Connecticut's Climate Progress

A Report Required by Connecticut's Global Warming Solutions Act, CGS Sec. 22a-200a(c) as amended in section 2 of Public Act 25-125

Connecticut Department of Energy & Environmental Protection

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List of Abbreviations

BAU: Business-As-Usual
BEV / EV / ZEV/ PHEV: Battery Electric Vehicle / Electric Vehicle / Zero Emission Vehicle / Plug-in Hybrid Electric Vehicle
BIL: Bipartisan Infrastructure Law
CCAP: Comprehensive Climate Action Plan
CPRG: Climate Pollution Reduction Grant
DEEP: Connecticut Department of Energy and Environmental Protection
DOE: Department of Energy
EDC: Electric Distribution Company
EPA: Environmental Protection Agency
FEMA: Federal Emergency Management Agency
GC3: Governor's Council on Climate Change
GHG: Greenhouse Gas(es)
GWSA: Global Warming Solutions Act
IIJA: Infrastructure Investment and Jobs Act
IRA: Inflation Reduction Act
ISO-NE: Independent System Operator-New England
LIDACs: Low-Income and Disadvantaged Communities
LULUCF: Land Use, Land Use Change, and Forestry
MMTCO2e: Million Metric Tons of Carbon Dioxide Equivalents
MOVES5: Motor Vehicle Emissions Simulator 5th Edition
MW / MWh: Megawatts / Megawatt Hours
NBS: Nature-Based Solutions
NWL: Natural and Working Lands
OBBBA: One Big Beautiful Bill Act
OCC: Office of Consumer Counsel
PCAP: Priority Climate Action Plan
PURA: Public Utilities Regulatory Authority
RGGI: Regional Greenhouse Gas Initiative
Tech CDR: Technological Carbon Dioxide Removal
USDA: U.S. Department of Agriculture

Greenhouse Gases:

CH4: Methane; **CO2/ CO2e:** Carbon Dioxide / Carbon Dioxide Equivalents; **HFCs:** Hydrofluorocarbons; **N2O:** Nitrous Oxide; **PFCs:** Perfluorocarbons; **SF6:** Sulfur hexafluorides

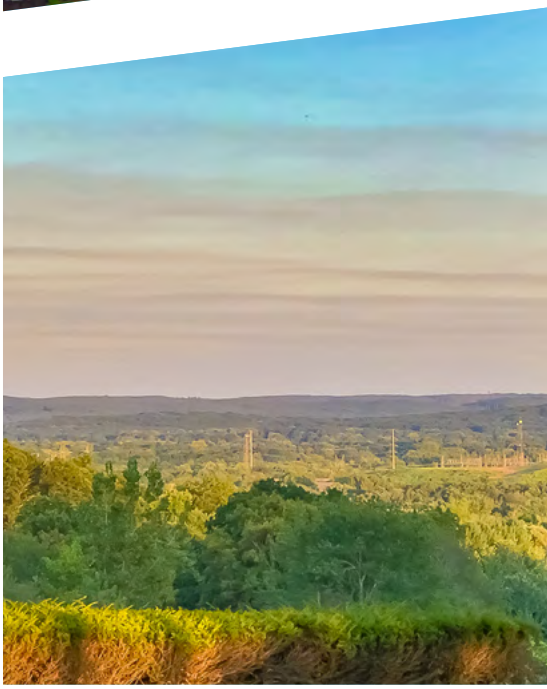
Executive Summary

The Connecticut Department of Energy and Environmental Protection (DEEP) is issuing this report on Connecticut's Climate Progress pursuant to Connecticut General Statutes (CGS) Sec. 22a-200a, also known as the Global Warming Solutions Act (GWSA), as updated by Public Act 25-125.[1] Sec. 2(d) of Public Act 25-125 requires DEEP, in consultation with the Secretary of the Office of Policy and Management and the Governor's Council on Climate Change, with an opportunity for public comment, to report periodically to the joint standing committees of the General Assembly having cognizance of matters relating to the environment, energy and technology, and transportation on:

1. An inventory of CT's progress towards its statutory greenhouse gas (GHG) emissions levels, including carbon sequestration;
2. A schedule of proposed regulations, policies, and strategies designed to achieve these GHG emissions levels;
3. An assessment of the latest scientific information and relevant data regarding global climate change; and
4. The status of GHG emission reduction efforts in other states and countries.

This report draws from several other DEEP reports and planning efforts to meet the above requirements.

As described in this report, global climate change has been affecting Connecticut residents, businesses, and infrastructure for decades. Extreme weather events have cost the state and the private sector billions of dollars since 2010. The state is expected to continue experiencing the effects of climate change, according to the most recent data on climate change available. These effects include a rising sea level, longer and more frequent heat waves, more intense storm and flooding events, and longer periods of more extreme drought. The need for strategies that lower GHGs, prepare communities and the environment for extreme weather impacts and climate change, and reduce costs for businesses and residents is more critical than ever. These actions must take place on an economy-wide scale.



Connecticut has long recognized the urgency of addressing climate change through longstanding state statutory programs and regulations that reduce emissions and improve resilience. This work includes setting — and meeting — the state's legislatively-enacted target to reduce GHG emissions by 10% below 1990 levels by 2020. It also includes joining with 23 other governors in the United States Climate Alliance to collectively reduce GHG emissions by 24% since 2005 in support of the international Paris Agreement despite U.S. withdrawal from the agreement. For many years, Connecticut's state-level efforts have proceeded in concert with similar federal policies, programs and regulations at the federal level.

These state and federal actions to reduce GHG emissions have made a measurable difference. The latest GHG Inventory[2] showed that as of 2023, Connecticut continues to keep GHG emissions below pre-pandemic levels. For the first time, GHG emissions in the transportation sector decreased, even while vehicle miles traveled increased. Despite this and other sector-specific downward trends in emissions, GHG modeling projections — undertaken as part of an Environmental Protection Agency (EPA) Climate Pollution Reduction Grant (CPRG) awarded to DEEP in 2023 for climate action planning — also show Connecticut is currently not on track to meet its 2030, 2040, or 2050 targets set by the legislature. The projections indicate that under a business-as-usual scenario, Connecticut would achieve a 34% reduction in GHG emissions below 2001 levels by 2030 and a 44% reduction by 2050. This business-as-usual scenario reflects the current state and federal policy and regulatory landscape, including recent federal changes of implemented and proposed funding and tax incentive cuts and regulatory rollbacks in the transportation and power sectors. It assumes that current policy landscape persists with no additional federal, state or local government climate action. The business-as-usual projection provides a baseline against which to assess potential GHG emissions reduction pathways that would achieve Connecticut's targets.

In 2025, the federal government took steps to reverse emissions reduction progress, putting the health and safety of Connecticut residents at risk, and undermining the reliability and affordability of the region's electricity supply. These recent federal actions include rolling back GHG pollution standards (e.g., power plant regulations, vehicle fuel economy standards, and the 2009 Endangerment Finding recognizing GHG pollution harms to both the environment and public health), revoking and repealing federal grant funding and tax credit support for clean energy and energy efficiency, seeking to halt the completion of already-permitted offshore wind projects under construction, and disrupting the permitting process for critical new clean energy facilities.

While these recent federal actions have had a significant impact, Connecticut continues to administer programs summarized in this report that support the reduction of GHG emissions. Many of these programs provide critical support to help lower energy costs, decrease air pollution, improve grid reliability, and contribute to community resilience. DEEP is prioritizing efforts that can enhance affordability for families and businesses and simultaneously reduce climate impacts.

While the federal government attempts to terminate some federal grants awarded to Connecticut under the Infrastructure Investment and Jobs Act (also known as the Bipartisan Infrastructure Law) in 2021 and the Inflation Reduction Act in 2022, some climate-related grants continue to be implemented. With the passage of the One Big Beautiful Bill Act (OBBBA) in July 2025, many of the new federal climate-related programs were rescinded. This included federal tax credits that supported renewable energy, energy efficiency, and electric vehicle adoption, all of which now expire many years before their original end date. While Connecticut's programs cannot replace the depth and breadth these tax credits provided, this report highlights how state programs will continue to support many of those same efforts.

As identified in this report, there are several near- and long-term climate actions that could be taken to support additional progress towards the state's targets. These opportunities have been evaluated through the development of several plans over the past five years, including the annual GHG Inventory[3], the Governor's Council on Climate Change 2021 Phase 1 report[4], and the EPA CPRG-funded[5] Priority Climate Action Plan (PCAP) released in August 2024. DEEP is analyzing 14 near-term actions as required in the Priority Climate Action Plan. While further deliberation will be required to determine whether to adopt or extend these specific measures for implementation purposes, for illustrative purposes, these actions would, if fully implemented, reduce Connecticut's GHG emissions by nearly 30 million metric tons of carbon dioxide equivalent (MMCO2e) by 2050 — the equivalent of removing nearly 7 million gas-powered cars from the road for one year.[6]

Finally, as statutorily required, this report considers opportunities for Connecticut to use carbon sequestration to help meet the state's net zero GHG emissions by 2050 target established under Public Act 25-125. In examining such opportunities, DEEP finds that conserving and better managing Connecticut's forests would provide the greatest benefits and represent the most feasible approaches to carbon sequestration in the state. This report further evaluates technological carbon dioxide removal (Tech CDR) as an option that may fill the gap between net zero and reducing emissions by at least 80% by 2050.

As DEEP plans for the future of climate mitigation in Connecticut, the agency is prioritizing actions that address affordability. Climate change drives up costs for our state to deal with extreme weather impacts. However, measures to reduce GHG emissions and mitigate change, such as energy efficiency, can reduce some of these costs and help businesses and residents address near-term affordability challenges. In the coming months, DEEP will further build on the recommendations and observations made in this report with the issuance of the EPA CPRG-funded Comprehensive Climate Action Plan.[7] Through this planning process, DEEP will evaluate how to invest in climate mitigation in the most cost-effective ways. At the same time, DEEP will continue to work with the Office of the Attorney General to contest federal actions that delay and limit the state's tools to reduce GHG emissions and offset rising costs, such as the anticipated additional ratepayer costs associated with delaying or preventing completion of offshore wind projects.[8] 2026 will likely be another dynamic year for climate action as changes at the federal level continue to take hold. This report demonstrates that Connecticut can continue to make progress amid the current uncertain environment.

Introduction

The Cost of Climate Change in Connecticut

Connecticut is already being impacted by global warming. According to the Long Island Sound Study and the University of Connecticut, Connecticut is already experiencing climate change impacts, including 8 to 9 inches of sea level rise since 1880, accelerating coastal erosion, a warming of Long Island Sound, warmer hottest and coldest days of the year, increasing annual rainfall, decreasing annual snowfall, and more intense rainstorms.[9]

Climate change impacts were felt during the severe flash flooding event on August 18, 2024, in the southwest and Naugatuck Valley areas of the state, which resulted in the loss of three lives, more than 30 roads closed due to erosion or complete washouts of culverts and bridges, and more than 2,300 homes and businesses damaged or destroyed. This event also closed the Waterbury and Maybrook railroad lines that pass through the impacted areas. These historic rainstorms led Governor Lamont to declare a Civil Preparedness Emergency. As the Connecticut Department of Emergency Management and Homeland Security Incident Report summarized, "[u]p to almost 16 inches of rain fell in 6-8 hours in some locations. It was determined that the rainfall was significant enough to qualify as a 1,000-year flood in some areas..."[10] This tragic and costly flooding event is the latest in a series of unprecedented severe weather events in the past few years. In 2023 alone, Connecticut communities were harmed by record-breaking rainfall in July and August, and record-breaking poor air quality linked to wildfires in June. Summer 2024 opened with a record-breaking heat wave from June 18-21 that also coincided with air quality alerts issued due to heat-related elevated ozone levels.

The August 2024 flooding event is one of the costliest disasters[11] in Connecticut since Superstorm Sandy, and caused significant damage to public infrastructure, roads and bridges, homes, and businesses. The state estimated in its request to the Federal Emergency Management Agency (FEMA) for disaster assistance that initial damage cost to transportation and other infrastructure was $206 million.[12] This includes more than $13 million in damage to the Waterbury Line of the Metro-North railroad, $7.45 million to DEEP-owned bridges, roads, and dams and other infrastructure, and more than $40 million in damage to a state long-term care facility. The initial damage assessment from this unprecedented flood found that 19 homes were destroyed and 170 homes suffered major damage. Overall, nearly 2,000 homes suffered at least some damage. More than 300 businesses reported suffering at least some damage, with 77 of them experiencing major damage. Damage assessments are still ongoing. The severity of this event resulted in flooding that occurred far outside of mapped floodplains, with many residents and businesses lacking flood insurance.[13]

This event added to the already significant, growing costs of extreme weather events in Connecticut in recent years. Beginning with Tropical Storm Irene in 2011 and including the October 2011 snowstorm, Sandy, Isaias, Henri, remnants of Ida, and four additional unnamed storms, Connecticut has received $329.6 million in FEMA recovery assistance from 2011-2023, excluding funding for the COVID-19 pandemic. Moreover, this amount does not reflect the full cost of these disasters since it does not include insurance payouts, private funds used for recovery, utility repairs, and other aid from the state and other federal agencies beyond FEMA assistance. For example, the infrastructure and housing damage to Connecticut from Superstorm Sandy alone was estimated at $360 million.[14] Additionally, utility costs for restoring service during extreme weather events are adding hundreds of millions of dollars to Connecticut energy bills and contributing to the affordability challenges of electricity costs in the states. United Illuminating and Eversource spent an estimated $1.24 billion on storm recovery in Connecticut from 2017 to 2023.[15,16] In 2011, Hurricane Irene caused power outages affecting 754,000 Connecticut customers and over $200 million in damage.[17] In 2012, Hurricane Sandy caused power outages affecting more than 600,000 Connecticut customers. The latter forced thousands of Connecticut residents to evacuate, caused thousands to apply for FEMA assistance, damaged roads and infrastructure, and took nine days for utilities to restore power.[18]

For Connecticut's wildlife, climate change ranks among the biggest issues facing Connecticut's Species of Greatest Conservation Need and State Assessment Priority Species, affecting 42% of all Species of Greatest Conservation Need statewide and will likely challenge them even more in the future. Impacts span every major taxonomic group with particularly high vulnerability among fish (79%), mammals (71%), and reptiles and amphibians (71%). These threats work through various mechanisms, including habitat shifts, altered phenology,[19] increased thermal and hydrological variability, and intensified extreme weather events. [20]

New Climate and Energy Laws

Building on the passage of the 2022 Connecticut Clean Air Act,[21] in 2025, the Connecticut legislature passed three omnibus bills, signed into law by Governor Lamont, that support clean energy, climate resilience, improve energy affordability, and reduce GHG emissions in the state. These laws added to and amended the climate change policies and mitigation targets established by Connecticut's Global Warming Solutions Act:

- Public Act 25-125, An Act Concerning the Protection of the Environment and the Development of Renewable Energy Resources and Associated Job Sectors,
- Public Act 25-33, An Act Concerning the Environment, Climate and Sustainable Municipal and State Planning,[22] and
- Public Act 25-173. An Act Concerning Energy Affordability, Access and Accountability.

A high-level summary of each bill is provided below with a more detailed summary of each bill in Appendix A. In addition to requiring this report on Connecticut's Climate Progress, these laws provide insight into the current direction of climate policy in Connecticut.

Public Act 25-125. This act sets new state-wide GHG emissions reduction targets for 2040 and 2050 and requires DEEP to develop this report.

PA 25-125 also achieves the following:

- Codifies GreenerGov emissions reduction goals, allows state agencies to use the social cost of GHGs to evaluate project costs, and requires the Connecticut Department of Administrative Services to consider state assets' energy efficiency and clean energy options and plan and budget for retrofitting state buildings to operate without carbon-emitting fuels.
- Establishes the Connecticut Clean Economy Council.
- Supports the use of efficient heat pumps through planning and inclusion in school construction grants.
- Expands the Housing Environmental Improvement Revolving Loan and Grant Fund to include resilience measures.
- Requires DEEP to conduct a nature-based solutions initiative and expand the state's open space program to allow urban agriculture.
- Requires studies on solar canopies and renters' use of state energy efficiency and renewable energy programs.
- Requires DEEP to report on recommended policies, strategies, and regulations to lower energy costs.

Public Act 25-33. This act makes changes in law related to planning and preparing for certain hazards and climate change effects (e.g., sea level rise, rising groundwater, extreme heat, wildfire, drought, or flooding). Highlights of the law include:

- Requires insurance brokers and financial institutions providing mortgages to provide information on flood coverage and the potential for flood damage and adds flood risk information to property conditions reports required for home sales.
- Requires the use of climate vulnerability assessments, climate projections, and resiliency goals in updates to local, regional, and state plans of conservation and development, the state's civil preparedness plan, and local evacuation or hazard mitigation plans.

- Authorizes local and regional zoning commissions to adopt regulations that address climate threats, including a regional transfer of development rights systems.
- Requires updates to the State Water Plan and reviews of water supply and sewage disposal system regulations to account for certain climate projections.
- Creates a framework for municipalities to establish resiliency improvement districts that may provide financing for resilience projects.

Public Act 25-173. The 59 sections of the 140-page law provide funding, policy and multiple plans and studies to improve energy affordability while also increasing reliability and facilitating decarbonization. A few highlights from among the law's many provisions include:

- Authorizes up to $250 million to reduce costs of hardship protection measures charged to electric customers as system benefits charges.
- Authorizes up to $50 million for the Office of Policy and Management to support the state's electric vehicle charging program while capping the Public Utilities Regulatory Authority's (PURA's) expenses for charging and wiring and directing the funding to those who live in low-income census tracts.
- Promotes the use of time-varying rates for electricity rates that (1) reflect the utility's cost to provide electricity to the customer at different times and (2) create a price differential that incentivizes targeted electric load growth and system efficiency.
- Supports the adoption of advanced transmission technologies such as high-performance conductors and dynamic line ratings to improve the reliability and efficiency of the electric grid.
- Requires DEEP to establish:
  - a thermal energy network grant and loan program,
  - an advanced nuclear reactor site readiness funding program with up to $5 million in funds, and
  - an electric active demand and gas demand response pilot program.
- Requires new energy procurement targets to be included in the next Integrated Resources Plan (IRP).
- Establishes as goals of the state (1) maximizing the efficiency and use of the electric transmission and distribution systems and (2) ensuring that any ratepayer-funded programs are cost-effective and focused on affordability, reliability, and decarbonization.

Progress Towards Connecticut's Statutory GHG Emissions Targets

Pursuant to Section 2(d) of Public Act 25-125, DEEP is required to report on the "quantifiable emissions reductions and carbon sequestration achieved" for Connecticut. This section reviews the state's statutory GHG emissions reduction targets and summarizes the results of DEEP's annual GHG Inventory published in September 2025 with emissions levels through the year 2023, the most recent year for which data is available.

These statutorily determined targets are based on what the best available science says will prevent the worst impacts of climate change. Regular reporting on the progress towards the targets enables decisionmakers to measure our progress, consider the relative efficacy of different mitigation strategies and cost-effectiveness of investments, and evaluate in real time how changes to policy at the federal and state level may affect our long-term ability to achieve these targets. As we have seen - particularly during the COVID-19 pandemic - there can be significant volatility in GHG emissions year-over-year, but at the decadal-scale we have seen sustained reductions in GHG emissions. Again, this demonstrates the utility of the targets and reporting over the near- and long-term to help measure and track our progress.

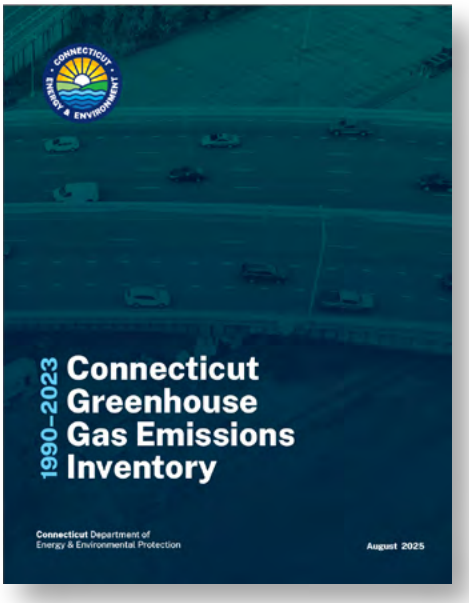
DEEP also provides the results of a business-as-usual (BAU) GHG emissions modeling scenario analysis conducted as part of the development of a Comprehensive Climate Action Plan deliverable for the EPA Climate Pollution Reduction Grant[23] awarded to DEEP in 2023. This modeling analysis provides future projections of what Connecticut's GHG emissions could be if current federal policy, including proposed regulatory rollbacks, and state policy persist and in the absence of further federal, state or local government actions that reduce emissions and provides a baseline against which to assess potential GHG emissions reduction pathways to reach Connecticut's targets. This assessment is underway as part of the EPA CPRG planning process and will be completed in summer 2026.

Statutory Targets

For over two decades, Connecticut has taken actions to respond to climate change. With the goal of reducing statewide GHG emissions and demonstrating effective solutions, the state has utilized tools such as goal setting, legislation, regulations, and voluntary action to advance its climate commitments. Connecticut has had statutory GHG gross emissions reduction targets since the passage of Public Act 04-252[24] in 2004, which established short- and long-term emissions reduction goals based off a 2001 climate plan developed by the New England Governors and Eastern Canadian Premiers, of which Connecticut is a member. The Global Warming Solutions Act (GWSA) of 2008[25] further refined and solidified these targets in state law, establishing state-wide emission reduction targets for 2020 and 2050. The original GWSA targets have been supplemented over time by legislation creating an interim target in 2018 for 2030,[26] an electric sector target in 2022 for 2040,[27] and, in 2025, adding an economy-wide interim target for 2040 and a net-zero target for 2050.[28] Connecticut's current GHG emissions targets are now:

- 10% below 1990 levels by January 1, 2020
- 45% below 2001 levels by January 1, 2030
- 65% below 2001 levels by January 1, 2040
- 0% from electricity supplied to electric customers in the state by January 1, 2040
- Net-zero by January 1, 2050, provided direct and indirect emissions of greenhouse gases are at least 80% below 2001 levels by January 1, 2050[29]

Connecticut's Latest Greenhouse Gas Inventory



In September 2025, Connecticut published its latest GHG Emissions Inventory,[30] an annual report that documents the state's GHG pollution and its progress towards its statutory GHG emissions reduction targets. This year's inventory shows that in 2023, which is the most recent year for which data is available, emissions decreased from the two largest sources of climate pollution in our state: transportation and buildings.

Total GHG emissions in 2023 were 35.0 million metric tons of carbon dioxide equivalent (MMTCO2e), representing an increase of 1.5% from 2022 levels. However, the state remains 9.5% below its pre-pandemic emissions levels in 2019 and continues to meet the GWSA's first emissions reduction target of 10% below 1990 levels by 2020. Reaching the next target — a 45% reduction in GHG emissions from 2001 levels by 2030 — requires reducing emissions levels by 8.9 MMTCO2e from the levels reported in 2023.

GHG Inventory Sector Highlights – Changes from 2022 to 2023 GHG Emissions

Transportation sector GHG emissions, the state's largest source of GHG emissions, decreased by about 0.3 MMTCO2e (or 2%) despite the number of vehicles miles traveled increasing in the state. The continued increase in the share of light-duty vehicles with higher fuel efficiency to the total of light-duty vehicles on the road likely drove emissions reductions in the transportation sector, with electric vehicle adoption and biodiesel consumption also contributing.

Residential buildings sector emissions declined by about 0.6 MMTCO2e (or 5.6%). The mild winter in 2023 likely drove the reduction in emissions in the residential buildings sector, complemented by weatherization and energy efficiency measures.

Electric power sector emissions increased by 1.1 MMTCO2e while electricity consumption in Connecticut decreased from 28.4 million megawatt hours (MWh) in 2022 to 27.2 million MWh in 2023 (by 4.2%). The increase in electric power sector emissions appears to be largely due to the Millstone nuclear plant having a prolonged outage in 2023 due to refueling, resulting in a lower zero-carbon energy production in 2023. As a result, the state's electric power consumption relied more on GHG emitting fossil fuels during this period.

Emissions from industrial processes, agriculture, wastewater and solid waste, and natural gas remained relatively constant.

Connecticut's natural and working lands sequestered approximately net 4.9 MMTCO2e.

Sector Emissions (MMTCO2e)	1990	2001	2010	2019	2022	2023
Transportation	15.1	17.3	16.0	15.40	14.9	14.6
Residential Buildings	8.3	8.6	7.7	7.41	7.1	6.7
Commercial Buildings	3.8	4.3	3.4	3.82	4.3	4.3
Electric Power (Consumption)	11.9	12.3	12.0	5.69	2.5	3.6
Industrial Processes	3.0	3.4	3.4	3.15	3.7	3.8
Wastewater and Solid Waste	1.4	1.6	1.8	2.25	1.6	1.5
Agriculture	0.3	0.3	0.3	0.37	0.2	0.3
Natural Gas Leakage	0.8	0.5	0.3	0.24	0.2	0.2
Total - w/ Electric Consumption	44.7	48.3	44.8	38.71	34.5	35.0

Projecting a Business-As-Usual Scenario

Using available emissions data at the sector level and building off the recently completed GHG inventory, DEEP developed a Business-As-Usual (BAU) projection of future GHG emissions given the current policy and regulatory landscape. This BAU scenario was developed to project the state's GHG emissions through 2050 and will serve as the required baseline against which GHG reduction measures will be modeled in Connecticut's forthcoming Comprehensive Climate Action Plan (CCAP).[31] DEEP is developing the CCAP for release by July 1, 2026, pursuant to a federal (EPA-administered) grant funded by the Inflation Reduction Act. The BAU analysis (Figure 1) considers programs and policies that exist today, including recent cuts to federal programs announced by the Trump Administration that are already in place. These federal cuts include recent and anticipated rollbacks to electric power and electric vehicle tax incentives, offshore wind projects, vehicle emissions standards,[32,33] and Clean Air Act 111(b) and (d) regulations.[34]

The BAU Analysis is intended to show estimated future GHG emissions, based upon historic data and current trends. While no exact prediction can be made of future GHG emissions, these analyses are relied upon to aid in determining how close to statutory targets future emissions will be and inform paths forward to meet those targets. To determine the accuracy of specific models, future predictions are often compared to historic data. Much of the modeling that was conducted for the BAU used models created or recommended by the EPA, or DEEP's consultant ICF, Inc. Figure 2 provides a wedge analysis that represents projected emissions for each sector analyzed in the BAU. Appendix B includes a technical memo describing the methods used in the development of the BAU scenario.

According to this analysis, the top three sectors expected to contribute most to GHG emissions in the coming years continue to be transportation, electric power, and buildings. These results are similar to the data presented in the most recent GHG Inventory, released in September 2025. Figure 2 shows that, on the current path, the state is estimated to fall short of meeting its 2030, 2040, and 2050 emissions targets, but continue to achieve significant GHG emissions reduction of 34% below 2001 levels by 2030 and 44% by 2050.

As further described in the Appendix B, in transportation and buildings, emissions are projected to decrease mainly due to electric vehicle adoption and more efficient, electric equipment. However, these gains are offset by continued growth in vehicle miles traveled and rising energy use in commercial buildings. Emissions from the electric power sector are expected to significantly decrease in the near term as more clean energy is added in the state and the region. While the state's in-state electricity supply reaches net zero emissions by 2040, GHG emissions tied to electricity use remain because the state increasingly relies on imported electricity from the regional grid. Beginning in 2040, the state becomes a net importer of electricity, and demand continues to rise through 2050 as electrification increases.

Projections for 2030 are more reliable than those for later years because they rely on more detailed and current data. With limited time remaining, there is little opportunity to significantly change course in the near term. Higher adoption of clean energy technologies[35] would have been needed earlier in the decade to meet the 2030 target. The analysis also finds that recent rollbacks of federal policies and incentives are unlikely to significantly affect the state's ability to meet the 2030 target, since market adoption of clean energy technologies is expected to continue in the near term. However, delays to offshore wind projects caused by federal actions are likely to push project completion beyond 2030 and add uncertainty to the region's clean energy transition.

Looking further ahead to 2040 and 2050, projections become less certain due to unknowns around future technologies, costs, and adoption rates. Federal policy changes have a larger impact in these later years, but they do not fully explain the gap between projected emissions and the state's targets. Emissions from hard-to-reduce sectors such as industry and waste, along with cost and feasibility barriers to faster adoption of clean energy technologies, also limit progress toward the state's targets.

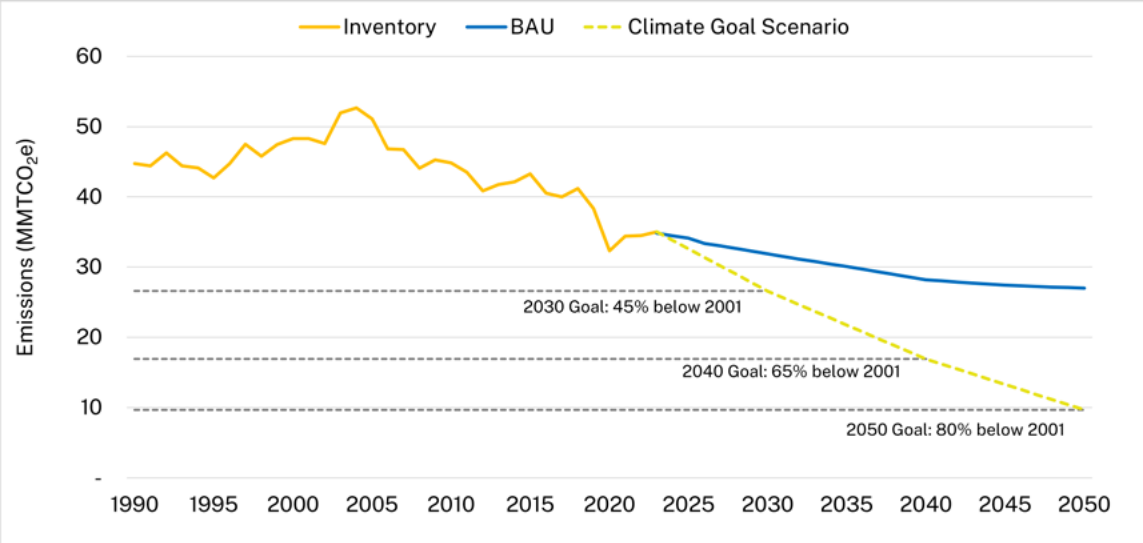


Figure 1. Projected total emissions in the BAU against Connecticut's statutory gross emissions reduction goals of 45% below 2001 levels by 2030, 65% below 2001 levels by 2040, and at least 80% below 2001 levels by 2050.

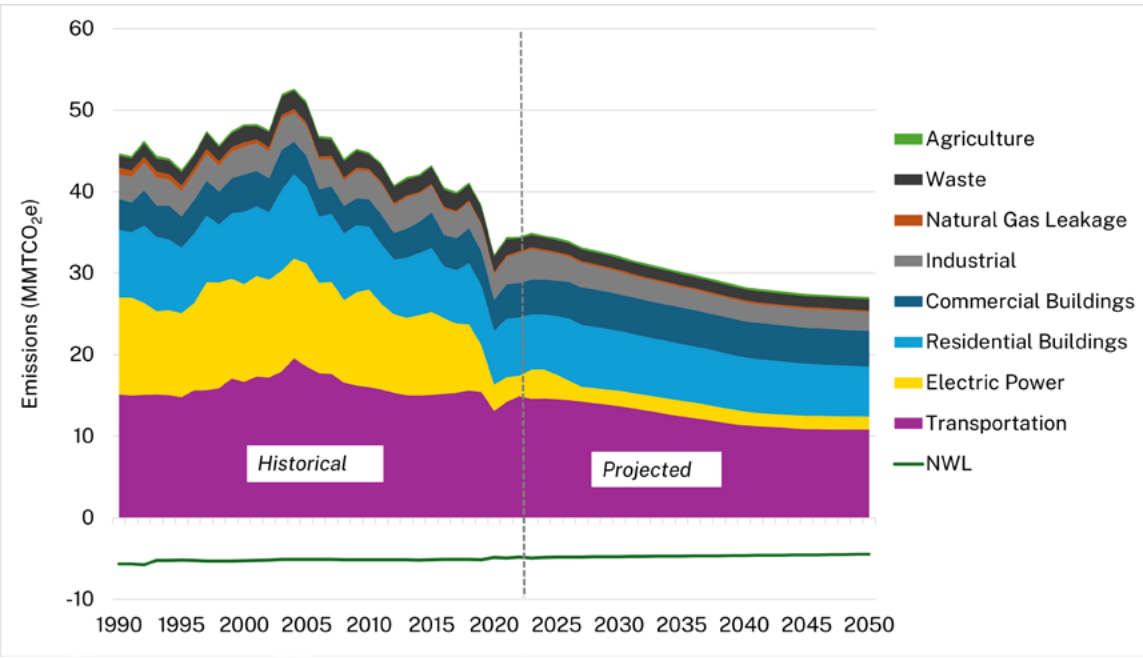


Figure 2. Wedge analysis of projected emissions in the BAU by sector.

As part of this analysis, two sensitivity scenarios were also modeled (See Figure 3) to assess the anticipated impact of certain federal policy rollbacks on transportation and electric power sector emissions. Specifically, a Some Rollbacks scenario assumes the absence of current or expected rollbacks to electric vehicle tax incentives, vehicle emission standards, and Clean Air Act 111(b) and (d) regulations. A No Rollbacks scenario assumes the Inflation Reduction Act (IRA) tax incentive schedule for electric power and electric vehicles is reinstated and reflects the absence of rollbacks to offshore wind projects, vehicle emissions standards, and Clean Air Act 111(b) and (d) regulations. The approach used to model these two sensitivity scenarios is described for applicable sectors below.

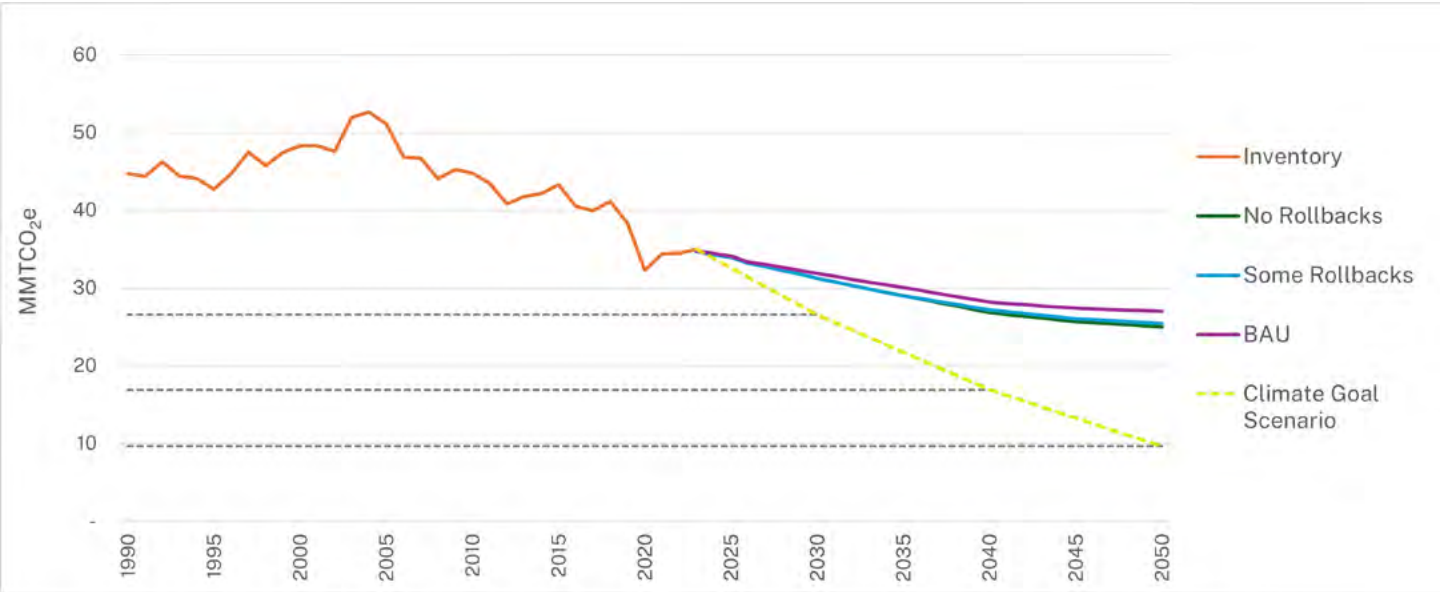


Figure 3. Sensitivity Analysis for the Business-As-Usual Projection.

Transportation sensitivity. Both sensitivity scenarios reflect the same change to on-road vehicle assumptions, with emissions from light-duty and heavy-duty vehicles being projected using default input values from the Motor Vehicle Emissions Simulator (MOVES5) model instead of the vehicle sales curves from the Rocky Mountain Institute's Energy Policy Simulator Repeal scenario. MOVES5 assumes electric vehicle adoption meets the EPA's Multi-Pollutant Emissions Standards for Model Years 2027 and later standards,[36] along with the EPA's Phase 3 Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles requirements.[37] As in the BAU scenario, emissions were calibrated using a scaling factor that aligns emissions from MOVES5 with the state's 2022 inventory emissions. All other transportation subsector emissions are consistent with the BAU scenario.

Electric power sensitivity. In the Some Rollbacks scenario, EPA 111(b) and (d) regulations are reinstated, but the OBBB Act tax credit phaseout schedule for clean generating technologies remain. The No Rollbacks scenario assumes that the EPA regulations are reinstated, and that tax credits for clean generating technologies revert to the full IRA phaseout schedule.[38]

Proposed GHG Mitigation Regulations, Policies, and Strategies

Pursuant to Section 2(d) of Public Act 25-125, this report must include "a schedule of proposed regulations, policies and strategies designed to achieve the limits of greenhouse gas emissions specified in this section, by the relevant date provided."

As reviewed in the report below, the federal government initiated many efforts to roll back GHG mitigation strategies in 2025. These efforts, if sustained, appear poised to have a meaningful impact not only on GHG emissions reductions, but on cost and quality of life at a time when affordability pressures are already high. At the same time, they remain early in their development, likely to encounter litigation and other challenges, and more changes could be coming. DEEP's focus is on implementing the federally-funded programs that are continuing as well as state-funded programs, while continuing to monitor for additional changes at the federal level. These programs support GHG emissions reductions as well as lower energy costs for families and businesses, decrease air pollution, increase grid reliability and enhance community resiliency. These are the long-standing mitigation programs that now more than ever contribute to making Connecticut a safer, healthier and more affordable place to live, raise a family, and grow a business.

This section of the report provides:

- a summary of the recommendations of the Governor's Council on Climate Change released in January 2021 and Governor Lamont's December 2021 Executive Order 21-3, implementing many of those recommendations;
- the impacts of federal actions since 2021 on regulations, policies and strategies to reduce GHG emissions, including new federally funded programs under the 2021 Infrastructure Investment and Jobs Act (a.k.a. the Bipartisan Infrastructure Law) and the 2022 Inflation Reduction Act, new federal regulations under the Clean Air Act, and the subsequent proposed rollback of federal regulations, including the proposed rollback of the landmark 2009 Endangerment Finding, and attempted terminations of some federal funds under the current federal administration;
- the status of those regulations and programs, including ongoing litigation between Connecticut and the federal government;
- a summary of current state and federal programs that are continuing;

- projected GHG emissions reductions that could be achieved with the implementation of illustrative actions being evaluated in the August 2024 Priority Climate Action Plan; and
- a discussion of two carbon sequestration pathways to meet the state's net zero by 2050 goal of 1) natural and working lands and 2) technological carbon dioxide removal (tech CDR)

The Governor's Council on Climate Change

On September 3, 2019, Governor Ned Lamont issued Executive Order No. 3[39] establishing the Governor's Council on Climate Change (GC3) and strengthening Connecticut's commitment to transition to a decarbonized economy and enhance resiliency of the state's economic, cultural, and natural resources to the impacts of climate change. In 2020, the GC3 convened working groups, conducted a participatory process, and delivered the *January 2021 Report: Taking Action on Climate Change and Building a More Resilient Connecticut for All,*[40] with 61 recommendations for near-term climate action that aim to achieve the following:

- Prioritize mitigation and adaptation strategies in communities that will feel the impacts of climate change first and worst through launching a statewide environmental justice mapping tool and focusing planning resources on those communities, including developing and implementing a no less than 40% equity funding and/or benefit commitment.
- Protect and harness energy efficiency funds to improve building heating and cooling and move to decarbonize our buildings sector through the use of renewable thermal technologies, including heat pumps.
- Achieve a zero-carbon electric grid by 2040 through increased use of solar, wind, battery storage and a smarter and more responsive grid, while creating green jobs.
- Reduce greenhouse gas emissions from methane and hydrofluorocarbons (HFCs) and promote mitigation strategies in planning and materials management.
- Move toward a decarbonized transportation sector through putting at least 125,000 electric vehicles (EVs) on the road by 2025, including medium and heavy-duty vehicles, with EV charging infrastructure, and advance initiatives to reduce vehicles miles traveled.
- Harness the power of nature-based solutions to 1) adapt and make Connecticut's vulnerable communities more resilient to the impacts of sea level rise, coastal and riverine flooding, and drought, while creating and enhancing ecosystem services and 2) move the state to net zero emissions through carbon sequestration and storage in forests, wetlands, and agricultural landscapes.
- Build back better with resilient and sustainable infrastructure and land use, informed by the best available science and engineering standards.
- Recognize that climate change is also a public health crisis and prepare Connecticut for heat stress, air quality impacts, and vector-borne diseases, while ensuring safe drinking water and a climate-informed emergency management system.
- Leverage federal, state, and municipal funding sources to implement adaptation and resilience projects while building new financing mechanisms, including the creation of resilience authorities, stormwater utilities, and an environmental infrastructure bank.

- Ensure Connecticut's decisions continue to be informed by the best available climate science and support climate science education.

In December 2021, Governor Lamont signed Executive Order 21-3 (E.O.21-3)[41] implementing 23 executive actions reflecting 33+ recommendations of the GC3 in the areas of buildings and infrastructure; clean transportation; community climate resilience; health, equity and environmental justice; jobs and the economy; and natural and working lands. E.O. 21-3 also continued the GC3, charging the Council to meet by December 31, 2022 to report on progress, and annually thereafter. The GC3 convened on December 6, 2022[42] to monitor and report on progress on the implementation of the E.O. 21-3 actions. All of DEEP's climate action plans and related planning documents, both economy-wide and sector-specific, including the Integrated Resources Plan, Comprehensive Energy Strategy, GHG Inventory, and past reports of the GC3, can be found on DEEP's Climate Change webpage.[43]

Current Federal Actions

Infrastructure Investment and Jobs Act, Inflation Reduction Act and One Big Beautiful Bill Act

In November 2021, Congress passed the Infrastructure Investment and Jobs Act (IIJA) (a.k.a. the Bipartisan Infrastructure Law), and in August 2022, the Inflation Reduction Act (IRA) was signed into law. Together these two bills signified the largest investment in climate action in U.S. history. The IRA alone provided over $360 billion in funding to support climate and energy programs across the nation and was projected to result in a 40% reduction in emissions below 2005 levels by 2030, placing the U.S. within reach of its near-term goals.[44] IIJA also provided awards to support projects such as transportation electrification, mode shifting, and the development of clean hydrogen hubs. By December 2023, approximately 8,000 projects throughout the U.S. states and territories and the District of Columbia had received funding through IIJA.[45] In 2023, Connecticut alone received over $2 billion for federal climate investments.[46]

On July 4, 2025, H.R. 1, a federal budget reconciliation bill, known as the One Big Beautiful Bill Act, was signed into law by President Trump that rescinded some of the new federal funding programs created under the IRA and made significant changes to federal tax credits and other provisions that Connecticut residents and businesses utilize to reduce the cost of renewable energy, energy efficiency, and electric vehicles. Key provisions of this bill include:

- Added Foreign Entity of Concern rules
- For solar and wind, commence construction by year-end 2025 with no Foreign Entity of Concern restrictions or by July 4, 2026 if in compliance with Foreign Entity of Concern restrictions
- Eliminated electric vehicle tax credit after September 30, 2025
- Eliminated residential efficiency and solar tax credits after December 31, 2025
- Provided geothermal and energy storage more favorable treatment

In response to the rollback of federal tax credits, DEEP published information[47] for Connecticut residents on the new timelines to take advantage of the federal tax credits and a list of related state incentive programs, which are further detailed below.

Federal Executive Actions

There have been multiple impactful federal executive actions conducted by the current federal administration, many of which further slow climate mitigation efforts at the state and federal level and increase costs for ratepayers and consumers, including:

- July 7th, 2025 E.O. 14315[48] ("Ending Market Distorting Subsidies for Unreliable, Foreign-Controlled Energy Sources"): Targets wind and solar, tightening the start of construction definition, and requires Treasury to provide additional guidance within 45 days
- July 15th, 2025 Department of Interior Memorandum[49] on "all decisions, actions, consultations, and other undertakings" related to wind and solar projects
- Tariffs are expected to impact energy pricing as increased cost of materials impact building costs for energy projects and increased costs of imported fuels are passed through to customers.
- Potential termination of the EPA ENERGY STAR® program:[50] The President's budget proposal zeroed out funding for the program and EPA leadership has expressed skepticism about the program.
- August 22nd, 2025 Stop Work Order from the Bureau of Ocean Energy Management to Revolution Wind:[51] Ordered halt to offshore construction due to unspecified "national security" and other concerns. The order threatens to prevent the 80% complete project from coming online, which would harm grid reliability and cost the region's ratepayers ~$500M/year. On September 22nd, 2025 U.S. District Court in D.C. issued a preliminary injunction[52] of the order, allowing construction to resume while litigation continues; according to Ørsted, the delay put the project at risk and was costing them over $2 million/day.
- On December 22, 2025, a second stop work order[53] was placed on the Revolution Wind project and four other wind projects. Statements were released by Governor Lamont alone[54] and in conjunction with governors[55] also impacted by the order. As of January 2, 2026, Ørsted, the developer for Revolution Wind in CT and RI and Equinor, the developer for Empire Wind in NY filed lawsuits challenging the order.[56] On January 6, 2026, Connecticut and Rhode Island filed a request for a preliminary injunction,[57] which was granted on January 12, 2026.

EPA Regulatory Rollbacks

There have also been several regulatory rollbacks proposed by the current federal administration that threaten the environment and public health and increase healthcare costs for families and businesses, including:

- EPA announced Final Rule rescinding the Endangerment Finding,[58] a 2009 determination that GHGs threaten public health and the environment and are therefore subject to the Clean Air Act (more discussion below).
- EPA proposed repeal of national emission standards for certain coal and oil-fired power plant emissions, commonly referred to as the Mercury and Air Toxics (MATs).
- EPA proposed repeal of GHG emission standards for all fossil fuel-fired power plants and finding that GHG emissions from such sources do not contribute significantly to dangerous air pollution.

- Proposed reconsideration of EPA's vehicle GHG emissions standards[59] for 2027 and later model years that will likely lead to reconsideration of emission standards for other air pollutants (oxides of nitrogen, non-methane organic gases and fine particulate matter)
- EPA has indicated they will revisit the National Ambient Air Quality Standard[60] for fine particulate matter.
- Congress passed several resolutions revoking federal waivers for California's vehicle emission standards.

Endangerment Finding

In 2007, the U.S. Supreme Court declared that greenhouse gases are, in fact, air pollution and therefore subject to regulation under the Clean Air Act, a landmark law for over half a century that empowers states and the federal government to work cooperatively to protect public health and the environment from harmful air pollution. Connecticut was one of 11 states that petitioned the court to decide this question.[61] Following this decision, as published on the U.S. EPA's website,[62] "on December 7, 2009, the *U.S. EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:*

- ***Endangerment Finding:*** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases — carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6) — in the atmosphere threaten the public health and welfare of current and future generations.
- ***Cause or Contribute Finding:*** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution that threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action was a prerequisite for implementing greenhouse gas emissions standards for vehicles and other sectors."

On July 29, 2025, the U.S. EPA proposed rescinding the 2009 Endangerment Finding and to repeal all greenhouse gas emissions standards applicable to light-medium and heavy-duty vehicles,[63] the single largest source of greenhouse gas emissions in the United States.[64] On February 12, 2026, the U.S. EPA finalized that rescission after the close of a public comment period in September. Following the announcements of the proposed and final rescission, Governor Lamont, Attorney General Tong, DEEP Commissioner Dykes, and Connecticut Department of Public Health Commissioner Juthani responded with statements criticizing the announcement and underscoring the scientifically supported and widely understood connection between greenhouse gases, air pollution, and harm to human health and the environment.[65,66] During the public comment period on the proposed rescission, DEEP Commissioner Dykes submitted a letter urging EPA to retain the 2009 Endangerment Finding and accompanying vehicle emission standards that are foundational to protecting public health and the environment, whereas the proposed rollback will undermine those protections.[67] The national pollution standards proposed to be rolled back for passenger cars, light-duty trucks, and medium-duty vehicles for model years 2027-2032 would avoid 7.2 billion tons of CO2 emissions through 2055. EPA projected in 2055 alone, the rule will avoid emissions of 8,700 tons of particulate matter, 36,000 tons of nitrogen oxides, and 150,000 tons of volatile organic compounds, and avoid 2,500 premature deaths, 110,000 lost workdays, and more than a million asthma attacks. The national greenhouse gas pollution standards for heavy-duty vehicles, such as freight trucks and buses, for model years 2027-2029, were expected to avoid 1 billion tons of greenhouse gas emissions through 2055 and achieve $13 billion in net climate and health benefits each year.[68]

Attempted Terminations of Federal Funding

In addition to nationwide legislative, executive, and regulatory changes, the current federal administration has also moved to terminate federal funds flowing into the states. These actions have impacted programs in Connecticut administered by DEEP, including:

Environmental Justice Government to Government (G2G) Program

- On May 1, 2025, EPA terminated a $1,000,000 award to DEEP through the G2G program.

Highlands Conservation Act Grant Program

- On May 22, 2025, the U.S. Department of Interior terminated a $830,450 award through the Highlands Conservation Act Program.
- This funding was dedicated to protecting conservation land in Environmental Justice communities within the Highlands region (northwest CT)

Solar For All

- EPA ordered DEEP to stop work and begin closeout due to passage of OBBBA, suggesting it repeals underlying authority to administer Solar for All and rescinds funds.
- In August 2025, DEEP received a Termination Notice from EPA and an Assistance Amendment changing the award amount to $0. DEEP has transmitted the requisite notices of disagreement.
- DEEP is working with the Governor's office and the Attorney General's office on next steps.

Status of Related State of Connecticut Litigation

As a result of federal executive actions and cutbacks of appropriated funds, Connecticut joined several other states in multiple litigative actions against the current federal administration, including:

New York v. Trump (D. Mass)

- States sued the federal Administration to challenge the implementation of an executive order halting federal approvals of wind energy development. (Complaint, March 2025).
- Current status: On December 8, 2025, Judge Patti Saris granted the Plaintiffs' motion for summary judgment, holding that the administration's order halting federal approvals for development of wind energy was arbitrary and capricious and therefore unlawful under the Administrative Procedure Act (APA).

New York v. U.S. Department of Energy (D. Or.)

- States challenged Department of Energy (DOE) policy limiting indirect and fringe benefits costs to 10 percent of total award amount. (Complaint, Aug. 2025).
- Current status: On September 29, 2025, the District Court granted the States' motion for partial summary judgment. On October 9, 2025, the District Court Judge denied the federal defendants' motion to stay, which was filed because of the government shutdown because the Court already held oral argument and ruled from the bench on the merits of the case, the remaining issues are narrow, and the prejudice to the plaintiffs in delaying resolution. On November 10, 2025, the court granted the States' motion for summary judgment.

Rhode Island v. U.S. Department of Interior (D.R.I.)

- Connecticut and Rhode Island challenged a Stop Work order issued by the U.S. Department of the Interior requiring construction to halt on the Revolution Wind Project. (Complaint, Sept. 2025).
- Current Status: After the federal district court for the District of Columbia granted a motion for preliminary injunction lifting the Stop Work Order in a case brought by the project's developer, the federal defendants asked the Rhode Island court to hold the preliminary injunction motion in the states' case in abeyance. Case was transferred on 12/12/2025 to D.C. Cir. On 1/12/26 the Court granted the Plaintiffs' Motion for Preliminary Injunction filed by Orsted, RI, and CT and held Department of Interior's suspension order was arbitrary and capricious in violation of federal law.

Washington v. Trump (W.D. Wash.)

- States challenged Executive Order 14156, "Declaring a National Energy Emergency," alleging that the EO improperly invokes emergency powers under the National Emergencies Act. (Complaint, May 2025).
- Current Status: Complaint filed.

New York v. Trump (D.R.I.); (1st Cir.)

- 22 States (plus D.C.) sued the federal Office of Management and Budget (OMB), challenging its directive to pause federal funding. (Complaint, Jan. 2025).
- Current Status: Preliminary Injunction in effect. On April 28, 2025, Defendants appealed order enforcing the preliminary injunction to the First Circuit Court of Appeals.

New Jersey v. U.S. Office of Management & Budget (D. Mass.)

- 21 states challenged the federal Administration's termination of billions of dollars' worth of federal grants appropriated by Congress, previously awarded to states for critical funding. The Administration terminated these funds based on a subclause that federal agencies may terminate grants "... to the extent authorized by law, if an award no longer effectuates the program goals or agency priorities." (Complaint, June 2025, Amended complaint, July 2025).
- Current Status: Awaiting Ruling on Motion for Summary Judgment

Continuing State and Federally Funded Programs

Federally Funded Programs

Despite the actions of the current federal administration, many federal programs that support the reduction of GHG emissions are continuing. The latest updates on some of DEEP's largest federal grants are available on this DEEP website, **Federal Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA) Funding Updates**. Other state agencies have programs underway to support GHG emissions reductions as well.

State Incentive Programs

Despite the uncertainty regarding climate action and regulation at the federal level, Connecticut remains committed at the state level to helping residents reduce costs and continuing climate progress. Such programs include the Connecticut Hydrogen and Electric Automobile Purchase Rebate (CHEAPR), EnergizeCT, Electric Vehicle Charging Program, and Residential Renewable Energy Solutions.

Connecticut Hydrogen and Electric Automobile Purchase Rebate (CHEAPR)

- The Connecticut Hydrogen and Electric Automobile Purchase Rebate (CHEAPR)[69] offers incentives to Connecticut residents who purchase or lease an eligible new or used battery electric (BEV) or plug-in hybrid electric (PHEV) vehicle from a licensed Connecticut automobile dealership or original equipment manufacturer. CHEAPR's Rebate+ program offers additional incentives to certain income qualified Connecticut residents who purchase or lease an eligible new or used BEV or PHEV vehicle from a licensed Connecticut automobile dealership or original equipment manufacturer.

  Rebate levels effective October 1, 2025:

  Battery Electric Vehicles (BEVs). A BEV is a vehicle that obtains all its power from energy stored in rechargeable battery packs. BEVs use electric motors and do not use an internal combustion engine therefore burning no gasoline.

  - MSRP Cap[1]: $50,000
  - Standard Rebate: $1,000
  - Rebate+ New Incentive (Standard + Rebate+): $4,000
  - Rebate+ Used Incentive: $5,000

  Plug-In Hybrid Electric Vehicles (PHEVs). A PHEV is a vehicle that can be driven solely on electricity, powered by its internal rechargeable battery but also includes an internal combustion engine or electric generator powered by gasoline to extend the range of the vehicle.

  - MSRP Cap: $50,000
  - Standard Rebate: $500
  - Rebate+ New Incentive (Standard + Rebate+): $2,000
  - Rebate+ Used Incentive: $3,000

EnergizeCT / Conservation & Load Management Plan

- The EnergizeCT program,[70] which is managed through the Conservation and Load Management Plan and the Energy Efficiency Board,[71] provides incentives for many of the same programs that were eliminated through the federal tax credits. These include home energy assessments and rebates and incentives for weatherization/insulation, efficient appliances, heat pumps and heat pump hot water heaters, windows and geothermal heating. For example, for single family (1-4 units), rebates for residential air source heat pumps for building heating and cooling that replace natural gas, oil, propane or electric resistance heat are $1000 per ton, up to $15,000.[72]

Electric Vehicle Charging Program

- The Electric Vehicle (EV) Charging Program[73] is a statewide program that provides incentives for residential and commercial light-duty EV charging equipment, as well as accompanying rate design offerings, to optimize charging behavior. Launched in January 2022, this nine-year program is administered by Connecticut's regulated electric companies, Eversource Energy and The United Illuminating company.

  Charger installation and wiring upgrade incentive. The state's electric distribution companies provide charger and wiring upgrade rebates up to $1,500 to customers meeting income eligibility requirements of up to 300% of the federal poverty level or who live in high poverty, low opportunity areas to help set up EV home charging. These rebates can be made towards the costs of a home wiring upgrade, the purchase of a Level 2 Smart Charger, or used to offset some of the cost of both. Residential EV charger rebates are available for 1 to 4-unit homes. Rebates are also available for larger apartment buildings.[74]

  Managed charging. A condition of receiving the above rebate is participating in managed charging. This program allows the single-family, multi-family or commercial owner of the charger to earn rewards for charging during off-peak hours and reducing demand during peak times. For chargers installed at a single-family home, up to $120/year can be earned by charging during off-peak hours (at least 80% of the time each month) or, if enrolled in scheduled charging, up to $300/year can be earned by sticking to a set off-peak charging schedule, with limited on-peak overrides.

Residential Renewable Energy Solutions

- Starting on January 1, 2022 and running through the end of 2027, Residential Renewable Energy Solutions[75] is a program that compensates residents for the power produced from their residential distributed generation (Renewable Energy) systems and Renewable Energy Certificates. The homeowner can select one of two incentive rate structures — Buy-All or Netting — along with the interconnection application. Additional incentives are available for income-eligible residential customers or customers who reside in Distressed Municipalities/Environmental Justice Communities.

DEEP Energy Procurements

Despite the actions taken at the federal level to hinder climate progress, Connecticut continues to implement climate action while improving affordability. The state has several energy procurement and climate action planning processes underway. Current energy procurement processes include:

Energy Efficiency Procurement

- DEEP released a final request for proposals on October 1, 2025, to procure active and passive electric and gas demand response measures.
- DEEP is in the process of evaluating bids received.

Expedited Zero Carbon Energy Procurement

- DEEP released an expedited request for proposals for zero carbon electricity generating resources on September 10, 2025.
- On December 18, 2025, DEEP announced the collective selection of 173 MW of solar between Connecticut, Massachusetts, Maine, and Vermont.[76]

2026 Zero Carbon Procurement

- On December 15, 2025, DEEP released a draft request for proposals seeking comment on the draft document requesting bids from emissions free resources, including nuclear, hydropower, solar, onshore and offshore wind, and co-located energy storage.
- DEEP intends to release a final request for proposals seeking bids later in January 2026.

Anticipated procurements include:

Grid-Scale Energy Storage Procurement

- DEEP has additional energy storage procurement authority remaining under C.G.S. Sec. 16-243dd and intends to initiate its next procurement early this year.

Current and Future Clean Energy Plans

At the planning level, DEEP is also continuing its work to provide pathways towards reaching our emissions goals while simultaneously reducing energy costs for consumers and promoting community resiliency. These planning efforts include:

Integrated Resources Plan (IRP)

- Assesses Connecticut's growing electricity needs and identifies pathways to meet these needs affordably and reliably for the state's residents and businesses over the next ten years (2026-2035).
- Initial notice of proceeding and request for comments issued on February 26, 2025.
- DEEP posted a scoping notice[77] on September 5, 2025, to solicit additional public input on proposed questions and modeling approaches.
- The Integrated Resources Plan will include new components from Public Act 25-173:
  - Sections 36 and 37: Assess the impacts to the Renewable Portfolio Standard market based on eligibility changes.
  - Section 43: Schedule of solicitations for additional 7% of new zero carbon Class I renewables above Renewable Portfolio Standard requirements.
  - Section 56: Electric system efficiency goals and metrics.

Hydrogen Roadmap

- On July 21, 2025, DEEP released a final Hydrogen Roadmap[78] pursuant to Public Act 23-156,[79] which assesses the use of clean hydrogen.
- The analysis in this report was conducted before the passage of OBBBA, which accelerates the sunset of the clean hydrogen production tax credit.
- The roadmap presents meaningful conclusions on clean hydrogen potential in Connecticut.

Geothermal and Air Source Heat Pumps

- DEEP will be developing a plan for the installation of efficient heat pumps for affordable heating and cooling systems in the state pursuant to Section 9 of Public Act 25-125
- DEEP plans to conduct research and analysis on geothermal, including thermal energy networks & air source heat pumps.

- Authorized state bond funding includes $25M for heat pump deployment & $125M for a Revolving Loan & Grant program. In December 2025, DEEP received $18 million in state bond funding for the Revolving Loan and Grant Program:[80] $6 million for barrier remediation in low-income single-family homes, and $12 million in loans for energy upgrades in multifamily affordable housing, including pre-development work, technical assistance, and necessary rehabilitation.

Nuclear

- Sections 33 and 34 of Public Act 25-173 lift the moratorium on new nuclear generating facilities in the state, under a community opt-in approach, and direct DEEP to create a competitive advanced nuclear site readiness program ($5M) to support early site permitting, community engagement, planning, and other efforts.
- Connecticut is working with other states, including through the National Association of State Energy Officials, National Association of Regulatory Utility Commissioners, and National Governors Association, to explore development of advanced nuclear generation, such as small modular reactors, in New England.
- With the passage of Public Act 24-38,[81] any future solicitation for existing nuclear conducted by DEEP must be done in coordination with at least two other states:
- MA, RI, ME, and VT have authority for a procurement.
- On December 10, 2025, DEEP hosted the first workshop under an informational process DEEP announced[82] in October 2025 to explore new nuclear energy capacity in Connecticut.[83]

EPA Climate Pollution Reduction Grant Climate Action Planning

In 2023, Connecticut became one of 46 states and territories to receive funding through the U.S. Environmental Protection Agency (EPA)'s Climate Pollution Reduction Grant (CPRG) Phase 1 Planning Grant program, authorized by the Inflation Reduction Act. This program provides states, territories, metropolitan statistical areas (MSAs), and tribes with funding to develop three climate planning documents to guide climate action implementation:

1. Priority Climate Action Plan[84]
2. Comprehensive Climate Action Plan
3. Status Report

The Priority Climate Action Plan

In spring 2024, DEEP released the first required deliverable of its CPRG Planning Grant, the **Priority Climate Action Plan (PCAP)**. Under the EPA CPRG grant, DEEP is required to identify near-term, high-priority implementable measures across five economic sectors to advance GHG mitigation in the state. In developing these initial mitigation measures over the allotted six-month period for completion, DEEP engaged with 100+ organizations through 186 collaborative meetings with 231 GC3 working group members. To request feedback and public comment on the measures, DEEP conducted a stakeholder survey and held a public meeting, as well as sought regular advice from the Low-Income and

Disadvantaged Communities (LIDAC) Advisory Group and engaged with community organizations within LIDACs, alongside coordination with sister agencies, councils of governments, and municipalities. This plan includes quantitative analysis of the emissions reductions (including co-pollutants) that these measures would result in, assuming certain costs and numbers of measures such as electric vehicle (EV) chargers, heat pumps, etc. are deployed. The PCAP also includes a qualitative analysis of potential benefits and impacts of these measures to members of low-income and disadvantaged communities in the state. Table 2 describes each of the measures and their estimated ability to reduce GHG emissions based on the assumptions, such as the number of chargers or heat pumps deployed, as identified and further described in the PCAP and its technical appendix.

Sector	Measure Description* *This is a generic description. The GHG reduction estimates are based on the detailed assumptions (e.g. number of chargers, number of heat pumps etc.) detailed in the PCAP Appendix,	Cumulative GHG emission reductions (metric tons C02e)[85]	
		2025-2030	2025-2050
Transportation	Deploy electric vehicle chargers statewide to support light-duty and medium-heavy duty fueling needs.	1,840,000	11,020,000
	Establish electric vehicle incentive pathways for advanced technology vehicles (full battery electric, plug-in hybrid and fuel cell electric vehicles for light-, medium-, and heavy-duty vehicles — collectively "ZEVs").	680,000	1,480,000
	Replace existing school buses with zero-emission vehicle school buses in environmental justice communities.	124,951	269,636
	Advance transit bus electrification — purchase buses based on the next 5-year Battery Electric Bus program.	45,103	115,227
	Purchase Idle Reduction ZeroRPM® for truck mounted attenuators for the Connecticut Department of Transportation's Crash Unit — implement truck mounted attenuators that have ZeroRPM® systems to prevent idling, reduce fuel consumption and greenhouse gas emissions.	8,106	34,740
	Expansion of the Microtransit Program with a focus on rural areas to provide an on-demand, accessible, shared-ride service within a zone.	110	284

Sector	Measure Description* *This is a generic description. The GHG reduction estimates are based on the detailed assumptions (e.g. number of chargers, number of heat pumps etc.) detailed in the PCAP Appendix,	Cumulative GHG emission reductions (metric tons C02e)[85]	
		2025-2030	2025-2050
Buildings	Support increased adoption of heat pumps statewide.	235,083	1,104,134
	Expand energy efficiency programs under the Conservation and Load Management Program.	33,019	127,117
	Expand funding for the Residential Energy Preparation Services program to address health and safety barriers to weatherization.	8,875	44,877
	Support deployment of networked geothermal systems.	695	5,698
Electric Power	Expand funding for the Residential Energy Preparation Services program to address health and safety barriers to weatherization.	849	6,347
	Reduce electric sector emissions while maintaining electric system reliability using demand response and/or energy storage.	3,784,402	14,593,479
Waste	Provide funding for enforcement and to municipalities to implement food scraps diversion programs, including grants to construct the infrastructure necessary to divert food scraps from landfills and incineration to food scraps/organics separation and collection programs.	118,853	1,045,604
Natural and Working Lands	Plant trees in urban areas to increase carbon storage/sequestration and mitigate pollution and other climate change impacts in underserved communities.	38.39	142.78
Total		**6,880,000**	**29,847,000**

In addition to DEEP, three of Connecticut's metropolitan statistical areas and the state's two federally recognized tribes, the Mashantucket Pequot Tribal Nation and the Mohegan Tribe, also received CPRG planning grant funding. Northeastern Connecticut received funding as part of the Worcester, Massachusetts metropolitan statistical area. Each of their PCAPs are linked below:

- **Hartford-East Hartford-Middletown Regional Priority Climate Action Plan**
- **New Haven-Milford Regional Priority Climate Action Plan**
- **Bridgeport-Stamford-Norwalk Regional Priority Climate Action Plan**
- **Worcester, MA-CT Regional Climate Action Plan**
- **Mashantucket Pequot Tribal Nation Priority Climate Action Plan**
- **The Mohegan Tribe Priority Climate Action Plan**

Climate Pollution Reduction Grant – Phase 2 Implementation Grants

Following the release of the PCAP, the State of Connecticut and local governments were eligible to apply for implementation grants from the EPA CPRG program to fund measures identified in the PCAP.[86] Connecticut was highly successful in this effort. In July 2024, EPA awarded[87] DEEP $450 million in funds to lead a New England Heat Pump Accelerator[88] as part of a multi-state coalition with Massachusetts, Rhode Island, New Hampshire, and Maine. Connecticut's share of the funding is approximately $100 million. In addition, Connecticut was selected to receive further funding through two other CPRG grant applications. Connecticut will receive $54 million to invest in fueling infrastructure for zero emission freight trucks along the I-95 corridor as part of a multistate Clean Corridor Coalition[89] led by New Jersey with Maryland and Delaware participating as well. Additionally, the City of New Haven received $9.4 million to construct a networked geothermal heat pump system for New Haven Union Station and the planned adjacent mixed-income housing development, which will consist of more than 1,000 units of housing.[90]

Comprehensive Climate Action Plan

As part of the second deliverable for EPA's CPRG Phase 1 Planning Grant program, the Comprehensive Climate Action Plan (CCAP), DEEP will expand upon the measures identified in the PCAP to identify emissions reduction measures on an economy-wide scale.

Using the Business-As-Usual (BAU) scenario as the baseline for emissions, modeling will be conducted to determine how much GHG can be reduced year over year to meet the 2030, 2040, and 2050 targets. Additional analyses will be conducted to determine overall benefits from implementing the recommended greenhouse gas reduction measures, resulting workforce needs, the authority needed to implement the measures, and results from public feedback. The final plan will be submitted to EPA by July 1, 2026.

The Role of Sequestration in Reaching Net-Zero

Connecticut's annual GHG inventory historically only included data on gross emissions, which means that only the sectors responsible for emitting GHGs were tracked. Following Executive Order 21-3 implementing recommendations of the Governor's Council on Climate Change, starting in 2022, DEEP

began using the land use, land use change, and forestry (LULUCF)[91] output of EPA's State Inventory Tool to estimate the amount of carbon being sequestered in Connecticut's lands and forests in the Natural and Working Lands (NWL) sector[92] as part of the GHG Inventory.[93] With the establishment of a net-zero by 2050 target in Public Act 25-125, DEEP is now required by law to include carbon sequestration in the inventory.

The current Connecticut GHG Inventory shows a net carbon sequestration of 4.9 MMTCO2e in 2023, with 98% of that sequestration occurring in forest land and urban forests. While the LULUCF output from the State Inventory Tool allows for analysis of forest carbon at a statewide scale and comparison to other sectors and states, it has data gaps. It does not include wetlands or allow for tracking policy implementation (e.g., progress on tree planting) or assessing trends in forest carbon on a timescale that is meaningful for climate policymaking.[94] DEEP intends to explore options, within available resources, to update its carbon sequestration methodology, including adding spatial and temporal resolution of GHGs from forestlands, related land use change, and biological carbon stocks in urbanized areas. By incorporating the best available science and sequestration data, Connecticut can track and report on its progress towards its 2050 target with greater accuracy and precision.

Connecticut's current 2050 gross GHG emissions reduction target is 80% below 2001 levels. Achieving this target leaves 9.7 MMTCO2e of GHG emissions remaining to be further reduced or offset with carbon sequestration to achieve the net-zero by 2050 target.[95] If the 2023 carbon sequestration levels of 4.9 MMTCO2e are maintained, Connecticut would need an additional 4.8 MMTCO2e in carbon sequestration to reach the net-zero by 2050 target, assuming emissions could not be reduced more than 80% below 2001 levels.

There are two overarching pathways for carbon sequestration that the state may consider to meet its net-zero by 2050 target:

- Natural and Working Lands (NWL)
- Technological Carbon Dioxide Removal (Tech CDR)

It is important to note that carbon capture, utilization, and storage (CCUS) is not the same as tech CDR and should not be counted in the inventory the same way. CCUS traps carbon at the source of emissions, which prevents those emissions from reaching the atmosphere, while tech CDR removes carbon that has already been emitted into the atmosphere. Therefore, reductions from CCUS should be counted towards gross emission reduction goals whereas tech CDR should only be counted towards net emission goals, such as net-zero. The recommendations of this section only pertain to tech CDR and not to CCUS.

Natural and Working Lands

Since forests and urban forests contribute to nearly all sequestration calculated by the EPA LULUCF State Inventory Tool, these landscapes represent Connecticut's greatest NWL opportunity. Practices such as incentivizing forestland preservation and improving the management of our forests are key to maintaining our current sequestration rates while urban forestry presents the greatest opportunity for afforestation along with potentially significant equity co-benefits.

DEEP oversees approximately 250,000 acres (about 7%) of land in Connecticut including parks, forests, wildlife management and flood control areas, many of which are managed sustainably to improve forest health and increase climate resiliency in the face of extreme weather events. Practices include controlling invasive plants, improving wildlife habitat for imperiled species, and diversifying tree age structure for increased carbon sequestration and storage.

Although Connecticut is the fourteenth most forested state in the nation, approximately 72% of the state's forestland are privately owned. Because such a large proportion of Connecticut's forests are not owned or managed by public entities, the state is focusing on connecting private landowners with expanding management resources and opportunities. DEEP was awarded a $5M competitive IRA funded grant which supports local landowners in implementing resilient forestry through the CT Natural Resource Conservation Service's Environmental Quality Incentives Program. This grant also supported local land trusts and municipalities in implementing climate smart forestry on their respective lands. These efforts support the following broader goals for NWL such as:

- Incentivizing climate-smart forestry[96] on private lands,
- Developing and training the technical assistance workforce to help landowners implement climate-smart forestry,
- Providing consistent state funding and finance for NWL sequestration pathways that foster voluntary implementation,
- Increasing state capacity for landowner outreach and assistance in applying for funding, and
- Supporting "no-net-loss" policies and practices.[97]

Table 3 below summarizes examples of state and federally funded programs that support action in the Natural and Working Lands sector. All programs listed in the table are administered by DEEP unless otherwise noted.

Grant Program	What It Funds	Who is Eligible	Funding Source	Anticipated End Date
Open Space and Watershed Land Acquisition Grant Program[98]	Land acquisition for open space and for access to water supply properties	Municipalities, 501(c)3 organizations, and water companies	State bonds and/or the Community Investment Act	Appraisals submitted for review December 2025. Awards to be granted Spring 2026.
Urban and Community Forest Planning[99]	Urban forestry planning & data collection	Municipalities and 501(c)3 organizations	USDA Consolidated Payment Grant	Spring 2026 ($95,000 remaining to award)

Grant Program	What It Funds	Who is Eligible	Funding Source	Anticipated End Date
Urban Forest Equity/Trees For Communities[100]	Stewardship projects in EJ communities. These may include tree planting, workforce development, or tree stewardship projects.	Municipalities, 501(c)3 organizations, and federally recognized tribes in environmental justice communities	Inflation Reduction Act	Finished (final round closed 8/2025)
Urban Forested Natural Areas and Riparian Corridor Restoration Grant[101]	Improves forest health and resilience through reforestation and invasive species removal	Municipalities and 501(c)3 organizations	Regional Greenhouse Gas Initiative Infrastructure Investment and Jobs Act	Finished
Urban Forest Resilience[102]	Promotes healthy tree canopy by funding hazard tree removal and replanting.	Municipalities and 501(c)3 organizations	State Urban Forest Resilience	Summer 2026 ($143,000 remaining to award)
Resilient Forestry Practices[103]	Support the implementation of resilient forestry practices on rural municipal woodlands	Rural municipalities and federally recognized tribes	Inflation Reduction Act	Spring 2026 ($1,000,000 to award)
Urban Forest Equity through Capacity Building[104]	Support capacity building through urban forestry projects that will increase tree cover in environmental justice communities.	Municipalities and 501(c)3 organizations in environmental justice communities	Regional Greenhouse Gas Initiative	Finished
Connecticut Environmental Quality Incentives Program[105] **Administered by CT Dept. of Agriculture**	Technical assistance for conservation plan development and covers some costs of conservation plan implementation.	Agricultural producers, farmers, ranchers, forest landowners	USDA Funds Allocated through the Farm Bill	Applications accepted annually. Applications due January 2026 for FY 2026 Round 1 funding.

Table 3. State and federally funded programs to support statewide NWL protection, conservation, and sequestration pathways.

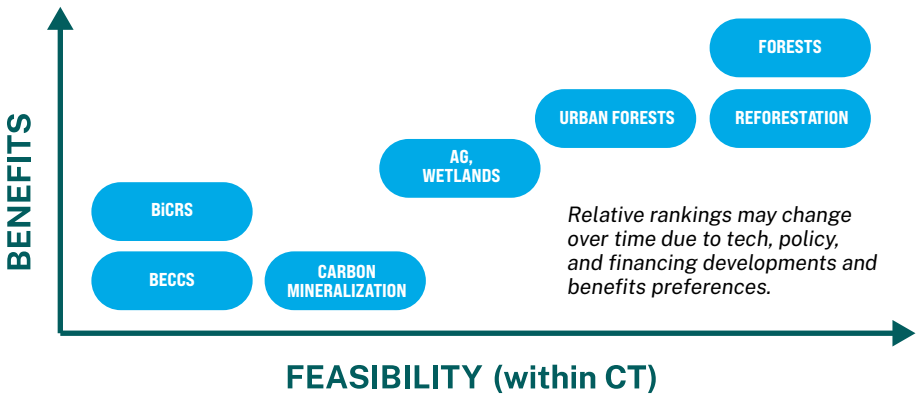
Forest conservation and management, reforestation, and agricultural soil carbon offer relatively low-cost, shovel-ready options that deliver significant benefits for biodiversity, climate resilience, public health, and rural economies. Forest pathways are particularly promising for their mitigation benefits. See Appendix C for a list and descriptions of NWL sequestration pathways that also highlight biodiversity, climate resilience, environmental, and economic and employment co-benefits. These co-benefits, among others, will also be presented as part of DEEP's upcoming nature-based solutions initiative program evaluation. By July 2026, DEEP will be posting this evaluation on the department's website for review and written comment pursuant to Section 12 of Public Act 25-125. Made in consultation with seven other Connecticut state agencies, the evaluation will examine the multiple benefits of nature-based solutions identified in Public Act 25-125, which include carbon sequestration in the NWL sector.

Technological Carbon Dioxide Removal (Tech CDR)

Generally, the state possesses much greater potential for sequestration through NWL than through tech CDR because of current technological, geological, and policy limitations (Figure 4). However, NWL pathways alone may not be scaled sufficiently to meet Connecticut's full net-zero needs, particularly given land constraints and uncertainty about the overall trajectory of the NWL sink. There is potential to expand the feasibility of certain tech CDR pathways to support the achievement of net-zero long-term. Examples of tech CDR include:

- Biochar: Heating biomass in a limited oxygen environment to create a carbon-rich product that can be used as a soil amendment, among other uses.
- Biomass carbon removal and storage (BiCRS): Storage of biomass either via burial (e.g., in land sites or exhausted mines) or injection of bio-oil into suitable geologic formations.
- Bioenergy with carbon capture and storage (BECCS): Producing energy from biomass while capturing and permanently storing the resulting carbon dioxide emissions.
- Carbon mineralization: Process that reacts certain minerals or industrial/mining waste materials with atmospheric CO2 to form solid carbonate minerals.

Tech CDR pathways — particularly BiCRS and carbon mineralization — are very likely necessary to close the net-zero gap but currently face high costs, require further research for safe and effective implementation and provide few environmental co-benefits. However, costs can be expected to decline over time with greater policy support and scaling.



Appendix C contains a more detailed benefits analysis of both NWL and tech CDR sequestration pathways.

Figure 4. Comparison of NWL and tech CDR sequestration pathways considering feasibility and benefits.

The Latest Science Regarding Global Climate Change

Pursuant to Section 2(d) of Public Act 25-125, this section of the report provides "an assessment of the latest scientific information and relevant data regarding global climate change." It summarizes the findings of the latest reports from the Intergovernmental Panel on Climate Change, the Fifth National Climate Assessment of the federal U.S. Global Change Research Program, and the 2025 National Academies of Science, Engineering, and Medicine assessment of the science underpinning the Endangerment Finding. It also updates the impacts of climate change in Connecticut that were first provided in the Governor's Council on Climate Change January 2021 report. Actionable climate science is essential for the state to adapt and become more resilient to the effects of climate change and extreme weather to save lives, prevent infrastructure and property damage, and lower costs. The 2025 study of the National Institute of Building Sciences found that every $1 spent on resilience can yield up to $13 in savings from avoided losses.[106]

National and International Climate Impacts

Since the 2021 Governor's Council on Climate Change (GC3) Phase 1 report was released, the Intergovernmental Panel on Climate Change released its 6th assessment report in March 2023, which stated that human-driven GHG emissions "have unequivocally caused global warming."[107] The Fifth National Climate Assessment, also released in 2023 by the federal U.S. Global Change Research Program, stated that "(m)any of the climate conditions and impacts people are experiencing today are unprecedented for thousands of years. As the world's climate has shifted toward warmer conditions, the frequency and intensity of extreme cold events have declined over much of the U.S., while the frequency, intensity, and duration of extreme heat have increased. Across all regions of the U.S., people are experiencing warming temperatures and longer-lasting heatwaves. Over much of the country, nighttime temperatures and winter temperatures have warmed more rapidly than daytime and summer temperatures. Many other extremes, including heavy precipitation, drought, flooding, wildfire, and hurricanes, are becoming more frequent and/or severe, with a cascade of effects in every part of the country."[108]

The Fifth National Climate Assessment chapter for the Northeast region, which includes Connecticut, noted that "as extreme events continue to occur frequently, these changes are becoming stressors throughout the region — in rural interiors, urban corridors, and the ecosystems supporting coastal communities."[109]

In 2025, in response to a request for public comment by EPA seeking feedback on administrative repealing its 2009 Endangerment Finding, the National Academies of Science, Engineering, and Medicine further conducted an independent assessment of the science underpinning the Endangerment Finding. The assessment concluded that the 2009 finding that GHG emissions "threaten human health and welfare was accurate, has stood the test of time, and is now reinforced by even stronger evidence."[110] Additionally, the assessment noted, "Continued emissions of greenhouse gases from human activities will lead to more climate changes in the United States, with the severity of expected change increasing with every ton of greenhouse gases emitted."

Connecticut Climate Change Impacts

Scientific knowledge and technical measurement capabilities are evolving rapidly as technologies and modeling capacities grow and improve. Evidence-based actions ensure that we steward the natural, cultural, and historic resources that support a high quality of life and a healthy economic future across the urban, suburban, and rural areas in Connecticut. The assessment from the Connecticut Institute for Resilience and Climate Adaptation at the University of Connecticut[111] draws from more advanced climate modeling that is now the foundation of climate projection data in regional, national, and neighboring states. The new study looks at whether the advances in modeling since 2019 can provide more quantitatively precise extreme weather event projections, specifically for Connecticut, to inform planning and design needs. Due to continued limitations of modeling, along with Connecticut's smaller geographical size, confidence in the impact which climate change will have on extreme weather events within Connecticut continues to vary. These findings, which are incorporated below, are in line with previous reports, including the 2019 Physical Climate Science Assessment Report[112] that served as the foundation for the GC3's previous climate science projections in their January 2021 report.

There is high confidence in projected changes and impacts through the mid-century, or 2050. Projected changes after the mid-century will depend on mitigation actions taken in Connecticut and globally. Various natural cycles that occur on regular intervals may temporarily mask climate change effects on our weather. Since our understanding of the processes that determine climate is advancing rapidly, and data is being continuously collected, we recommend a comprehensive review of projections be undertaken by the State at five-year intervals as outlined below.

Drawing from these recent bodies of research that review the state of the science[113] and observed temperature and precipitation patterns,[114] the GC3 adopted the following findings and recommendations regarding the impacts of climate change:

1. Average sea level rise in Long Island Sound remains projected to be up to 20 inches above the National Tidal Datum Epoch (1983-2001) by 2050. This projection is less likely to be sensitive to future trends in carbon dioxide emissions and reflects continuity and replication in research findings.
2. The projected rise in sea level will substantially amplify the frequency and magnitude of coastal flooding in Connecticut, making storms that currently result in low-level coastal flooding significantly more impactful. The overall extent of coastal areas subject to tidal flood risks,

including those in FEMA designated flood zones, will not expand by much in most areas. This is due to Connecticut's unique glaciated coastal topography. However, 20 inches of sea-level rise could increase the coastal flood frequency risk by a factor of 5 to 10, with no change in storm conditions. This means less intense events will cause more significant flooding. As a result, major coastal flooding levels, similar to those that occurred during 2012's Superstorm Sandy, could be expected every 5 to 10 years by mid-century.

3. Sea level rise will continue after 2050. The 2021 Intergovernmental Panel on Climate Change report[115] found with medium confidence the range of sea level rise in Long Island Sound is projected to be between 16.5 inches and 54.7 inches by 2100.

4. Average temperatures in Connecticut could increase by 5˚F (2.7˚C) by 2050 compared to the 1970-1999 baseline. Connecticut's temperature has already risen more than the global average in part because temperature changes tend to increase in middle and high latitudes (towards polar regions). Consequently, a 2˚C target for global average temperature increase would result in a higher average temperature (than 2˚C) in Connecticut.
5. All indices of hot weather are expected to shift toward more frequent and higher temperature events. For example, by mid-century, the number of days per year with temperatures above 90˚F (32 ˚C) could increase. Statewide, from 1970 to 1999, the average number of days per year above 90˚F in Connecticut was 5. This is projected to increase to an average of 25 days per year above 90˚F between 2040-2069. (Note that specific locations and specific years will show more days with extreme temperatures than statewide and long-term averages). The number of days per year with frost could decrease from 124 to 85.
6. Significant increases to daily minimum temperatures indicate that nighttime may become less reliable for naturally dissipating heat, resulting in increased use of air conditioning and electricity during hot summers. Additionally, increasing daily minimum temperatures are a signal that humidity may increase, which contributes to heat stress.
7. Temperature projections after mid-century are sensitive to policy choices on GHG emissions. Globally coordinated mitigation, including in Connecticut, now increases the likelihood that the temperatures will stabilize after 2050. If not, warming and related impacts are likely to accelerate.
8. Drought risk is expected to increase. The probability of unusual events (extremely low annual and summer water availability, and extremely high 1-day and 5-day precipitation) are projected to increase by a factor of between 2 and 4 by mid-century.

9. Regionally, modeling is more confident that the frequency and intensity of storms is likely to increase. The degree to which these storms will affect Connecticut through higher winds and increased precipitation remains uncertain in modeling. In general, warmer temperatures will result in less snow and more rain, but a warmer atmosphere can hold higher amounts of moisture, and during the winter, this increased humidity may yield occasional high snowfall events when temperatures permit.
10. Changes in the frequency of tropical cyclones affecting Connecticut in a warmer climate are uncertain. However, when tropical cyclones form in the future, they are likely to have a stronger intensity. Since 1980 there has been an increase in the frequency of hurricanes in category three or greater.
11. While more recent regional climate projection signals are clearer, the most current downscaled climate projections for Connecticut do not yet have sufficient confidence to guide policy and interventions regarding extreme precipitation or extreme wind occurrences. This is due to current modeling limitations that lack the resolution to capture localized weather dynamics driving extreme events. However, there are signals that the annual average for rainfall will increase. This increase likely will be due to heavier rainfall amounts during storm events when they occur. There is also an indication for longer dry periods causing more frequent short-term droughts.

"Regionally, modeling is more confident that the frequency and intensity of storms is likely to increase."

Other Regional, National, and Global Climate Efforts

Pursuant to Section 2(d) of Public Act 25-125, this section of the report provides "the status of greenhouse gas emission reduction efforts in other states and countries." It summarizes recent climate efforts of the United Nations Framework Convention on Climate Change as well as two sub-national coalitions of which Connecticut is a member: the New England Governors and Eastern Canadian Premiers and the U.S. Climate Alliance. It also provides an update on the Regional Greenhouse Gas Initiative, including how this program has lowered GHG emissions and returned investments into rate relief and energy efficiency programs to lower energy costs for ratepayers. It is important that we continue to make progress in line with other states so that we can get the benefits of collective leadership and guard against any potential economic disadvantages. As evidenced by the discussion in this report, Connecticut's statutory targets and continued progress towards achieving these targets are making a meaningful contribution to emissions reduction at a national and international scale.

Connecticut remains committed to addressing climate change at the national and international level because of the safety and economic consequences of not doing so, even as the current federal administration pulls out of these efforts. On January 7, 2026, President Trump signed a memorandum withdrawing the United States from the United Nations Framework on Climate Change, and Governor Lamont released the following statement in response:

"Once again, the Trump administration is ceding U.S. leadership on one of the consequential issues of our time. Withdrawing from this group surrenders our country's ability to influence the trillions of dollars in financial investments and policy decisions that will keep people safe from a changing climate and shape the world's economy for generations to come. America's voice should be at the forefront of this global effort, guiding and helping to shape the clean energy transition and making our communities more resilient. We remain committed to the U.S. Climate Alliance and will continue to do our small part to protect Connecticut residents and provide for a safe and prosperous future."- Governor Lamont

United Nations Framework Convention on Climate Change

As summarized in the 2025 US Climate Alliance Annual Report,[116] nations recognized the growing need for action to address climate change decades ago. The United Nations Framework Convention on Climate Change was established in 1992, under which the Kyoto Protocol (2005) was adopted and later replaced by the Paris Agreement (2015). All 195 countries that ratified the Paris Agreement have pledged to reduce their individual GHG emissions to abate worsening impacts of climate change and to keep global temperature rise well below 2 ˚C (above pre-industrial levels), with an ideal limit of no more than 1.5 ˚C. Many of these countries — including the United States — have reduced their emissions since global climate talks began in the early 1990s. For example, in 2021, net U.S. economy-wide GHG emissions were two percent below 1990 levels and 18% below 2005 levels. In 2023, these reductions were even greater at four percent and 19%, respectively. While global emissions reductions are not on pace with what science says is needed to prevent the most catastrophic impacts of climate change, each metric ton of these abated emissions still minimizes the compounding risk of future climate disasters.

Overall, the U.S. ranks among the top global emitters of GHGs, along with China, India, the European Union, Russia, and Indonesia. While the populations of these countries account for just over 50% of the world's total population, they produce over 60% of global GHG emissions. Unlike Connecticut-based trends, where transportation and buildings are the state's largest GHG emitters, the top two emitting sectors on a global scale are the power industry and industrial combustion and processes.[117] Between 1970 and 2024, global emissions have more than doubled from about 24 billion metric tons of carbon dioxide equivalent (CO2e) to around 52 billion metric tons CO2e.[118] However, while the U.S. continues to be a top emitting economy per capita, again, as stated above, the level of emissions per capita in the U.S. has seen a steady decline since the turn of the twenty-first century.[119]

In September 2025, the United Nations published a press release saying that almost one-hundred countries, including China — the world's top emitter — and representing two-thirds of global GHG emissions, have signaled their intent to commit to new Nationally Determined Contribution targets to help advance climate action.[120] Nationally Determined Contributions are a component of the Paris Agreement in which countries provide an outline of the climate actions they intend to pursue to help reach the Agreement's goal.[121] The U.S. withdrew from the Paris Agreement first in 2017 under first Trump administration and again in January 2025 when President Trump returned to office. On January 7, 2026, President Trump signed a memorandum withdrawing the U.S. from United Nations Framework Convention on Climate Change along with 65 other international organizations and bodies.

New England Governors and Eastern Canadian Premiers

Connecticut is a member of several different intergovernmental climate and sustainability initiatives and cooperatives, including the New England Governors and Eastern Canadian Premiers. Established in 1973,

the eleven member jurisdictions — Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, New Brunswick, Newfoundland and Labrador, Nova Scotia, Prince Edward Island, and Quebec — have worked together to advance sustainability, energy affordability, and trade.[122] In 2001, Connecticut contributed to the development of the first ever international, multi-jurisdictional climate plan titled, 2001 New England Governors/Eastern Canadian Premiers (NEG/ECP) Climate Change Action Plan.[123] This plan set regional GHG emissions reduction targets that included reducing emissions to:

- 1990 levels by 2010
- 10% below 1990 levels by 2020
- 75-85% below 2001 levels by 2050

Connecticut adopted these regional targets three years later in state statute with the passage of Public Act 04-252[124] in 2004.

During their 46th annual conference, held in November 2025, New England Governors, Eastern Canadian Premiers, and their representatives met to discuss shared energy and environmental priorities, as well as opportunities to enhance regional collaboration in technology and innovation.[125] Three resolutions were adopted at the conference, including two directing the continuation of collaboration on energy,[126] ecological connectivity, and food security.[127] In addition, a resolution was adopted to initiate collaboration on technology and innovation.[128] These resolutions were developed through the reconvening of the Northeast International Committee on Energy and the Committee on Environment in 2024 and continued work in 2025.

Like Connecticut's GHG inventory, New England Governors, Eastern Canadian Premiers most recently available Transportation and Air Quality Committee Report, released in 2019, identified the transportation sector as the region's largest contributor to its GHG emissions. As part of their recommendations to reduce GHG emissions in this sector, New England Governors, Eastern Canadian Premiers considers not only improving and expanding access to electric vehicles and charging infrastructure but also ensuring that opportunities for advancing electric vehicles and associated infrastructure remain consistently available throughout the region.[129]

U.S. Climate Alliance

In response to the Trump Administration's first withdrawal from the Paris Agreement in 2017, the governors of Washington, New York, and California initiated the coalition now known as the U.S. Climate Alliance. This subnational, bipartisan coalition is currently comprised of governors representing 24 states and territories (including Connecticut), approximately 55% of the U.S. population, and 60% of the U.S. economy.130 Alliance members are working to achieve the goals of the Paris Agreement through four key commitments:

- ***Reducing Emissions.*** Reducing collective net GHG emissions at least 26-28% by 2025, 50-52% by 2030, and 61-66% by 2035, all below 2005 levels, and collectively achieving overall net-zero GHG emissions as soon as practicable, and no later than 2050.

- ***Accelerating Action.*** Accelerating new and existing policies to reduce climate pollution, build resilience to the impacts of climate change, and promote clean energy deployment at the state and federal levels.[131]
- ***Centering Equity***. Centering equity, environmental justice, and a just economic transition in their efforts to achieve their climate goals and create high-quality jobs.
- ***Tracking Progress.*** Tracking and reporting progress to the global community in appropriate settings, including when the world convenes to take stock of the Paris Agreement.

In November 2025, the Alliance released its annual report detailing collective progress towards its GHG emissions reduction goals. The report shows that the sectors that contribute most towards overall GHG emissions include transportation, which accounts for 34% of the Alliance's total emissions, and buildings and electricity, each of which account for 20% of the Alliance's total emissions. Between 2005 and 2023, the Alliance's economy-wide GHG emissions decreased by 24% while Alliance members simultaneously increased their GDP by 34%, demonstrating that climate action does not negatively impact economic activity.[132] In fact, since its first annual report released in 2017, the Alliance has used these documents to exemplify how member states and territories continue to simultaneously reduce harmful GHG emissions, thoughtfully fill in gaps in federal leadership through state action, provide cost savings to consumers, and expand workforce and economic development.[133]

Regional Greenhouse Gas Initiative

The Regional Greenhouse Gas Initiative (RGGI) is a cooperative, market-based effort among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont to cap and reduce CO2 emissions from the power sector.[134] Launched in 2009, it represents the first cap-and-invest regional initiative implemented in the United States. Together, the participating states have established a regional cap on CO2 emissions from power plants. Over time, the regional cap declines, so that CO2 emissions decrease in a planned and predictable way. Since RGGI launched, the participating states have reduced annual CO2 emissions from the covered power plants by 46%.[135]

Under RGGI, fossil fuel power plants in the region are required to buy CO2 "allowances," sold at quarterly auctions, for each ton of CO2 they emit. These allowance auctions generate funds, which the participating states invest in a variety of programs that help make energy more affordable and further reduce emissions.[136] Under formulas established pursuant to Connecticut General Statutes Section 22a-200c in DEEP's implementing regulations, these funds are used primarily to provide direct rate relief to electric customers and to support and expand the state's energy efficiency programs, which help Connecticut consumers lower their energy bills. By statute and regulation, Connecticut also invests portions of its RGGI proceeds to support financing programs that make clean energy more accessible and affordable (via the CT Green Bank); to provide clean vehicle rebates to consumers though Connecticut's CHEAPR program; and to cover the administrative costs of the RGGI program.

In July 2025, the RGGI states announced an agreement to further reduce emissions in the region by lowering RGGI's CO2 emissions cap by at least 60 percent between 2027 and 2037. In addition to setting the region on a path to a cleaner power sector, this agreement includes ratepayer protections designed to ensure continued affordability and benefits under the program.[137] RGGI states will need to adopt these updates, which take effect on January 1, 2027, through their respective regulatory processes in 2026.

Appendix A: Detailed Summaries of 2025 Climate and Energy Laws

Public Act 25-125.

- Codifies GreenerGov emissions reductions goals in statute for state agencies of 45 percent below 2001 levels by 2030; 70 percent below 2016 levels by 2040; net zero by 2050; and using only zero-carbon generating electricity by 2030;
- Guidelines for state agencies to consider the social cost of GHGs when evaluating the costs and benefits of activities and improvements to state facilities;
- Establishes the Connecticut Clean Economy Council;
- Requires DEEP to develop a plan for installing efficient heat pumps for affordable heating and cooling systems in the state;
- Adds air source and ground source heat pump purchase and installation to the list of school construction project grant applications;
- Requires the Department of Administrative Services to establish a process to consider a state asset's capability to (1) increase energy efficiency, (2) reduce energy use, (3) use Class I renewable energy, (4) use zero-carbon heating and cooling and water heating alternatives, (5) support electric vehicle charging, and (6) act as a resilience hub; and for Department of Administrative Services to plan and budget to retrofit existing fossil fuel-based heating and cooling systems to those that operate without carbon-emitting fuels;
- Requires DEEP to conduct a nature-based solutions initiative program evaluation to support climate change mitigation and adaptation, ecosystem resilience, and biodiversity;
- Requires a PURA study to develop a solar canopy strategic plan and program design;
- Requires DEEP to provide a "triple impact report" with recommended regulations, policies, and strategies to significantly lower energy costs for families and businesses; increase community resilience to extreme weather events (e.g., flooding and extreme heat); and contribute to GHG emission reductions;
- Makes changes to the Housing Environmental Improvement Revolving Loan and Grant Fund, including expanding qualifying retrofit projects beyond the existing energy efficiency and addressing health and safety barriers uses of funds, to include flood mitigation and replacing heating, ventilation, and air conditioning systems of homes impacted by extreme weather events;
- Broadens the purposes for which certain Open Space and Watershed Land Acquisition grants may be used to include repurposing open space land for urban agricultural use; and
- Requires DEEP to study renters' use of the state energy efficiency and clean energy programs for which it can obtain data, including any barriers renters experience accessing the programs and any recommendations for addressing them.

Public Act 25-33.

- Requires insurance brokers to notify purchasers that a policy does not include flood coverage when purchasing for the first time and every renewal thereafter;
- Requires financial institutions to inform the mortgage applicant that (1) standard homeowners policies do not cover flood related losses, (2) flood damage can happen regardless of whether the property is in a designated flood zone, and (3) the applicant may want to consult an insurance producer or surplus lines broker about flood insurance availability and benefits;
- Adds a section to the required property conditions report that is required to be provided by the property seller to the buyer on "flood risk awareness," including whether there have been claims for flood damage on the property and water penetration or damage from seepage or a natural flood event.
- Requires the use of climate vulnerability assessments, climate projections, and resiliency goals in updates to local, regional, and state plans of conservation and development, the state's civil preparedness plan, and local evacuation or hazard mitigation plans;
- Authorizes local and regional zoning commissions to adopt regulations that address climate threats
- Allows municipal zoning regulations to provide for regional transfer of development rights systems;
- Requires updates to the state water plan and reviews of water supply and sewage disposal system regulations to account for certain projections; and
- Creates a framework for municipalities to establish resiliency improvement districts that may provide financing for resilience projects.

Public Act 25-173

- Authorizes up to $250 million in Governor's Office (GO) bonds for fiscal years (FYs) 26 & 27 to reduce costs of hardship protection measures charged to electric distribution company (EDC) customers as system benefits charges;
- Authorizes up to a total of $50 million in General Obligation bonds for FYs 26 & 27 for the Office of Policy and Management to support the state's EV charging program;
- Caps PURA expenses at $20 million per year for EV charging stations and customer wiring upgrades in any light-duty EV charging program established in a PURA proceeding and only allows those funds to be used for residents living in single-family homes who make less than or equal to three hundred per cent of the federal poverty level or reside in any concentrated poverty census tract;
- An existing law requires the PURA chairperson to study renewable energy tariff programs, including examining potential processes to avoid stranded projects and potential successor programs. As part of this study, the act requires her to also examine: 1. a framework to encourage the aggregation of distributed energy resources that can respond and provide grid and retail market services; 2. different compensation structures to encourage deployment in areas where the grid is underutilized; 3. how nonparticipating electric customers may be impacted by renewable energy tariff programs; 4. strategies to minimize unintentionally duplicative incentives or subsidies between participating and nonparticipating electric customers; and 5. the costs and benefits of the renewable energy tariff programs and methods to maximize benefits to nonparticipating customers (e.g., reducing electric system distribution congestion);

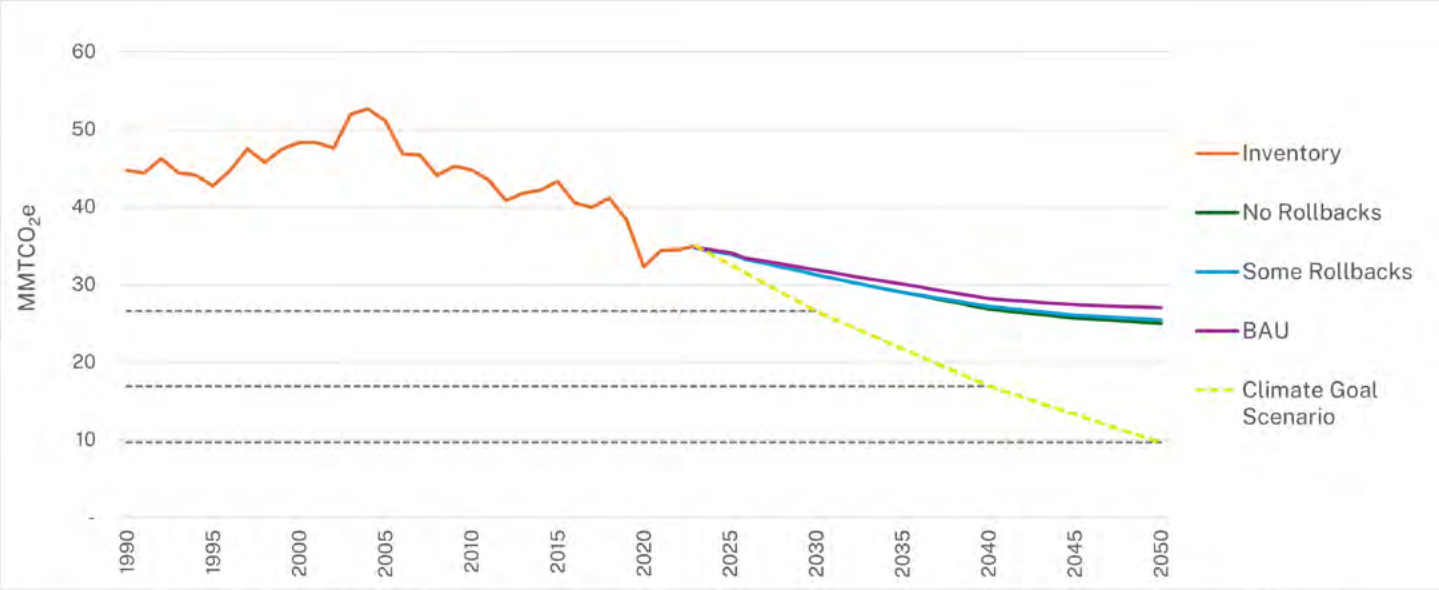
- Requires PURA to (1) implement certain cost containment measures when setting low-income rates and (2) submit a report on the effectiveness of low-income rates and these measures;
- Limits DEEP's programs that provide incentives for renewable energy of the Non-residential Renewable Energy Solutions, Residential Renewable Energy Solutions, and the Shared Clean Energy Facilities to projects that emit no pollutants, including making class I low-emissions projects (e.g., fuel cells) and anaerobic digestion facilities ineligible under Non-residential Renewable Energy Solutions;
- Add a non-bypassable charge of at least 3.25 cents to the Residential Renewable Energy Solutions tariff and adjust the buy-all tariff structure such that the electric distribution companies purchase all energy a project generates at a locked-in rate for 20 years;
- Authorizes securitization for "financed utility services," capped at $2.2 billion in the aggregate and secured by the competitive transition assessment charge;
- Allows PURA to select the Green Bank, the Department of Energy and Environmental Protection (DEEP), an EDC, a third party that PURA deems appropriate, or any combination of these entities, to administer any ratepayer-funded clean energy or renewable energy program PURA establishes in a proceeding;
- Requires the Office of Consumer Counsel to study public benefits line items;
- Requires (1) EDCs to apply to PURA to implement time-varying rates for residential, commercial, and industrial customers and (2) PURA to open a docket to evaluate EDC applications to implement time-varying rates for residential and commercial customers. A time-varying rate is an electric rate designed to (1) reflect the utility's cost to provide electricity to the customer at different times and (2) create a price differential that incentivizes targeted electric load growth and system efficiency. Time-varying rates may include critical peak pricing, which is pricing for a period when system costs are highest or when the power grid is severely stressed and customers may pay higher prices as a result;
- Requires each EDC to design a comprehensive customer education and engagement program to inform EDC customers about the benefits of time-varying rates and encourage them to use the rates and any available technology that enables customer cost savings when on time-varying rates;
- Requires EDCs to establish planning committees that include line and restoration crew members to review emergency service restoration plan implementation after large outages; expands the types of emergencies covered by the plans to include wildfires; requires the plans to include measures to protect line and restoration crew member safety;
- Prohibits EDCs from requiring line and restoration crew members to work in unsafe conditions and prohibits punishing an employee for causing the company to miss certain service restoration deadlines after emergencies; expands the types of emergencies subject to these deadlines to include wildfires;
- Requires utilities to develop and evaluate a project alternative that uses an advanced conductor (unless the primary proposed project incorporates one) and (2) grid-enhancing technology or non-transmission alternative technology for submission to the Connecticut Siting Council whenever they propose modifications. If the proposed alternative is more cost effective, the Council shall give it preference. Utilities must also issue an annual report on current projects and needs and identify whether those needs could be serviced with advanced transmission technologies. Gives the Office of Consumer Counsel (OCC) and DEEP the ability (with consultant help) to evaluate whether the scope of, need for, and timing of proposed transmission projects in the state are appropriate and whether less costly or other more beneficial alternatives exist;

- Requires EDCs that own or control certain transmission facilities in the state to be ISO-New England (ISO-NE) participants and requires EDCs to annually report to PURA each recorded vote they and their corporate affiliates cast in ISO-NE meetings during the prior year;
- Allows EDCs to use nuclear energy or related products purchased under the prior zero-carbon procurement to provide standard service; creates an exception to the limit on the length of certain zero-carbon procurement contracts;
- Requires EDCs to be able to procure at least 25% of standard service load through dynamic market purchases; requires PURA's procurement manager to submit a plan amendment by February 15, 2026; modifies procurement plan amendment approval processes;
- Requires DEEP to establish a thermal energy network grant and loan program within available appropriations;
- Creates a second exception from the nuclear moratorium for advanced nuclear reactors that meet certain requirements and expands DEEP's duties related to atomic development activity;
- Requires DEEP to establish an advanced nuclear reactor site readiness funding program; authorizes up to $5 million in state bonds to fund it;
- Removes landfill methane gas and certain biomass facilities from the Class I renewable energy sources definition;
- Reduces Class I Renewable Portfolio Standard requirements in years 2026 to 2030; requires PURA to establish procedures to dispose of Renewable Energy Certificates purchased under renewable energy tariffs and various energy procurement solicitations;
- Requires the DEEP commissioner to set (1) targets for energy procured under existing power procurement authorizations and (2) a proposed schedule for solicitations under these laws for new zero-carbon Class I renewable energy resources needed to achieve an additional 7% of total load served by EDCs in the aggregate by 2030, in addition to Renewable Portfolio Standard requirements. The DEEP commissioner must do this in the next Integrated Resources Plan approved after January 1, 2025.
- Requires the DEEP commissioner, in consultation with OCC and PURA's procurement manager, to start a proceeding to solicit proposals for energy, capacity, and environmental attributes from certain biomass facilities. To participate, a facility must be an eligible biomass facility and have entered into at least one existing biomass power purchase agreement;
- Requires DEEP to establish an electric active demand and gas demand response pilot program;
- Allows inspectors accredited by the United States National Association of Marine Surveyors to inspect fishermen providing support services for offshore wind projects selected under certain power purchase agreement;
- Principally makes PURA a part of DEEP for administrative purposes only and makes related changes; requires rate adjustments to come before all qualifying commissioners; and expands existing "revolving door" limitations on the employment commissioners may accept after leaving PURA;
- Requires proprietary information PURA receives from holding companies and their subsidiaries to be given to OCC; requires PURA to adjust retail transmission rates to fund DEEP and OCC consultants and evaluations under the act's grid enhancing technologies requirements;

- Allows PURA to extend deadlines for rate amendment decisions for up to 90 days if two large utilities apply for rate amendments within a 60-day period;
- Eliminates a requirement that PURA initiate a proceeding to develop a program for front-of-the meter energy storage systems not located on a customer's premises;
- Establishes as goals of the state (1) maximizing the efficiency and use of the electric transmission and distribution systems and (2) ensuring that any ratepayer-funded programs are cost-effective and focused on affordability, reliability, and decarbonization;
- Establishes a municipal uniform solar capacity tax of $10,000 per MW of nameplate capacity on solar photovoltaic systems over one MW in size, with specified exceptions;
- Creates a new property tax exemption for certain solar-related Class I renewable energy sources; limits the new exemption and an existing exemption for specified commercial and industrial Class I renewable energy sources by explicitly excluding the real property where their equipment and devices are located; and
- Extends the Solar Consumer Protection Task Force's reporting deadline by one year and broadens qualifications for one appointee

Appendix B: Business-As-Usual (BAU) Emission Projection Methodology

This appendix describes the methodology used to project forward greenhouse gas (GHG) emissions for the state of Connecticut under a business-as-usual (BAU) scenario. The BAU projection is used as the baseline from which GHG reduction measures will be modeled in the state's comprehensive climate action plan. Along with evolving macroeconomic trends and market drivers, the BAU reflects the current policy landscape, including recent and anticipated rollbacks to electric power and electric vehicle tax incentives, offshore wind projects, vehicle emissions standards,[138,139] and Clean Air Act 111(b) and (d) regulations.[140] The BAU was projected forward from a 2023 inventory base year unless otherwise noted. Sector-specific methodologies used to project emissions through 2050 are detailed below.



Appendix B. Figure 1. Sensitivity Analysis for the Business-As-Usual Projection

Transportation

The transportation sector includes emissions from on-road light-duty vehicles, on-road heavy duty vehicles, off-road vehicles, aviation, marine vessels, and rail. Connecticut's BAU scenario for on-road and off-road activity was developed using the Environmental Protection Agency's (EPA) Motor Vehicle Emissions Simulator (MOVES5) emissions model.[141] The basis for projecting marine and rail activity was the U.S. Energy Information Administration's (EIA) 2025 Annual Energy Outlook.[142] Aviation emissions were projected using the Federal Aviation Administration's Terminal Area Forecast.[143] Details by subsector are included below.

- ***On-road.*** Emissions from light-duty and heavy-duty on-road vehicles were projected using EPA's MOVES5 model. The analysis assumed the implied zero-emission vehicle sales curves from Rocky Mountain Institute's Energy Policy Simulator Repeal scenario,[144] representing a scenario where key recent EPA standards and IRA tax credits are repealed. The resulting emissions were calibrated using a scaling factor that aligns 2022 emissions output from MOVES5 with the state's 2022 inventory emissions. 2022 was used as the starting point (instead of 2023) because detailed state inventory data for the transportation sector was only available through 2022.
- ***Off-road.*** Emissions from off-road vehicles were projected using the MOVES5 non-road module for Connecticut. Off-road emissions were calibrated using a scaling factor that aligns 2022 emission output from MOVES5 with the state's 2022 inventory emissions.
- ***Rails and Marine.*** Emissions from rail and marine were projected using year-over-year growth rates in energy consumption from Annual Energy Outlook 2025. Rail emissions were further broken out into freight and passenger rail emissions using data for fuel user per passenger, ton miles, and passenger miles.[145,146]
- ***Aviation.*** Emissions from aviation were projected based on Federal Aviation Administration's enplanement forecasts for state active airports in the National Plan of Integrated Airport Systems.[147]

Residential and Commercial Buildings

The residential and commercial building sector includes emissions from the combustion of fossil fuels used in residential and commercial buildings. Emissions from residential and commercial buildings were projected forward using Annual Energy Outlook (AEO) 2025 for the New England region.[129] Specifically, annual growth rates by fuel type and sector for 2024-2050 were calculated using AEO 2025 and then applied to fuel-specific emissions estimates from the state's 2023 inventory. The 2024-2025 growth rate was applied to grow emissions from 2023 to 2024, as actual 2023 emissions were not available in AEO.

To disaggregate emissions from new buildings from the existing building stock, the annual growth in new residential and commercial buildings was first estimated. Growth in new residential buildings was estimated using state population growth projection data[148] along with person-per-household census estimates.[149] Growth in new commercial buildings was projected based on state commercial square footage estimates from the National Renewable Energy Laboratory's (NREL) ComStock dataset[150] along with labor growth projection data.[151] Using building growth projections as an input, energy utilization in new buildings was then calculated using ICF's proprietary Energy Codes tool, which estimates usage based on continued code updates, improving equipment efficiencies, and changes to the state's share of new multifamily home construction over time. As a final step, energy usage in new buildings by year

was converted to emissions using emission factors from the EPA's GHG Emission Factors Hub.[152] These emissions were subtracted from total projected emissions to derive projected emissions from the existing building stock.

Electric Power

The electric power sector includes emissions from electricity consumption within the state, including electricity supplied by power plants located outside of the state. ICF's propriety Integrated Planning Model (IPM) was used to project emissions from electricity consumption under the BAU scenario. The model evaluates the most cost-effective mix of technologies (e.g., renewables, gas, nuclear) to meet demand subject to environmental and operational limits. Outputs include emissions, generation, and capacity by fuel and generator type, in addition to electricity prices and system costs.

IPM's inputs and constraints include energy and peak demand; fuel prices; technology performance and costs; energy and capacity market revenues; and policies including Renewable Portfolio Standards, tax incentives, carbon markets (e.g., Regional Greenhouse Gas Initiative (RGGI)), and EPA regulations. In the model, consistent assumptions were applied across ISO New England (ISO-NE) to capture existing state and federal policies, including renewable portfolio standards, carbon trading programs or state limits on power sector emissions, and federal tax incentives for new clean electricity generating resources. Standard criteria (ISO-NE reporting, interconnection queue data, project research) were used to identify planned new generating projects and planned retirements in the ISO-NE region. For projected peak and energy demand, the 2025 CELT (Capacity, Energy, Loads, and Transmission Load Forecast[153] was used and extended through 2050 based on a 3-year growth rate. Key data sources for technology costs and performance include the 2024 National Renewable Energy Laboratory Annual Technology Baseline[154] for clean energy plus adjustments for federal tax incentives, if modeled (e.g., Section 45 tax credits); U.S. Environmental Information Administration's Annual Energy Outlook[155] for conventional technologies; and EPA v6.22 IPM[156] scenario assumptions for some inputs, like carbon capture and storage (CCS) retrofits costs. Under the BAU, federal EPA Clean Air Act 111(b) and (d) regulations127 were not modeled, and federal tax incentives for eligible technology types follow the adjusted (shortened) phase-out schedule as set by the One Big Beautiful Bill (OBBB) Act.[157]

Electricity emissions for the sector were calculated in alignment with the state's 2023 GHG inventory methodology, which estimates the emissions associated with the electricity consumed in the state, first counting in-state nuclear generation and Renewable Portfolio Standard-eligible generation in the region (assuming clean electricity in line with the Renewable Energy Certificates expected to be retired for the state program). Electricity consumption was based on projections from the other end-use sectors.

Industry

The industrial sector includes emissions from industrial building energy use and industrial processes, including use of hydrofluorocarbons (HFCs) as substitutes for ozone-depleting substances and semiconductor manufacturing emissions.

Industrial sector emissions, excluding emission from HFCs and semiconductor manufacturing, were projected forward using subsector-specific information from the U.S. Department of Energy's (DOE)

Industrial Decarbonization Roadmap (2022).[158,159] Facility-level, point-source emissions for covered industrial facilities in Connecticut were first obtained from the EPA's Greenhouse Gas Reporting Program and were used to estimate emissions and energy use by fuel type.[160] Facility-level totals were disaggregated by fuel using data from the Energy Information Administration's Manufacturing Energy Consumption Survey (MECS),[161] with subsector adjustments applied based on North American Industry Classification System (NAICS) codes. Because the Greenhouse Gas Reporting Program does not capture small industrial sources, reported emissions were scaled to align with the state's 2023 inventory. The DOE Industrial Decarbonization Roadmap was then used to project forward industry- and fuel-specific consumption and emissions trends, providing a reference-case trajectory of industrial sector emissions in the absence of additional decarbonization measures.

HFCs are substitutes for ozone-depleting substances, commonly used as refrigerants and in industrial processes. HFC emissions were projected forward from the state's 2022 baseline using population growth projections. 2022 was used as the starting point (instead of 2023) because default data for ozone depleting substances substitutes was only available in the EPA's State Inventory Tool through 2022.[162] These projections were then adjusted downward to account for the phasedown of HFCs under the American Innovation and Manufacturing (AIM) Act. Annual reductions were calculated based on projected national emissions of HFCs under a baseline scenario from the EPA's technical report, *Global Non-CO2 Greenhouse Gas Emission Projections & Mitigation Potential: 2020-2080.*[163] These reductions were applied to the population-based projected emissions for Connecticut to calculate projected state emissions under the BAU.

Semiconductor manufacturing emissions were held constant relative to the 2022 inventory since there are no known plans to build new manufacturing facilities within the state. 2022 was used as the starting point (instead of 2023) because default data for semiconductor manufacturing was only available in the EPA's State Inventory Tool through 2022.

Natural Gas Leakage

The natural gas leakage sector includes emissions from leakages in the state's natural gas transmission and distribution systems. No emissions from production processes or storage are assumed to occur within Connecticut. The BAU was based on a linear extrapolation of historical trends from the state's inventory. Transmission pipeline data were only available from 1990-2019 and the state's inventory assumes that transmission pipeline mileage, and therefore leakage emissions, were constant from 2019 through 2023. Therefore, transmission pipeline emissions were projected forward from 2023 using the annual linear trendline change in emissions from 1990-2019. For natural gas distribution system leakage, emissions were projected forward using the 2018-2023 trend from the state's inventory.

Waste and Wastewater

The waste and wastewater sector includes emissions from landfills, solid waste combustion, and wastewater treatment. Emissions were projected for waste treated in-state (scope 1) as well as for waste treated out-of-state (scope 3).

Landfills. Connecticut no longer has any active in-state municipal solid waste landfills, therefore the BAU assumes that no waste will be landfilled within the state in the future. However, waste that was previously

landfilled in the state will continue to generate emissions. Emissions from in-state landfills were projected forward using EPA's SIT State Inventory Projection Tool,149 which relies on the first order decay method to quantify emissions, building off the in-state historical landfill data used to prepare the state's 2023 inventory.

Combustion. Emissions from the combustion of waste in-state were derived by first projecting forward the quantity of waste combusted within the state. Historical data on the quantity of waste combusted in-state was provided by DEEP. The amount of waste combusted in 2023 was assumed to remain constant into the future based on the assumption that existing combustion facilities within the state are operating at capacity. Emissions per ton of waste, which is based on EPA's State Inventory Tool, was also assumed to remain constant into the future.

Out-of-state waste treatment. For waste that is landfilled and combusted out of state, future quantities were derived by first projecting forward the total quantity of waste generated in state in 2023 using population projections from EPA's State Inventory Tool. The amount of waste sent out of state was then calculated by subtracting out the amount of waste landfilled and combusted in state. This out-of-state waste was disaggregated into landfilled waste (90%) and combusted (10%) based on DEEP estimates informed by historical data. Emissions from waste landfilled out-of-state was estimated using EPA's State Inventory Projection Tool using the state of Ohio as a proxy for all out-of-state waste. Ohio was selected as a proxy because it receives the highest percentage of Connecticut's exported waste.[164] Emissions from waste combusted out-of-state were estimated using the derived quantities of waste combusted and the emissions factor derived from SIT.

Wastewater. EPA's State Inventory Projection Tool was used to project forward emissions from wastewater treatment. EPA's State Inventory Projection Tool uses a linear trend of national historical data, apportioned based on the state's population, to estimate future emissions.

Agriculture

The agriculture sector includes emissions from enteric fermentation, manure management, agricultural soils, liming, urea, and field burning of agricultural residues.

Enteric fermentation. Emissions from enteric fermentation were estimated based on projected livestock population. Livestock population data was obtained for 2023 from EPA's State Inventory Tool and projected based on the US Department of Agriculture (USDA) Baseline Projections rates of change.[165] Emissions were then calculated using the most recent U.S. per-head emissions factors from EPA's U.S. Greenhouse Gas Inventory.[166] The per-head emission factors are assumed to remain constant into the future as the per head emissions factor has stabilized in recent years.

Manure management. Emissions from manure management were similarly derived using projected livestock population and per-head emissions factors from the 2022 U.S. GHG Inventory.

Agricultural soils. N2O emissions from agricultural soils were estimated using projecting livestock populations as well as future crop production for key residue crops based on the USDA National

Agricultural Statistics Service data,[167] and future fertilizer application. Production-related activity data projections were based on rates of change developed from historical trends or the USDA Baseline Projections rates of change.[168] Fertilizer rates of change were based on historical trends from State Inventory Tool fertilizer data. For estimating N2O from grazing animals and manure-based fertilizer sources, the percentage of manure in each manure management system was held constant based on 2022 EPA State Inventory Tool values. These values were used to project emissions from daily spread, manure deposited onto pasture, and per head nitrogen excretion factors.

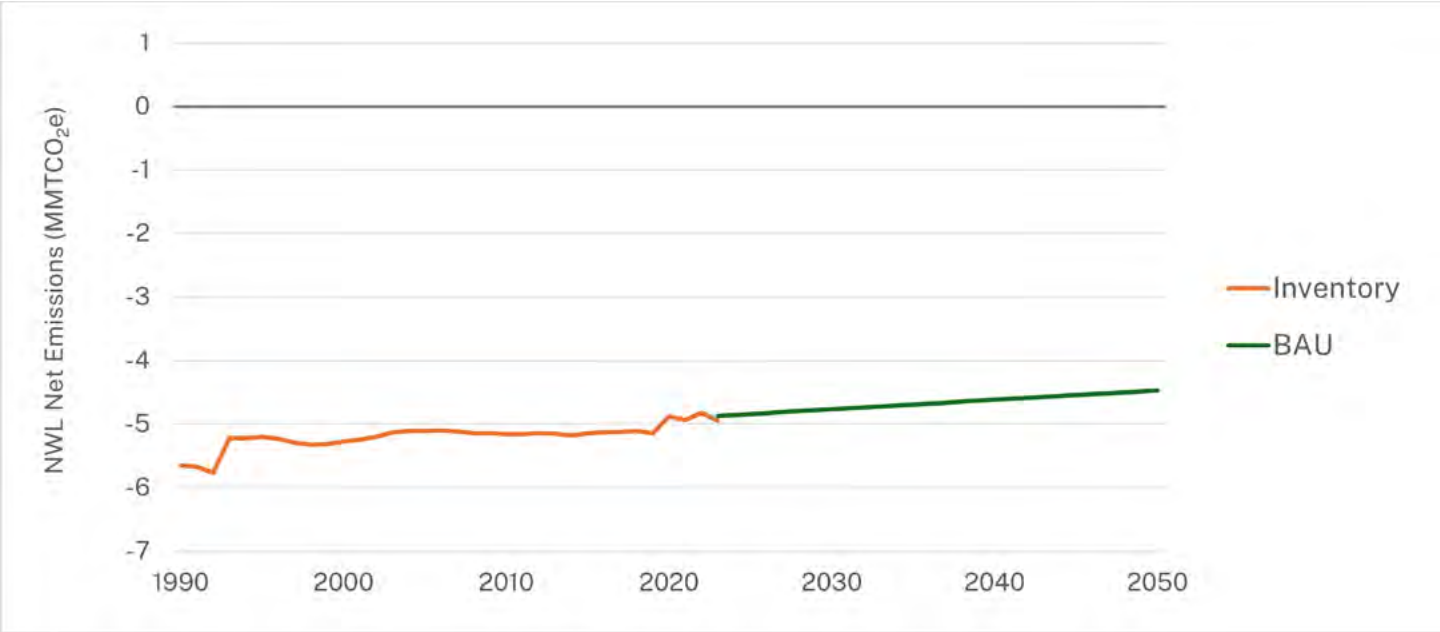
Liming, dolomite, and urea application. Projections for liming, dolomite, and urea application were based on historical trends using activity data obtained from EPA State Inventory Tool, as well as U.S. GHG Inventory emission factors as detailed above. Emissions projections for field burning of agricultural residues (FBAR) were based on the crop production data from USDA National Agricultural Statistics Service as derived for agricultural soils estimates and relevant parameters from Chapter 11 of the 2019 Refinement to the 2006 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories.[169]

Natural and Working Lands

Natural and working lands (NWL) include forests and woodlands, grasslands and shrublands, croplands and rangelands, wetlands, and urban green spaces. The NWL sector accounts for the ability of plants and soils to store and sequester, as well as account for the effects of land cover change, such as deforestation, afforestation, and urbanization. For each NWL subsector, land cover data from the National Land Cover Database[170] was analyzed from 1990 to 2024, which provides consistent land cover classes and full coverage for Connecticut. Land cover was projected from 2025 to 2050 using the average year-over-year percent change for each land cover class from the last 15 years (2009–2024), while maintaining Connecticut's total land area. Ratios of inventory subsector to land cover type were used to establish relationships between emissions/sequestration and the landscape.

Connecticut state law sets a goal of protecting nearly 700,000 acres of the state's land base as open space.[171] The state has already achieved over 77% of this goal, with an additional 154,072 acres remaining to be converted to open space.[172,173] Open space was assumed to include the following land cover types: Deciduous Forest, Evergreen Forest, Mixed Forest, Shrub/Scrub, Grassland/Herbaceous, Woody Wetlands, and Emergent Herbaceous Wetlands. The remaining acreage (approximately 6,000 acres per year) was assumed to be reallocated from developed land to these open space classes based on their current share of total land cover. These assumptions were used to adjust the National Land Cover Database land cover projections, and the average historical inventory subsector-to-land cover type ratios were applied to the new projections.

Changes in emissions from projected changes in forest land and urban tree cover were based on adjusted National Land Cover Database land cover data that includes the state's open land statute and historical inventory for the past 15 years. As Connecticut does not landfill yard trimmings or food waste, emissions from this subsector were held at zero. Due to high uncertainty in underlying data, agricultural soil sequestration was held flat at 2023 levels. N2O emissions from settlement soils were also held flat, as these soils have shown consistent values since 2014.



Appendix B. Figure 2. Business-As-Usual Projection for the Natural and Working Lands Sector.

Appendix C: Sequestration Pathways Benefits Tables

The following tables depict the following eight different sequestration pathways across both natural and working lands and tech CDR:

1. Forest conservation and management,
2. Reforestation,
3. Urban forests,
4. Coastal and inland wetlands,
5. Agricultural lands,
6. Biomass carbon removal and storage (BiCRS), including biochar,
7. Bioenergy with carbon capture and storage (BECCS), and
8. Carbon mineralization.

The following criteria were used to assess the nature-based and tech CDR pathways that are most likely to be viable in Connecticut, and thereby inform the overall likelihood that sequestration can play a role in contributing to statewide climate goals. Pathways are given a “Low (red),” “Medium (yellow),” or “High (green)” rating for each criterion below. Criteria are not weighted in this qualitative assessment.

1. ***GHG reduction:*** In-state feasibility to meaningfully contribute to net zero, as indicated by NWL Opportunity Assessment and Technological CDR report.
2. ***Biodiversity:*** Strategic implementation can be expected to positively impact biodiversity.

3. ***Climate resilience:*** Strategic implementation can be expected to directly increase community resilience, including by:
   a. Addressing flooding or drought via nature-based stormwater management or shoreline protection
   b. Reducing the urban heat island effect
4. ***Additional environmental benefits:*** Strategic implementation can be expected to directly:
   a. Improve air and water quality
   b. Support invasive species control
   c. Increase climate-smart agriculture and soil conservation
   d. Increase access to open space for public health benefits
5. ***Economic + employment impacts:*** Strategic implementation can be expected to support commodity production and/or increase employment opportunities.

Forest Conservation and Management

GHG Mitigation	High	
Biodiversity	**High**	Forest conservation is essential to preserving habitat for many of Connecticut's wildlife species. Threatened species such as the New England cottontail depend on early seral or open canopy conditions, which can be created by forest management. Targeted forest management also promotes a diversity of forest types with varying tree and plant species.
Climate Resilience	**High**	Connecticut is largely characterized by even-aged forest stands that have regenerated after clear-cutting for agriculture. These older, even-aged forest stands are susceptible to pests, disease, and climate change. Forest management that seeks to emulate the natural disturbance cycle increases forest resilience and improves water and quality and hydrologic function (Caldwell et al. 2023).
Addl. Enviro. Benefits	**High**	Forest conservation and management assures the continued presence of landscapes that provide recreational and public health benefits such as improved air quality and stress reduction. New England's forests remove over 760,000 tons of air pollution including ozone, nitrogen oxides, sulfur dioxide, and fine particulates each year, which is worth an estimated $550 million in health benefits (Foster et al. 2017). Forest management can also include removal and control of invasive species, including both plants and pests.
Economic & Employment	**High**	Sustainable silvicultural practices can be used to harvest trees and generate income from the sale of timber and production of wood products. For every $1 million invested in forest restoration, up to 33 forest-related jobs are created (BenDor et al. 2015).

Reforestation

GHG Mitigation	High	
Biodiversity	**Medium**	Reforestation can reconnect fragmented habitat, but its benefits depend on depend on implementation. For example, monocultural pine plantations can maximize carbon sequestration but compromise species diversity and forest health. Following best practices frameworks (e.g., DiSacco 2021) for reforestation projects helps ensure biodiversity goals are met.
Climate Resilience	**High**	Reforestation projects that make use of appropriate tree species, genetics, planting techniques, and adaptive management can ensure resilient outcomes (American Forests 2020). Reforestation efforts can help combat erosion and improve watershed health by restoring tree cover and stabilizing soil.
Addl. Enviro. Benefits	**High**	Increasing forest extent can increase the overall provision of the public health and access benefits described for forest conservation and management. Adaptive management to support success of reforestation projects can include control of invasive species.
Economic & Employment	**High**	Reforestation in the U.S. supports economic growth by creating jobs in seed collection, nursery management, planting, and ongoing forest management. Workforce is cited as the top barrier to expanding the reforestation pipeline, underlining the significant opportunity to grow jobs, especially in rural areas (American Forests 2021).

Urban Forests

GHG Mitigation	High	
Biodiversity	**Medium**	Urban forests increase urban biodiversity, supporting pollinators and urban-adapted species that can survive in smaller habitats. They host fewer specialist species due to disturbances and human activity, but can provide important corridors for them in a fragmented landscape (Stevens et al. 2023). They also act as important stopover sites for migrating birds (Hutt-Taylor 2024).
Climate Resilience	**High**	Urban forestry and tree planting increase community resilience by mitigating the urban heat island effect, whereby urban areas become warmer than surrounding suburban and rural areas due to built infrastructure. Urban forests also moderate stormwater flows (Nowak 2010).

Addl. Enviro. Benefits	**High**	Urban trees improve air quality by directly removing pollutants from the air and reducing air temperature, thus altering pollution concentrations. Urban forests can remove multiple tons of ozone, criteria air pollutants, and particulate matter each year either through direct uptake of gases or temporarily intercepting airborne particles (Nowak 2010). They also provide important mental health benefits.
Economic & Employment	**High**	Urban forests can reduce energy costs by cooling surrounding areas and shading buildings (Nowak et al. 2017). Tree planting and wood reuse programs can also generate employment opportunities in urban areas. Planting trees in urban areas also increases property values (PNWRS 2010).

Coastal and Inland Wetlands

GHG Mitigation	Medium	
Biodiversity	**Medium**	Both inland and coastal wetlands are critically important to biodiversity (EPA 2025). Coastal wetlands rank among the most ecologically productive ecosystems on Earth (Barbier et al. 2010). In Long Island Sound, they offer essential nesting, feeding, and sheltering grounds for shorebirds and serve as vital nursery habitats for young stages of numerous marine and estuarine species (Basso et al. 2015).
Climate Resilience	**High**	Wetland ecosystems act as natural infrastructure that enhances climate resilience, protecting communities from the growing impacts of extreme weather and sea level rise. Coastal wetland vegetation stabilizes shorelines and buffers erosion from storm and wave energy. Inland wetlands help stabilize hydrology and recharging supply and controlling flooding (Ferreira 2023).
Addl. Enviro. Benefits	**High**	Coastal wetlands help improve water quality by trapping sediments, nutrients, and pollutants (Hagger et al. 2022). Inland wetlands support water quality by filtering groundwater. Both tidal and inland wetlands provide opportunities for wildlife observation and hunting.
Economic & Employment	**High**	Coastal wetlands have a disproportionately high economic value per unit area, greater than many of the other critical habitats found in Connecticut (Basso et al. 2018). Over the last 130 years, Connecticut lost 5,262 tidal wetland acres, estimated to be a loss of $61.5–$406.5 million per year in wetland benefits (Basso et al. 2015). Species that are the target of recreational and commercial fisheries have important ecological linkages to tidal wetlands (Kazmierczak 2002).

Agricultural Soil Carbon

GHG Mitigation	Medium	
Biodiversity	**High**	Certain practices that contribute to agricultural soil carbon sequestration also benefit biodiversity. Aboveground, crop rotation to enhance soil carbon can improve on-farm biodiversity over space and time by creating more habitat niches for wildlife (Scheid et al. 2023). Belowground, soil organic carbon fuels microbial activity that drives decomposition and humus formation, creating feedback loops that enhance soil biodiversity, organic matter, and vegetation diversity (Laban et al. 2018).
Climate Resilience	**High**	Enhancing soil organic carbon bolsters climate resilience by improving soil structure, water retention, and resistance to erosion, thereby mitigating the impacts of extreme weather events on crops, leading to improved food security (Lal 2004).
Addl. Enviro. Benefits	**High**	Use of appropriate cover crops and other soil carbon enhancing practices can reduce agricultural water demand, as reduced erosion and redistribution helps maintain soil depth and water retention (Bossio et al. 2020). Practices that enhance soil carbon also improve water quality; studies across the U.S. show that cover cropping reduces nutrient losses by 70% (Soil Health Institute, n.d.).
Economic & Employment	**High**	Over the long term, consistent implementation of soil health practices in the northeast leads to increases in yields compared to conventional farming, due in part to the added resilience benefits (AFT 2024). It also leads to cost savings; implementing no-till, cover cropping, and nutrient management, on a farm in New York saved $44 per acre in operating costs (AFT 2020).

BiCRS (Including Biochar, Biomass Burial, and Bio-Oil Sequestration)

GHG Mitigation	Medium	
Biodiversity	**Medium**	Biochar can enhance soil microbial biomass but its effects on microbial diversity are highly variable and depend on soil conditions (Li et al. 2020). Exposure to biochar can negatively impact soil fauna, particularly when applied at high concentrations or in small particle sizes. Using low concentrations with large particles sizes, applied at the appropriate time, mitigates these effects. (Ma et al. 2024). Bio-oil sequestration is unlikely to have significant direct impacts on biodiversity. Biomass burial projects can be sited to minimize biodiversity impacts.
Climate Resilience	**High**	Biochar improves water retention and fosters nutrient absorption, creating a fertile environment that supports sustainable and resilient agriculture (Khan et al. 2024). BiCRS pathways also provide a potential climate-smart use for forestry wastes derived from forest management, which could increase the economic viability of climate-resilient forestry.
Addl. Enviro. Benefits	**Medium**	Biochar is being studied for its potential use in brownfield remediation and early results are promising, though more research is required to ensure its effectiveness (Mazzurco-Maritana 2025). Criteria air pollutant emissions from pyrolysis for biochar and bio-oil vary widely depending on feedstock and method of production (Springsteen et al. 2021). Biomass burial provides no additional environmental co-benefits.
Economic & Employment	**Medium**	Biochar has the potential to increase crop yields (Khan et al. 2024), and as a marketable bio-product with multiple uses it can provide opportunities for additional income for landowners. In addition, the pyrolysis process that creates biochar creates heat, gas, and bio-oil that be used as sources of renewable energy.

BECCS (Bioenergy with Carbon Capture and Storage)

GHG Mitigation	Medium	
Biodiversity	**Low**	Use of purpose-grown crops as a feedstock for BECCS is likely to have negative impacts on biodiversity via to induced land use change; this can be mitigated by optimal land use allocation (Hanssen et al 2021). Use of forest thinning residues is ideal though sustainable supply may be insufficient at the scale required for BECCS (further region-specific analysis is required). Use of municipal solid waste as a feedstock will have no positive biodiversity impacts and may result in indirect negative impacts from release of toxins.
Climate Resilience	**Low**	BECCS can contribute to climate resilience to the extent that it creates demand for woody biomass waste from forest thinnings implemented for the specific purpose of increasing forest health (EFI 2022). Because BECCS requires a large, steady supply of biomass to maintain energy generation reliability, this also creates a risk of potentially incentivizing unsustainable forest practices to meet biomass demand.
Addl. Enviro. Benefits	**Low**	The process of turning harvested trees into pellets for use in BECCS and the burning of all types of biomass for energy generates air pollutants. Biomass facilities in the U.S. have non-GHG emissions 2.8 times greater than their non-biomass counterparts per unit energy (Tran et. al 2023). Air permitting requirements such as implementing Best Available Control Technology can reduce, but not eliminate, these emissions.
Economic & Employment	**High**	The construction of new a BECCS facility that captures 500,000 tons of CO2e per year is estimated to provide 420-600 average annual jobs, and 60-160 ongoing jobs related to operations and maintenance (Bower et al. 2025). Jobs can also be created or supported in the biomass supply chain.

Carbon Mineralization/Enhanced Rock Weathering

GHG Mitigation	Medium	
Biodiversity	Low	A potential advantage of enhanced rock weathering (ERW) over other land-based technological CDR strategies is that carbon sequestration is achieved without competing with other land uses (Eufrasio 2022). ERW typically involves adding rock dust to existing agricultural land, avoiding the need to directly or indirectly convert land types. However, there are many potential terrestrial, freshwater, and marine ecosystem impacts from large-scale application of rock dust that require further research (Levy 2024). Further, some byproducts of mining and grinding rock may harm natural ecosystems (Surhoff 2022).
Climate Resilience	Low	ERW has the potential to increase crop yields in temperate environments on sandy clay-loam soils, which are present in Connecticut, and thus enhance food security (Skov 2024). However, further research is required. ERW has shown positive to neutral effects on soil fertility in the short term, though there are signs that soil fertility could be compromised in the long term indicating the need for further investigation (Dupla et al. 2024).
Addl. Enviro. Benefits	Low	Scaling carbon mineralization to megatons in the region will require significant energy for mining and transport, which could produce air pollutants harmful to human health. Byproducts from the mining process and inhalation of particulate matter from the ground rock dust may harm human health.
Economic & Employment	High	Carbon mineralization pathways are estimated to result in more job creation than other technological CDR pathways, primarily in operations and maintenance related to mining/quarrying, transportation, and construction (Bower et al. 2025).

Appendix D: Report Consultation Process

In compliance with Section 2 of Public Act 25-125, DEEP hosted a meeting of the Governor's Council on Climate Change and held a public comment period on the draft Climate Progress Report.

January 13, 2026: Governor's Council on Climate Change Meeting

- At this hybrid meeting, DEEP presented the findings of the draft Climate Progress Report to the Council. The presentation was followed by a discussion with GC3 members on their priorities for continued progress towards the state's goals. The meeting concluded with an opportunity for public comments.
- View the Public Notice
- View the Minutes and Written Comments
- View the Zoom Meeting Recording

January 23, 2026-February 6, 2026: Public Comment Period

- Written comments were emailed to deep.climatechange@ct.gov with "CT Climate Progress Report Comments" in the subject line.
- DEEP received a total of 25 comments from environmental advocacy groups, regional planning councils, the utilities, and individuals, amongst others.
- View the Notice of Opportunity for Public Comment

DEEP presented the findings of the draft report at the public meeting of the Governor's Council on Climate Change (GC3) on Tuesday January 13, 2026. A recording of the meeting, slides, and meeting minutes can be found on the GC3 Meetings and Notices website. Following the close of the public comment period, DEEP submitted the report to the Office of Policy and Management in February 2026 and subsequently in March 2026 to the joint standing committees of the Connecticut General Assembly having cognizance of matters relating to the environment, energy and technology, and transportation.

Endnotes:

1. Connecticut General Assembly, Public Act 25-125: AN ACT CONCERNING THE PROTECTION OF THE ENVIRONMENT AND THE DEVELOPMENT OF RENEWABLE ENERGY SOURCES AND ASSOCIATED JOB SECTORS, (July 2025), https://www.cga.ct.gov/2025/act/pa/pdf/2025PA-00125-R00HB-05004-PA.pdf

2. CT DEEP, CT GHG Inventory 1990-2023, (August 2025), found at https://portal.ct.gov/-/media/deep/climatechange/1990-2023-ghg-inventory/deep_ghg_report_1990-2023-final.pdf?rev=c4562f29c0cd4dc4a43c7d67cfa83593&hash=B7E9F86289DCEFFCE0AAE1AA08637750

3. CT DEEP Greenhouse Gas Inventory Reports, found at https://portal.ct.gov/deep/climate-change/ct-greenhouse-gas-inventory-reports

4. Connecticut Governor's Council on Climate Change, Taking Action on Climate Change and Building a More Resilient Connecticut for All, Phase 1 Report: Near-Term Actions, (January 2021), found at https://portal.ct.gov/-/media/deep/climatechange/gc3/gc3_phase1_report_jan2021.pdf?rev=fe13cbb4f2c74e05a439c9cec69bc230&hash=9A003BB2D9D81CEE34D697BA50802DA0

5. CT DEEP, CPRG Priority Climate Action Plan, (August 2024), found at https://portal.ct.gov/deep/climate-change/pcap

6. CT DEEP, CPRG Priority Climate Action Plan, (August 2024), found at https://portal.ct.gov/deep/climate-change/pcap

7. The Comprehensive Climate Action Plan will include modeling of the emissions reductions that could be achieved if all measures discussed in this report were implemented. The plan will also assess additional benefits of climate action to reduce air pollution, protect public health, increase community resilience, lower energy costs and create new jobs.

8. Staff Report, CT Heads Back To Court In Effort To Restart Revolution Wind, CTNewsJunkie (January 6, 2026), found at https://ctnewsjunkie.com/2026/01/06/ct-heads-back-to-court-in-effort-to-restart-revolution-wind/

9. Connecticut Governor's Council on Climate Change, Taking Action on Climate Change and Building a More Resilient Connecticut for All, Phase 1 Report: Near-Term Actions (January 2021), found at https://portal.ct.gov/-/media/deep/climatechange/gc3/gc3_phase1_report_jan2021.pdf

10. Lamont, Gov. Ned. Letter requesting Major Disaster Declaration for August 18, 2024 flash flooding, (September 9, 2024), found at https://portal.ct.gov/governor/-/media/office-of-the-governor/news/2024/20240909-request-for-major-disaster-declaration.pdf

11. Damage assessments submitted to FEMA do not include damage to private utilities, including grid infrastructure owned and operated by Eversource and Avangrid (aka United Illuminating). Some storms in Connecticut have been much more costly to the private utilities than they have to public infrastructure, homes and businesses and vice versa. For example, Isaias cost the private electric distribution companies an estimated $232 million in preparedness and recovery costs. The FEMA damage assessment for Isaias to public infrastructure was $21.3 million.

12. State of Connecticut Office of the Governor, Request for Major Disaster Declaration, (September 2024), found at https://portal.ct.gov/governor/-/media/office-of-the-governor/news/2024/20240909-request-for-major-disaster-declaration.pdf

13. State of Connecticut Office of the Governor, Request for Major Disaster Declaration (September 2024), found at https://portal.ct.gov/governor/-/media/office-of-the-governor/news/2024/20240909-request-for-major-disaster-declaration.pdf

14. Burgeson, John, Rising Above the Tide: 5 Years Since Sandy, CTPost, (Oct. 28, 2017), found at https://www.ctpost.com/local/article/Rising-above-the-tide-5-years-since-Sandy-12313727.php

15. Underwood, Stephen, Storm costs add up to multi-millions for CT utilities. Here's a look, and why it costs customers, too, Hartford Courant, (February, 25 2026), found at Storm costs add up to multi-millions for CT utility providers

16. Haar, Dan, Dan Haar: Eversource asking customers to pay $634M bill for storms in Connecticut, CTInsider, (December 21, 2023), found at Dan Haar: Eversource asking customers to pay $634M bill for CT storms

17. Hart, Marybeth, Tropical Storm Irene Delivered a Sunday Punch to Connecticut, Wrack Lines (Fall/Winter 2011-2012), found at https://digitalcommons.lib.uconn.edu/cgi/viewcontent.cgi?article=1067&context=wrack-lines

18. Burgeson, John, Rising Above the Tide: 5 Years Since Sandy, CTPost, (Oct. 28, 2017), https://www.ctpost.com/local/article/Rising-above-the-tide-5-years-since-Sandy-12313727.php

19. Phenology: seasonal changes in plants and animals from year to year

20. DEEP, 2025 Wildlife Action Plan: Chapter 3, (December 2025), found at https://portal.ct.gov/-/media/deep/wildlife/pdf_files/swap/ctwap2025-ch3.pdf?rev=b67a6d9ede6047fd873e4e99e4ed0c15&hash=081170E3E769DAD21150574825CB3555

21. Connecticut General Assembly, Public Act 22-25 AN ACT CONCERNING THE CONNECTICUT CLEAN AIR ACT (2022), found at https://www.cga.ct.gov/2022/act/pa/pdf/2022PA-00025-R00SB-00004-PA.pdf

22. The full title of Public Act 25-33 is An Act Concerning the Environment, Climate and Sustainable Municipal and State Planning, and the Use of Neonicotinoids and Second-General Anticoagulant Rodenticides. The neonicotinoids and rodenticides section of the bill was unrelated to addressing the impacts of climate change or extreme weather.

23. U.S. EPA, Climate Pollution Reduction Planning Grant, found at https://www.epa.gov/inflation-reduction-act/about-cprg-planning-grant-information

24. Connecticut General Assembly, Public Act 04-252: AN ACT CONCERNING CLIMATE CHANGE (July 2004), found at https://www.cga.ct.gov/2004/act/Pa/2004PA-00252-R00SB-00595-PA.htm

25. Connecticut General Assembly, Public Act 08-98: AN ACT CONCERNING CONNECTICUT GLOBAL WARMING SOLUTIONS (July 2008), found at https://www.cga.ct.gov/2008/act/pa/2008pa-00098-r00hb-05600-pa.htm

26. Connecticut General Assembly, Public Act 18-82: AN ACT CONCERNING CLIMATE CHANGE PLANNING AND RESILIENCY (July 2018), found at https://www.cga.ct.gov/2018/act/pa/pdf/2018PA-00082-R00SB-00007-PA.pdf

27. Connecticut General Assembly, Public Act 22-5: AN ACT CONCERNING CLIMATE CHANGE MITIGATION (July 2022), found at https://www.cga.ct.gov/2022/act/pa/pdf/2022PA-00005-R00SB-00010-PA.pdf

28. Connecticut General Assembly, Public Act 25-125: AN ACT CONCERNING THE PROTECTION OF THE ENVIRONMENT AND THE DEVELOPMENT OF RENEWABLE ENERGY SOURCES AND ASSOCIATED JOB SECTORS (July 2025), found at https://www.cga.ct.gov/2025/act/pa/pdf/2025PA-00125-R00HB-05004-PA.pdf

29. While Public Act 25-125 added a net-zero target for 2050, the 2020, 2030 and 2040 interim targets are not net emissions targets. As such, carbon sequestration or negative emissions provided by the natural and working lands sector are not included in the GHG emissions calculation measuring the state's progress towards meeting these interim targets. However, starting with the release of the GHG Inventory in April 2024, the state has been tracking carbon sequestration in the natural and working lands sector using the EPA Land, Land Use Change, and Forests output of the EPA State Inventory Tool.

30. CT DEEP, Greenhouse Gas Inventory Reports, found at https://portal.ct.gov/deep/climate-change/ct-greenhouse-gas-inventory-reports

31. CT DEEP, Comprehensive Climate Action Plan, found at https://portal.ct.gov/deep/climate-change/comprehensive-climate-action-plan

32. U.S. EPA, Final Rule: Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles, found at https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-multi-pollutant-emissions-standards-model.

33. U.S. EPA, Final Rule: Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles – Phase 3, found at https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-greenhouse-gas-emissions-standards-heavy-duty.

34. U.S. EPA, Final Carbon Pollution Standards to Reduce Greenhouse Gas Emissions from Power Plants, found at https://www.epa.gov/system/files/documents/2024-04/cps-presentation-final-rule-4-24-2024.pdf.

35. Clean energy technologies include renewable energy, energy efficiency, electric vehicle and charging, and other electrification technologies.

36. U.S. EPA, Federal Rule: Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles, (April 18, 2024) found at https://www.federalregister.gov/documents/2024/04/18/2024-06214/multi-pollutant-emissions-standards-for-model-years-2027-and-later-light-duty-and-medium-duty

37. U.S. EPA, Federal Rule: Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles-Phase 3, (April 22, 2024) found at https://www.federalregister.gov/documents/2024/04/22/2024-06809/greenhouse-gas-emissions-standards-for-heavy-duty-vehicles-phase-3

38. U.S. EPA, Summary of Inflation Reduction Act provisions related to renewable energy, found at https://www.epa.gov/green-power-markets/summary-inflation-reduction-act-provisions-related-renewable-energy.

39. Governor Lamont, Executive Order No. 3, found at https://portal.ct.gov/-/media/office-of-the-governor/executive-orders/lamont-executive-orders/executive-order-no-3.pdf

40. Connecticut Governor's Council on Climate Change, Taking Action on Climate Change and Building a More Resilient Connecticut for All, Phase 1 Report: Near-Term Actions (January 2021) found at https://portal.ct.gov/-/media/deep/climatechange/gc3/gc3_phase1_report_jan2021.pdf

41. Governor Lamont, Governor Lamont Signs Executive Order Directing Connecticut State Agencies To Implement Actions That Reduce Carbon Emissions and Adapt to Climate Crisis, Press Release (December 16, 2021), found at https://portal.ct.gov/governor/news/press-releases/2021/12-2021/governor-lamont-signs-executive-order-directing-connecticut-state-agencies-to-implement-actions?language=en_US

42. Governor's Council on Climate Change Meetings and Notices

43. https://portal.ct.gov/deep/climate-change/climate-change

44. U.S. Climate Alliance, 2022 Annual Report: Full Speed Ahead (September 2022), found at USClimateAlliance_AnnualReport_LowRes_2022.pdf

45. Climate Program Portal, Federal Climate Funding Ramps Up, (May 8, 2024), found at https://climateprogramportal.org/2024/05/08/federal-climate-funding-ramps-up/

46. Climate Program Portal, Federal Climate Funding Ramps Up, (May 8, 2024), found at https://climateprogramportal.org/2024/05/08/federal-climate-funding-ramps-up/

47. CT DEEP, Now Is A Great Time to Take Advantage of Cost-Saving Clean Energy Tax Credits and Incentives, Press Release (August 11, 2025), found at https://portal.ct.gov/deep/news-releases/news-releases---2025/now-is-a-great-time-to-take-advantage-of-cost-saving-clean-energy-tax-credits-and-incentives

48. President Trump, Executive Order: Ending Market Distorting Subsidies for Unreliable Foreign Controlled Energy Sources, (July 7, 2025), found at https://www.whitehouse.gov/presidential-actions/2025/07/ending-market-distorting-subsidies-for-unreliable-foreign%E2%80%91controlled-energy-sources/

49. US Department of Interior, Departmental Review Procedures for Decisions, Actions, Consultations, and Other Undertakings Related to Wind and Solar Energy Facilities, (July 15, 2025), found at https://www.doi.gov/media/document/departmental-review-procedures-decisions-actions-consultations-and-other

50. Joselow, Maxine and Friedman, Lisa, E.P.A. Retreats From Plans to End the Energy Star Program, (November 1, 2025), found at https://www.nytimes.com/2025/11/01/climate/epa-energy-star-program.html

51. Governor Lamont, Governor Lamont and Governor McKee Statements on President Trump's Order To Stop Construction on the Nearly Complete Revolution Wind Project, Press Release (August 23, 2025), found at https://portal.ct.gov/governor/news/press-releases/2025/08-2025/governor-lamont-and-governor-mckee-statements-on-order-to-stop-revolution-wind?language=en_US

52. Attorney General Tong, Attorney General Tong Statement on Preliminary Injunction Granted in Orsted Challenge to Baseless Revolution Wind Stop Work Order, Press Release (September 22, 2025), found at https://portal.ct.gov/ag/press-releases/2025-press-releases/preliminary-injunction-granted-in-orsted-challenge-to-baseless-revolution-wind-stop-work-order

53. U.S. Department of Interior, The Trump Administration Protects U.S. National Security by Pausing Offshore Wind Leases, Press Release (December 22, 2025), found at https://www.doi.gov/pressreleases/trump-administration-protects-us-national-security-pausing-offshore-wind-leases

54. Governor Lamont, Governor Lamont Statement on Trump Administration's Latest Attempt To Stop Revolution Wind, Press Release (December 22, 2025), found at https://portal.ct.gov/governor/news/press-releases/2025/12-2025/governor-lamont-statement-on-trump-administration-latest-attempt-to-stop-revolution-wind?language=en_US

55. Governor Lamont, Governor Lamont, Governor Healey, Governor Hochul, Governor McKee Pen Letter to U.S. Interior Secretary Demanding Immediate Lifting of Stop Work Order on Offshore Wind Projects, Press Release (December 24, 2025), found at https://portal.ct.gov/governor/news/press-releases/2025/12-2025/governors-pen-letter-to-interior-secretary-demanding-immediate-lifting-of-order-on-offshore-wind?language=en_US

56. Friedman, Lisa, Offshore Wind Projects Challenge Trump Administration's Order to Stop Work, NY Times (January 2, 2026), found at https://www.nytimes.com/2026/01/02/climate/trump-offshore-wind-lawsuit-national-security.html

57. Attorney General Tong, Attorney General Tong Moves to Block Latest Trump Attempt to Stop Revolution Wind, Press Release (January 6, 2026), found at https://portal.ct.gov/ag/press-releases/2026-press-releases/attorney-general-tong-moves-to-block-latest-trump-attempt-to-stop-revolution-wind

58. U.S. EPA, Final Rule: Rescission of the Greenhouse Gas Endangerment Finding and Motor Vehicle Greenhouse Gas Emission Standards Under the Clean Air Act, found at https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-rescission-greenhouse-gas-endangerment

59. U.S. EPA, Regulations for Greenhouse Gas Emissions from Passenger Cars and Trucks, found at https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-passenger-cars-and

60. U.S. EPA, NAAQS Table, found at https://www.epa.gov/criteria-air-pollutants/naaqs-table

61. Governor Lamont, Governor Lamont, Attorney General Tong, Commissioner Dykes, and Commissioner Juthani Respond to the EPA's Proposed Repeal of the Landmark Endangerment Finding, Press Release (July 29, 2025), found at https://portal.ct.gov/deep/news-releases/news-releases---2025/gov-lamont-attorney-general-tong-commissioner-dykes-and-commissioner-juthani-respond-to-the-epa

62. U.S. EPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, found at https://www.epa.gov/climate-change/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a

63. U.S. EPA, Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards, (July 29, 2025). See also, 90 Fed. Reg. 36288 (August 1, 2025).

64. U.S. EPA, obtained via Freedom of Information Act (FOIA) request, found at Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2023." Published by the Environmental Defense Fund on May 8, 2025

65. Governor Lamont, Governor Lamont, Attorney General Tong, Commissioner Dykes, and Commissioner Juthani Statements on Trump Administration's Repeal of Landmark Endangerment Finding, Press Release (February 12, 2026), found at https://portal.ct.gov/governor/news/press-releases/2026/02-2026/governor-lamont-on-trump-repeal-of-landmark-endangerment-finding?language=en_US

66. Governor Lamont, Governor Lamont, Attorney General Tong, Commissioner Dykes, and Commissioner Juthani Respond to the EPA's Proposed Repeal of the Landmark Endangerment Finding, Press Release (July 29, 2025), found at https://portal.ct.gov/deep/news-releases/news-releases---2025/gov-lamont-attorney-general-tong-commissioner-dykes-and-commissioner-juthani-respond-to-the-epa

67. CT DEEP, Comments on the Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards, found at https://portal.ct.gov/-/media/deep/air/comments/federalactions/ct-comments-endangerment-finding-repeal-08012025.pdf?rev=0253914c079b4146a21c484179161902&hash=98C54143BB331E9F781D647E9F7102C1

68. U.S. EPA, Bold Promises, Real Results, Fact Sheet (June 2024), found at https://www.epa.gov/system/files/documents/2024-06/bprr_factsheet_climate_v-6.pdf

69. CT DEEP, Connecticut Hydrogen and Electric Automobile Purchase Rebate (CHEAPR), found at https://portal.ct.gov/DEEP/Air/Mobile-Sources/CHEAPR/CHEAPR---Home

70. Energize CT, found at https://www.energizect.com/

71. CT DEEP, Conservation and Load Management (C&LM), found at https://portal.ct.gov/deep/energy/conservation-and-load-management/conservation-and-load-management

72. Energize CT, Residential Air Source Heat Pump Energy Optimization Incentive, found at https://www.energizect.com/rebates-incentives/heating-cooling/heat-pumps/residential-energy-optimization

73. PURA, Electric Vehicle (EV) Charging Program, found at https://portal.ct.gov/pura/electric/office-of-technical-and-regulatory-analysis/clean-energy-programs/electric-vehicle-charging-program

74. Eversource, Electric Vehicle Charger and Wiring Upgrade Rebates for Connecticut, found at https://www.eversource.com/residential/save-money-energy/clean-energy-options/electric-vehicles/charging-stations/ct

75. PURA, Residential Renewable Energy Solutions (RRES) Program, found at https://portal.ct.gov/pura/electric/office-of-technical-and-regulatory-analysis/clean-energy-programs/residential-renewable-energy-solutions-program

76. CT DEEP, Connecticut and New England State Partners Announce Clean Energy Selections, Press Release (December 18, 2025) found at

https://portal.ct.gov/deep/news-releases/news-releases---2025/connecticut-and-new-england-state-partners-announce-clean-energy-selections

77. CT DEEP, IRP Notice of Proceeding and Scoping, (February 26, 2025), found at https://portal.ct.gov/-/media/deep/energy/irp/irp-notice-of-proceeding-and-scoping.pdf

78. Prepared by Engie, Commissioned by CT DEEP, Connecticut Clean Hydrogen Roadmap, (2024), found at https://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/3d1a49c6cf-9a122385258cce0057f7f3/$FILE/2024%20Connecticut%20Hydrogen%20Roadmap.%20FINAL.V2.pdf

79. Connecticut General Assembly, Public Act 23-156: AN ACT IMPLEMENTING RECOMMENDATIONS OF THE HYDROGEN TASK FORCE, (June 27, 2023), found at https://www.cga.ct.gov/2023/act/pa/pdf/2023PA-00156-R00HB-06851-PA.pdf

80. Governor Lamont, Governor Lamont Announces Funding To Establish New State Program Helping To Make Energy Efficiency Upgrades at Existing Homes, Press Release (December 18, 2025), found at https://portal.ct.gov/deep/news-releases/news-releases---2025/governor-lamont-announces-funding-to-establish-new-state-program-helping-make-energy-efficiency

81. Connecticut General Assembly, Public Act 24-38: AN ACT CONCERNING ENERGY PROCUREMENTS, CERTAIN ENERGY SOURCES AND PROGRAMS OF THE PUBLIC UTILITIES REGULATORY AUTHORITY, (May 21, 2024), found at https://www.cga.ct.gov/2024/act/pa/pdf/2024PA-00038-R00SB-00385-PA.pdf

82. CT DEEP, DEEP Launches Informational Process to Explore New Nuclear Energy Capacity in Connecticut, Press Release (October 23, 2025), found at https://portal.ct.gov/deep/news-releases/news-releases---2025/deep-launches-informational-process-to-explore-new-nuclear-energy-capacity-in-connecticut

83. CT DEEP, Notice of Proceeding: DEEP Stakeholder Process to Explore New Nuclear Capacity in Connecticut, found at https://portal.ct.gov/-/media/deep/energy/proceedings/deep-informational-process-to-explore-new-nuclear-energy-capacity-in-ct.pdf

84. DEEP, A Priority Climate Action Plan (March 2024), found at https://portal.ct.gov/-/media/deep/climatechange/pcap/deep_pcap_report_8-24.pdf?rev=2441df4e4596435c97e73474ee53239f&hash=E0293EC356B2BA77938F787E165764E0

85. Calculations for the emissions reductions may include assumptions about a certain number of EV chargers or heat pumps deployed or a specific dollar amount invested. Details on the calculations for each measure may be found in the appendices of the Priority Climate Action Plan.

86. U.S. EPA, About CPRG Implementation Grants, found at https://www.epa.gov/inflation-reduction-act/about-cprg-implementation-grants

87. CT DEEP, Governor Lamont Announces Connecticut Receives Federal Grant To Accelerate Adoption of Affordable Electric Heat Pumps, Press Release (July 23, 2024), found at https://portal.ct.gov/deep/news-releases/news-releases---2024/gov-lamont-announces-ct-receives-fed-grant-to-accelerate-adoption-of-affordable-electric-heat-pumps

88. CT DEEP, Introducing the New England Heat Pump Accelerator, found at

https://portal.ct.gov/deep/energy/new-england-heat-pump-accelerator

89. New Jersey Department of Environmental Protection, Introducing the Clean Corridor Coalition, found at https://dep.nj.gov/drivegreen/cprg-ccc/

90. U.S. EPA, Climate Pollution Reduction Grant: City of New Haven (Connecticut), found at https://www.epa.gov/inflation-reduction-act/city-new-haven-connecticut

91. The Land Use, Land Use Change, and Forestry (LULUCF) module in EPA's State Inventory Tool calculates GHG emission fluxes from soils, forest fires, forest management, urban trees, landfilled yard trimmings and food scraps, and agricultural soils. The LULUCF module does not include emission fluxes associated with wetlands. From https://www.epa.gov/system/files/documents/2023-02/land-use-change-and-forestry-users-guide.pdf

92. Natural and Working Lands (NWL) sector vs. Nature-Based Solutions (NBS). NWL sector and NBS, although closely related terms, are not interchangeable. The NWL sector, as used in this report, is an economic sector defined by EPA for the CPRG grant program as forests and woodlands, grasslands and shrublands, croplands and rangelands, wetlands, and urban green spaces and functions collectively as a net carbon sink. GHG emissions sources from livestock and crop production are inventoried separately in the agriculture sector (see CT DEEP GHG Inventory). While NBS may include natural and working lands that sequester carbon, the term NBS is often used more broadly than only referring to the NWL sector. The term NBS is frequently used in the context of climate resilience strategies, such as green infrastructure for stormwater management, whereas the term NWL sector is more frequently used in the context of GHG emissions accounting for net carbon sinks, with climate resilience discussed as a co-benefit of NWL sector strategies.

93. https://portal.ct.gov/-/media/deep/climatechange/1990-2023-ghg-inventory/deep_ghg_report_1990-2023-final.pdf?rev=c4562f29c0cd4dc4a43c7d67cfa83593&hash=B7E9F86289DCEFFCE0AAE1AA08637750, (pg. 16). While wetlands fall under the NWL sector umbrella, DEEP is currently using the EPA State Inventory Tool Land Use, Land Use Change and Forestry (LULUCF) to account for carbon sequestration in the state inventory. LULUCF does not include weltands and therefore the inventory is not yet able to track carbon sequestration in wetlands. However, DEEP did include wetlands in the Business-As-Usual projection for Connecticut's net GHG emissions (see Appendix B).

94. U.S. Climate Alliance, Natural & Working Lands & Climate Action: A State Guide to Enhance the Sector's Contribution to State and National Climate Goals, Guide (November 2022), found at https://usclimatealliance.org/guide/nwl-state-guide-nov-2022/

95. Carbon sequestration is only accounted for in the state's 2050 net-zero target. The interim 2030, 2040, and 80% gross emissions reduction by 2050 targets are not net GHG emissions goals and therefore cannot be achieved by accounting for negative emissions.

96. Climate-smart forestry is a form of location-based forest management that improves forest resilience and climate benefits and is often informed by on-the-ground stakeholders and rightsholders. From https://www.nature.org/en-us/what-we-do/our-priorities/tackle-climate-change/climate-change-stories/climate-smart-forestry/#:~:text=Climate%2Dsmart%20forestry%20means%20caring,forest%20in%20Indonesia%27s%20Berua%20District. See also https://content.ces.ncsu.edu/what-is-climate-smart-forestry-a-brief-overview

97. See also recommendations of the GC3 in the January 2021 Report: https://portal.ct.gov/-/media/deep/climatechange/gc3/gc3_phase1_report_jan2021.pdf?rev=fe13cbb4f2c74e05a439c9cec69bc230&hash=9A003BB2D9D81CEE34D697BA50802DA0

98. CT DEEP, Open Space and Watershed Land Acquisition Grant Program, found at https://portal.ct.gov/deep/open-space/open-space-and-watershed-land-acquisition-grant-program#Additional

99. CT DEEP, Urban and Community Forestry Planning Grant Program, found at https://portal.ct.gov/deep/forestry/urban-forestry/grants/urban-and-community-forestry-planning-grant-program

100. CT DEEP, Urban Forest Equity Grant Program, found at https://portal.ct.gov/DEEP/Business-and-Financial-Assistance/Grants-Financial-Assistance/Urban-Forest-Equity-Grant-Program

101. CT DEEP, Urban Forested Natural Areas and Riparian Corridor Restoration Grant Program, found at https://portal.ct.gov/DEEP/Forestry/Urban-Forestry/Grants/Urban-Forested-Natural-Areas-and-Riparian-Corridor-Restoration-Grant-Program

102. CT DEEP, Urban Forest Resilience Grant Program, found at https://portal.ct.gov/DEEP/Forestry/Urban-Forestry/Grants/Urban-Forest-Resilience-Grant-Program

103. CT DEEP, Resilient Forestry Practices Grant, found at https://portal.ct.gov/deep/forestry/urban-forestry/grants/resilient-forestry-practices-grant

104. CT DEEP, Urban Forestry Equity through Capacity Building Grant Program, found at https://portal.ct.gov/DEEP/Business-and-Financial-Assistance/Grants-Financial-Assistance/Urban-Forestry-Equity-through-Capacity-Building-Grant-Program

105. USDA Natural Resources Conservation Service, Connecticut Environmental Quality Incentives Program (EQIP), found at https://www.nrcs.usda.gov/programs-initiatives/eqip-environmental-quality-incentives/connecticut/connecticut-eqip

106. National Institute of Building Sciences, NIBS Releases 2025 Moving Forward Report: A Call to Retrofit for Resilience, Press Release (June 2, 2025), found at https://nibs.org/nibs-releases-2025-moving-forward-report-a-call-to-retrofit-for-resilience/

107. IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001

108. Jay, A.K., A.R. Crimmins, C.W. Avery, T.A. Dahl, R.S. Dodder, B.D. Hamlington, A. Lustig, K. Marvel, P.A. Méndez-Lazaro, M.S. Osler, A. Terando, E.S. Weeks, and A. Zycherman, 2023: Ch. 1. Overview: Understanding risks, impacts, and responses. In: Fifth National Climate Assessment. Crimmins, A.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA. https://doi.org/10.7930/NCA5.2023.CH1

109. Whitehead, J.C., E.L. Mecray, E.D. Lane, L. Kerr, M.L. Finucane, D.R. Reidmiller, M.C. Bove, F.A. Montalto, S. O'Rourke, D.A. Zarrilli, P. Chigbu, C.C. Thornbrugh, E.N. Curchitser, J.G. Hunter, and K. Law, 2023: Ch. 21. Northeast. In: Fifth National Climate Assessment. Crimmins, A.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA. https://doi.org/10.7930/NCA5.2023.CH21

110. National Academies of Sciences, Engineering, and Medicine. 2025. Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare. Washington, DC: The National Academies Press. https://doi.org/10.17226/29239.

111. de Vos, M, Y. Onat and J. O'Donnell. Climate Services, Volume 41. January 2026. Evaluation of high-resolution downscaled CMIP6 projections for adaptation to climate extremes in Connecticut. Climate Services (January 2026). https://www.sciencedirect.com/science/article/pii/S2405880726000014?lid=jua9g5tkojjo&utm_source=braze&utm_medium=email&utm_campaign=STMJ_220042_AUTH_SERV_PPUB&utm_content=07bab9e4-c31e-408b-afa5-1c9ca0f269ca&utm_term=07bab9e4-c31e-408b-afa5-1c9ca0f269ca&DGCID=STMJ_220042_AUTH_SERV_PPUB

112. Seth, A., G. Wang, C. Kirchhoff, K. Lombardo, S. Stephenson, R. Anyahand J. Wu (2019). Connecticut Physical Climate Science Assessment Report (PCSAR): Observed trends and projections of temperature and precipitation. CIRCA Report. https://circa.uconn.edu/wp-content/uploads/sites/1618/2019/11/CTPCSAR-Aug2019.pdf

113. O'Donnell, J. (2019). Sea Level Rise in Connecticut. CIRCA Report. https://circa.uconn.edu/wp-content/uploads/sites/1618/2019/10/Sea-Level-Rise-Connecticut-Final-Report-Feb-2019.pdf

114. Seth, A., G. Wang, C. Kirchhoff, K. Lombardo, S. Stephenson, R. Anyahand J. Wu (2019). Connecticut Physical Climate Science Assessment Report (PCSAR): Observed trends and projections of temperature and precipitation. CIRCA Report. https://circa.uconn.edu/wp-content/uploads/sites/1618/2019/11/CTPCSAR-Aug2019.pdf

115. Fox-Kemper, B., H.T. Hewitt, C. Xiao, G. Aðalgeirsdóttir, S.S. Drijfhout, T.L. Edwards, N.R. Golledge, M. Hemer, R.E. Kopp, G. Krinner, A. Mix, D. Notz, S. Nowicki, I.S. Nurhati, L. Ruiz, J.-B. Sallée, A.B.A. Slangen, and Y. Yu, 2021: Ocean, Cryosphere and Sea Level Change. In Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E.Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1211–1362, doi:10.1017/9781009157896.011.

116. U.S. Climate Alliance, PRESSING FORWARD: Governors' Enduring Fight for a Resilient & Sustainable Future, Report (2025), found at USClimateAlliance_AnnualReport_2025.pdf

117. European Commission Joint Research Centre, JRC Science for Policy Report: GHG Emissions of All World Countries (2025), found at file://deepisilon/horizon/redirectedfolders/brownall/Downloads/GHG_emissions_of_all_world_countries_booklet_2025report.pdf

118. European Commission Joint Research Centre, JRC Science for Policy Report: GHG Emissions of All World Countries (2025), found at file://deepisilon/horizon/redirectedfolders/brownall/Downloads/GHG_emissions_of_all_world_countries_booklet_2025report.pdf

119. European Commission Joint Research Centre, JRC Science for Policy Report: GHG Emissions of All World Countries, (2025), found at file://deepisilon/horizon/redirectedfolders/brownall/Downloads/GHG_emissions_of_all_world_countries_booklet_2025report.pdf

120. UN Climate Change, Momentum Gathers Towards COP30 as Close to 100 Countries Signal New Climate Targets, (September 2025), found at https://unfccc.int/news/momentum-gathers-towards-cop30-as-close-to-100-countries-signal-new-climate-targets

121. UN Climate Change, Nationally Determined Contributions (NDCs): The Paris Agreement and NDCs, (2025), found at https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs

122. The Council of Atlantic Premiers, New England Governors and Eastern Canadian Premiers (NEG-ECP), (October 2025), found at https://cap-cpma.ca/negecp/

123. NEG-ECP, 2001 New England Governors/Eastern Canadian Premiers (NEG/ECP) Climate Change Action Plan, (August 2001), found at https://novascotia.ca/nse/climate.change/docs/neg-ecp.pdf

124. Connecticut General Assembly, Public Act 04-252: AN ACT CONCERNING CLIMATE CHANGE (July 2004), found at https://www.cga.ct.gov/2004/act/Pa/2004PA-00252-R00SB-00595-PA.htm

125. Newfoundland and Labrador Government Canada, Eastern Canadian Premiers and New England Governors Meet in Newfoundland and Labrador to Strengthen Regional Partnership, News Release (November 17, 2025), found at https://www.gov.nl.ca/releases/2025/exec/1117n03/

126. NEG-ECP, Resolution 46-2: Concerning Regional Collaboration on Energy, (November 16-27, 2025) found at https://cap-cpma.ca/wp-content/uploads/2025/11/Resolutions-EN_NEG-ECP-2025-11-17_2.pdf

127. NEG-ECP, Resolution 46-3: Concerning Ecological Connectivity and Food Security, (November 16-27, 2025) found at https://cap-cpma.ca/wp-content/uploads/2025/11/Resolutions-EN_NEG-ECP-2025-11-17_3.pdf

128. NEG-ECP, Resolution 46-1: Concerning Technology and Innovation, (November 16-27, 2025) found at https://cap-cpma.ca/wp-content/uploads/2025/11/Resolutions-EN_NEG-ECP-2025-11-17_1.pdf

129. The Council of Atlantic Premiers, Transportation and Air Quality Committee Report submitted to New England Governors and Eastern Canadian Premiers (2019), found at https://cap-cpma.ca/wp-content/uploads/2020/02/TAQC-2019-Report.pdf

130. U.S. Climate Alliance, About: Our Coalition, (October 2025), found at https://usclimatealliance.org/about/

131. View Alliance members' policies priorities across ten key policy areas: https://usclimatealliance.org/policy-priorities/. See also the Alliance's Climate Policy Database: https://data.usclimatealliance.org/climate-policy-database

132. U.S. Climate Alliance, U.S. Climate Alliance 2025 Annual Report (November 2025), found at https://usclimatealliance.org/report/2025-annual-report/

133. U.S. Climate Alliance, Resources, (October 2025), found at https://usclimatealliance.org/resources/?jsf=e-pro-posts&tax=post_tag:138

134. RGGI, The Regional Greenhouse Gas Initiative: 101 Factsheet, (2024) found at https://www.rggi.org/sites/default/files/Uploads/Fact%20Sheets/RGGI_101_Factsheet.pdf

135. RGGI, RGGI States Announce Results of Third Program Review, Press Release (July 3, 2025), found at https://www.rggi.org/sites/default/files/Uploads/Press-Releases/Press_Release_Program_Review_Announcement.pdf

136. RGGI, The Investment of RGGI Proceeds in 2023, (2023), found at https://www.rggi.org/sites/default/files/Uploads/Proceeds/RGGI_Proceeds_Report_2023.pdf

137. RGGI, RGGI States Announce Results of Third Program Review, Press Release (July 3, 2025), found at https://www.rggi.org/sites/default/files/Uploads/Press-Releases/Press_Release_Program_Review_Announcement.pdf

138. "Final Rule: Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles," United States Environmental Protection Agency, https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-multi-pollutant-emissions-standards-model.

139. "Final Rule: Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles – Phase 3," United States Environmental Protection Agency, https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-greenhouse-gas-emissions-standards-heavy-duty.

140. "Final Carbon Pollution Standards to Reduce Greenhouse Gas Emissions from Power Plants", United States Environmental Protection Agency, https://www.epa.gov/system/files/documents/2024-04/cps-presentation-final-rule-4-24-2024.pdf.

141. "Latest Version of MOtor Vehicle Emission Simulator (MOVES)," United States Environmental Protection Agency, https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves.

142. "Annual Energy Outlook 2025," United States Energy Information Administration, https://www.eia.gov/outlooks/aeo/.

143. "Terminal Area Forecast," United States Federal Aviation Administration, https://taf.faa.gov/.

144. "Energy Policy Simulator," Rocky Mountain Institute, https://energypolicy.solutions/simulator/connecticut/en.

145. "Connecticut State Rail Plan (2022-2026)," Connecticut Department of Transportation, https://portal.ct.gov/dot/-/media/dot/plans-projects-studies/plans/state_rail_plan/ctsrp2022-2026v20221130.pdf.

146. "Freight Analysis Framework," Oak Ridge National Laboratory, https://faf.ornl.gov/faf5/dtt_total.aspx.

147. "National Plan of Integrated Airport Systems (NPIAS) – Current," Federal Aviation Administration, https://www.faa.gov/airports/planning_capacity/npias/current.

148. "Connecticut Town Population Projections, 2015-2040," Connecticut State Data Center, https://data.ct.gov/Government/Connecticut-Town-Population-Projections-2015-2040/p6hp-fnp7/about_data.

149. "U.S. Census Bureau QuickFacts: Connecticut," United States Census Bureau, https://www.census.gov/quickfacts/fact/table/CT/EDU685222.

150. "ComStock Public Datasets," National Renewable Energy Laboratory, https://comstock.nrel.gov/page/datasets.

151. "CT Long Term Employment Projections 2000 – 2055," S&P Global, provided by Connecticut Department of Labor.

152. "Emission Factors for Greenhouse Gas Inventories," United States Environmental Protection Agency, https://www.epa.gov/system/files/documents/2025-01/ghg-emission-factors-hub-2025.pdf.

153. "Load Forecast," ISO New England, https://www.iso-ne.com/system-planning/system-forecasting/load-forecast.

154. "2024 Electricity ATB Technologies and Data Overview," United States National Renewable Energy Laboratory, https://atb.nrel.gov/electricity/2024/index.

155. "Assumptions to the Annual Energy Outlook 2023: Oil and Gas Supply Module," United States Energy Information Administration, https://www.eia.gov/outlooks/aeo/assumptions/pdf/OGSM_Assumptions.pdf.

156. "Documentation for Post-IRA 2022 Reference Case," United States Environmental Protection Agency, https://www.epa.gov/power-sector-modeling/documentation-post-ira-2022-reference-case.

157. "Beginning of Construction Requirements for Purposes of the Termination of Clean Electricity Production Credits and Clean Electricity Investment Credits for Applicable Wind and Solar Facilities," United States Internal Revenue Service, https://www.irs.gov/pub/irs-drop/n-25-42.pdf.

158. "Industrial Decarbonization Roadmap," United States Department of Energy, Industrial Efficiency & Decarbonization Office, https://www.energy.gov/sites/default/files/2022-09/Industrial%20Decarbonization%20Roadmap.pdf.

159. "Industrial Decarbonization Roadmap and Context," United States Department of Energy, https://www.energy.gov/sites/default/files/2024-12/itiac-march-2024-cresko-industrial-decarb-roadmap.pdf.

160. "Greenhouse Gas Reporting Program (GHGRP) – Facility-Level Data Portal," United States Environmental Protection Agency, https://ghgdata.epa.gov/ghgp/.

161. "Manufacturing Energy Consumption Survey (MECS), 2018 – Data Tables. Table 1.1: Consumption of Energy for All Purposes (First Use), by Manufacturing Industry and Region," U.S. Energy Information Administration, https://www.eia.gov/consumption/manufacturing/data/2018/.

162. "State Inventory and Projection Tool (Version 2025.1)," United States Environmental Protection Agency, https://www.epa.gov/statelocalenergy/state-inventory-and-projection-tool.

163. "Global Non-CO2 Greenhouse Gas Emission Projections & Mitigation Potential: 2020-2080," United States Environmental Protection Agency, https://www.epa.gov/global-mitigation-non-co2-greenhouse-gases/global-non-co2-greenhouse-gas-emission-projections-0.

164. "2023 Solid Waste Disposal & Diversion Report," State of Connecticut Department of Energy and Environmental Protection, https://portal.ct.gov/-/media/deep/reduce_reuse_recycle/data/2023/diversion_report_2025-final.pdf?rev=78610edcd6684ae59b1f206c1d05cbee&hash=F926D538AA54875F9F1BB76259695F1D.

165. "2025 Baseline Projections," United States Department of Agriculture, https://www.usda.gov/about-usda/general-information/staff-offices/office-chief-economist/world-agricultural-outlook-board/baseline-projections.

166. "Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2022," United States Environmental Protection Agency, https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks.

167. "National Agricultural Statistics Service," United States Department of Agriculture, https://quickstats.nass.usda.gov/.

168. "2025 Baseline Projections, United States Department of Agriculture," https://www.usda.gov/about-usda/general-information/staff-offices/office-chief-economist/world-agricultural-outlook-board/baseline-projections.

169. "Chapter 11: N2O Emissions from Managed Soils, and CO2 emissions from Line and Urea Application," 2019 Refinement to the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, https://www.ipcc-nggip.iges.or.jp/public/2019rf/pdf/4_Volume4/19R_V4_Ch11_Soils_N2O_CO2.pdf.

170. "Annual NLCD," Multi-Resolution Land Characteristics (MRLC) Consortium, https://www.mrlc.gov/.

171. "Sec. 23-8. Open spaces for recreation," Connecticut General Assembly, https://www.cga.ct.gov/current/pub/chap_447.htm#sec_23-8.

172. These numbers are based on what DEEP has been directly involved with, but does not include the full landscape of open space protection across CT.

173. "Governor Lamont Announces State Grants To Protect 2,270 Acres of Open Space and Create Six New Community Green Spaces," State of Connecticut, https://portal.ct.gov/governor/news/press-releases/2025/07-2025/governor-lamont-announces-state-grants-to-protect-open-space?language=en_US.

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