2022 Rhode Island **Greenhouse Gas Inventory**

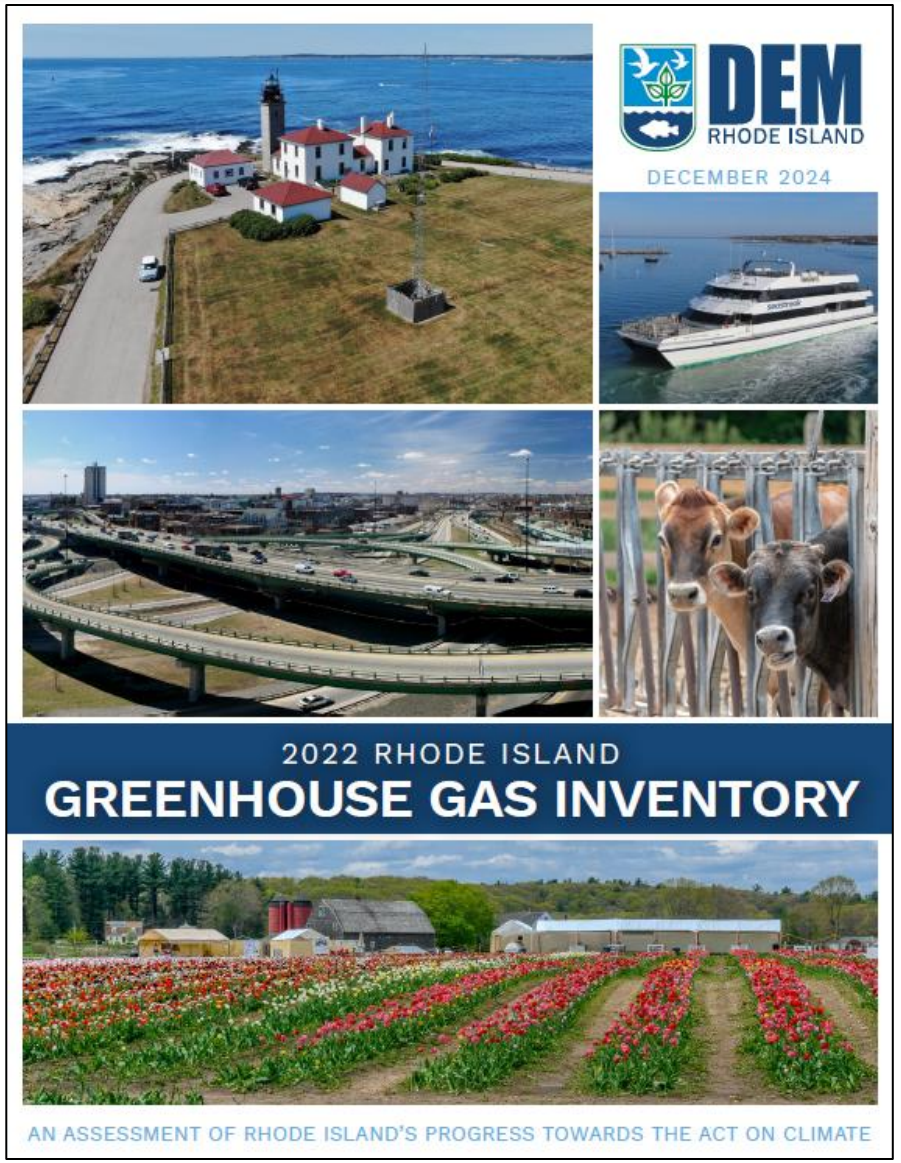
Presentation to the RI EC4

December 11, 2024

DEM
RHODE ISLAND

Introduction

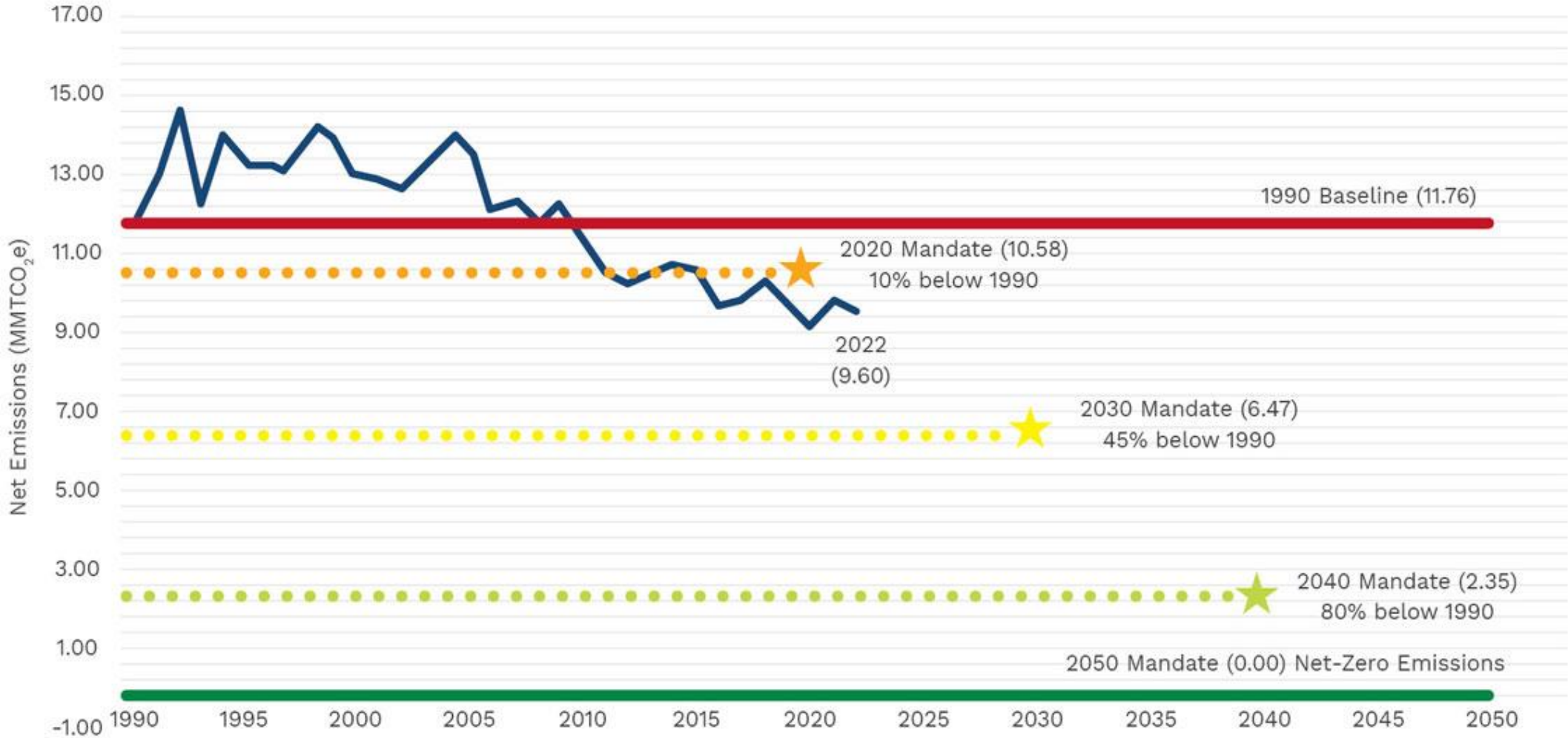
- Assesses Climate-Warming Emissions from Rhode Island
- Primary Scientific Metric for the Act on Climate
- Annual Emissions Estimates 1990-2022



Act on Climate Requirements

R.I. General Laws § 42-6.2-9. Specifies “Mandatory Targets for Emissions Reduction”:

1990-2022 RHODE ISLAND GREENHOUSE GAS EMISSIONS
ACT ON CLIMATE REQUIREMENTS



2022 Gross Greenhouse Gas (GHG) Emissions

Transportation	Residential Buildings	Electricity Consumption	Commercial Buildings	Industrial Processes and Product Use	Industrial Buildings	Natural Gas Distribution	Waste	Agriculture
3.78 $MMTCO_2e$	*2.12 $MMTCO_2e$*	*1.92 $MMTCO_2e$*	*0.93 $MMTCO_2e$*	*0.62 $MMTCO_2e$*	*0.59 $MMTCO_2e$*	*0.25 $MMTCO_2e$*	*0.11 $MMTCO_2e$*	*0.02 $MMTCO_2e$*
36.6%	**20.5%**	**18.6%**	**9.0%**	**6.0%**	**5.7%**	**2.4%**	**1.1%**	**0.2%**

2022 Net GHG Emissions

9.60* million metric tons of CO_2e

**Net emissions equal the sum of gross emissions and removals. Sector totals may not align with net total due to rounding.*

2022 Greenhouse Gas Removals

Natural and Working Lands (NWLs)

-0.75 $MMTCO_2e$

7.2% of gross GHG emissions offset by NWLs

1990 - 2022 Change

Statewide Net GHG Reductions

-18.3%

2022 Gross Greenhouse Gas (GHG) Emissions

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36.6%

Residential Buildings

2.12 MMTCO$_2$e

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Electricity Consumption

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Commercial Buildings

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Transportation Emissions Since 2021

Aircraft **Increased 18.6%**

Highway Vehicles **Decreased 4.0%**

Non-Road Sources **Decreased 10.5%**

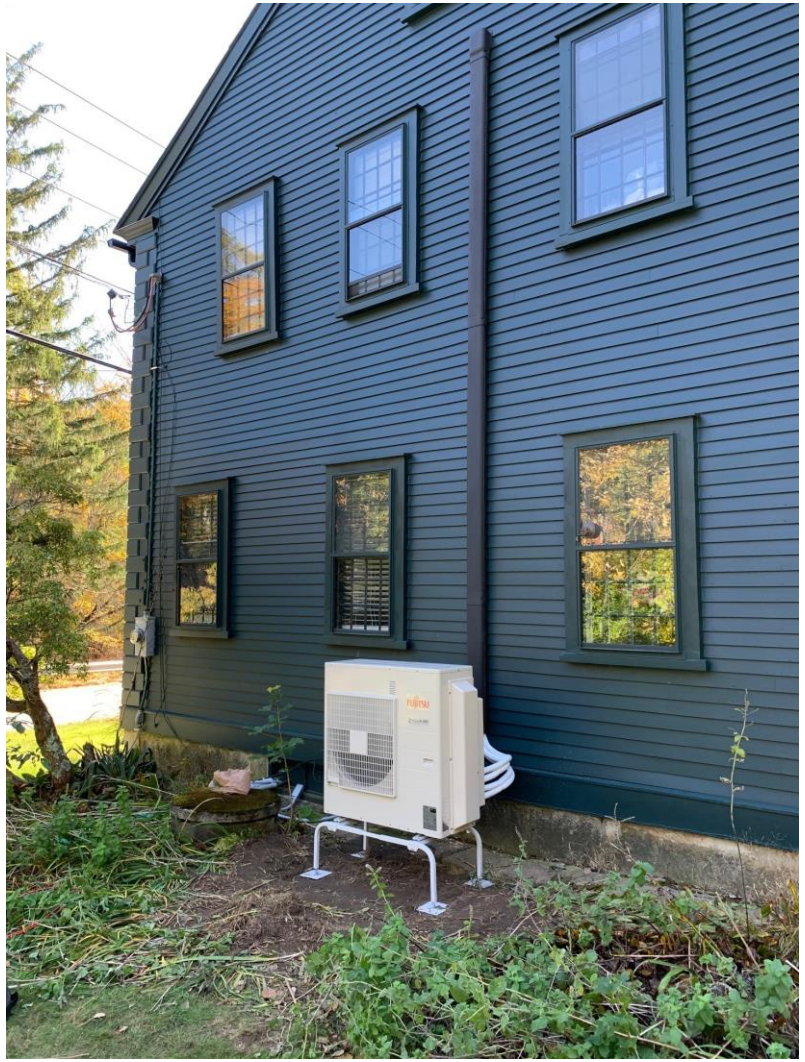
Overall Transportation Sector Change: -3.4%

Credit: Rhode Island Airport Corporation

Building Emissions Since 2021

Residential Buildings
Decreased 1.2%

- 2022 Slightly Cooler Year
- Advances in Energy Efficiency, and Weatherization, and Electric Heat
- Wood Heating Emissions Increased



Credit: Rhode Island Office of Energy Resources

Electricity Emissions Since 2021

Electricity Consumption **Decreased 1.2%**

- Renewables supplied 19.3% of electricity
- Priciest natural gas since 2014
  - Expensive imported LNG (Russia-Ukraine war)
  - Pipeline constraints due to cold spells in Jan., Feb., and Dec.

Credit: Tiverton Power, LLC

Statewide Emissions Since 1990

Transportation
Decreased 18.3%

Residential Buildings
Decreased 10.9%

Electricity Consumption
Decreased 31.7%

Credit: University of Massachusetts, Amherst

Recent Methodology Improvements

Improved Livestock Population Data

Improved Non-Road Sources Fuel Data

Added Flooded Land Emissions and Forest Carbon Storage

Breene Hollow Farm, West Greenwich

What's on the Horizon for 2025?

Natural Gas Distribution **Methodology Improvement**

- Will improve fugitive emissions estimates from all aspects of the gas system
- Plan to release draft methodology for public comment in Q1 2025

Credit: Rhode Island Office of Energy Resources

What's on the Horizon for 2025?

Comprehensive Greenhouse Gas Inventory Report

- Short chapter for each sector
- Full methodology write-up
- Plan to publish alongside the *2025 Climate Action Strategy*

Credit: Rhode Island Department of Transportation

Questions?
Thank You!

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