than we're currently going to make our next (greenhouse gas reduction) goal," said Rebecca French, director of the Office of Climate Planning. "Our next goal is a 45% reduction" from 2001 levels by 2030. "We've got to stay the course and ramp up a bit."

The legislature set long-term goals for reducing greenhouse gases in the state as well: a reduction of 70% from 2001 levels by 2040 and net-zero by 2050.

A push for heat pumps

DEEP staff wants to encourage residents, businesses and long-term care facilities serving Medicaid recipients to switch to heat pumps to save money and reduce their energy usage. The state bill calls for up to \$25 million in state bonds to be used to deploy heat pumps, she said.

The federal tax credit of up to \$2,000 or 30% of the cost, whichever is less, for heat pumps that are recognized as "Energy Star most efficient" will expire at the end of this year, according to [EnergyStar.gov](https://www.energystar.gov).

With congressional approval of President Trump's "One Big Beautiful Bill" this month, energy tax credits for any type of energy-saving home improvement upgrades are now set to expire after Dec. 31.

HB 5004 includes grants, rebates, low-interest loans and other incentives to homeowners, municipalities, businesses and state departments to help reach those greenhouse gas goals. For example, DEEP will develop a plan for the installation of efficient heat pumps for affordable heating and cooling systems for private homes and municipal and state buildings.

The bill prioritizes energy-saving improvements in homes in environmental justice communities, defined as areas where at least 30% of residents are low-income, and long-term care facilities where at least 80% of residents receive Medicaid. The state will offer low or no-interest loans to replace heating and cooling equipment for those who qualify.

Specifically, by July 2027, state offices working with DEEP will develop a plan and a budget to retrofit existing fossil fuel-based heating and cooling systems at state buildings to systems capable of being operated without carbon-emitting fuels. The plan and budget will be submitted to the state legislature's relevant committees for review and potential approval.

In addition, the bill charged DEEP with evaluating how to integrate and advance nature-based solutions that support mitigating and adapting to climate change and strengthening ecosystem resilience and biodiversity. DEEP will offer microgrid and resilience grants as well as loans and

grants for open space and watershed land acquisition. A microgrid is a local electrical grid with defined electrical boundaries; a solar panel farm or even a single home with solar panels could be considered a microgrid, according to the [U.S. Department of Energy](#).

The bill also calls for DEEP to advance nature-based solutions that encourage the use of the state's ecosystems, such as forests and wetlands, to naturally sequester and store carbon, reduce greenhouse gas emissions, increase biodiversity and protect against climate change impacts.

In addition to continuing efforts to increase the preservation of forests and wetlands, it prioritizes increasing community resilience by improving water quality. It calls for addressing flooding and drought through nature-based stormwater management and shoreline protection, such as living shorelines. To improve air quality and reduce urban heat island effects, the bill calls for increasing urban forestry and green spaces. It also supports increasing public access to open space for public health benefits.

Senate Bill 9 calls for several measures to help communities adapt to climate-change conditions, such as more severe storms, increased flooding and rising sea levels. It directs DEEP oversight of coastal site plans for any shoreline flood and erosion control structure. In addition, activity proposed within FEMA-designated areas or any site that contains tidal wetlands, beaches or dunes will require DEEP oversight.

Beginning Oct. 1, 2027, municipal evacuation plans and hazard mitigation plans will need to identify and address threats to roads and infrastructure as a result of rising sea levels. The plans must specify actions and capital projects to mitigate the impacts of climate change, including increased precipitation, flooding, sea-level rise and extreme heat.

To prevent homeowners from discovering after a flood that their homeowner's insurance policy doesn't cover them, the new statute requires home insurers to notify customers that their standard homeowners' policy does not include flood insurance and give homeowners the option of buying flood insurance. It also requires sellers to disclose to potential buyers the property's history of flooding, including whether they previously received federal disaster aid because of flooding.

Editor's note: This story is made possible by donations to The Day's Community Journalism Funds. To donate, go to <https://givebutter.com/theday>.