

Greenhouse Gas Inventory and Tracking Progress

JANE LAZORCHAK, ANR

APRIL 14, 2022

The Greenhouse Gas Emissions Inventory

- **Act 168 (2005)** – The legislature codified GHG emission reduction goals
- **Act 209 (2007)** – ANR required to inventory GHG emissions, update inventory, and forecast emissions
- **Act 170 (2011)** – ANR required to develop method of accounting for GHG life cycle emissions
- **Act 153 (2020)** – Global Warming Solutions Act amends GHG reduction requirements

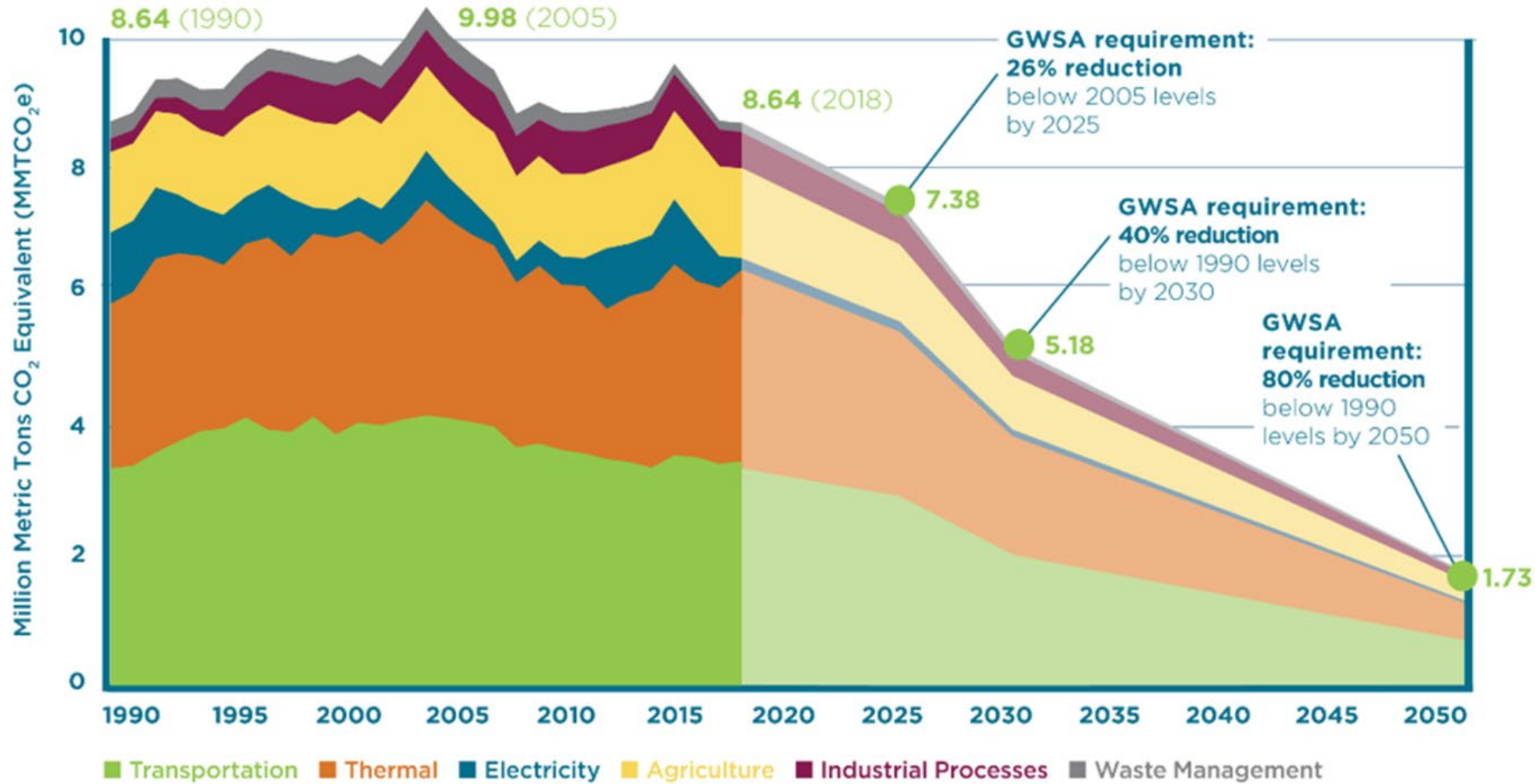
GWSA Statutory Requirements

- (3) Identify the means to accurately measure:
 - (A) the State's greenhouse gas emissions and progress towards meeting the reduction requirements pursuant to section 578 of this title, including publishing emissions data in a timely manner;
 - (B) the effectiveness of the specific initiatives, programs, and strategies set forth in the Plan and updates to the Plan in reducing greenhouse gas emissions;
 - (C) the effect of climate change on the State's climate, wildlife, and natural resources; and
 - (D) the existing resilience of the State's communities, infrastructure, and economy and progress towards improving resilience to adapt to the current and anticipated effects of climate change.

The Greenhouse Gas Emissions Inventory

- Inventory of anthropogenic GHG emissions for Vermont, published annually
- Total (gross) annual emissions (not including biogenic CO₂ in gross annual totals)
- Attempt to quantify and sum GHG emissions from all applicable sectors in Vermont
- Inventory relies heavily on federal datasets and EPA tools and therefore often lags several years behind the calendar year when the emissions occurred (current inventory 1990-2017)
- Includes emissions of gases covered in international agreed upon protocol in million metric tons of CO₂ equivalent (MMTCO₂e)
- Methodologies consistent with accepted GHG inventory standards/protocols
- Inventory uses 100-year global warming potential values from the IPCC AR4 report per IPCC GHG inventory guidance

GWSA Emission Reduction Requirements



Transportation:
Vermont Fuels
Sales Data

Source: Vermont Agency of Natural Resources, Vermont GHG Emissions Inventory and Forecast (1990-2017), 2021.

Measuring and Tracking Progress Tool - Requirements

As part of the Plan, the Council put forward a framework for assessing progress. Specifically, the GWSA requires that the state track key components of its climate action, including:

- A. The State's greenhouse gas emissions and progress towards reducing emissions;
- B. The effectiveness of the initiatives, programs, and strategies set forth in the CAP;
- C. The effects of climate change on the State's climate, wildlife, and natural resources; and
- D. Progress towards improving existing resiliency of the State's communities, infrastructure, and economy to current and anticipated effects of climate change.

Measuring and Tracking Progress Tool - Goals

- 1) Policy-Decision Support Tool: Support the State and its partners in making climate policy decisions with best available information.
- 2) Sustainable Data Management: Create a data governance plan, flexibly accommodate future data needs, and coordinate relevant data and reporting across multiple private and public entities.
- 3) Open and Accessible Data: Provide access to key data sources to organizations and members of the public engaged in climate action that wish to utilize Vermont's data to support their work.
- 4) Public Education: Inform the public about progress on achieving GWSA commitments, including GHG emissions, emissions reductions, sequestration, adaptation, resilience, and equity.

Measuring and Tracking Progress Tool - Transportation

- **RFP Developed and Expect it to be completed by end of 2023**
- **Consider Metrics such as:**
 - 1) Diesel Sales
 - 2) Gasoline Sales
 - 3) Electric Vehicles Registered
 - 4) Public Transit Trips
 - 5) Vehicle Miles Travelled
 - 6) Fleet emissions/makeup
 - 7) Other Local Transit Agency Data
 - 8) Bike/pedestrian Metrics