



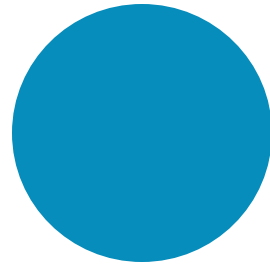
STATE OF RHODE ISLAND
**OFFICE OF
ENERGY RESOURCES**

EC4 Proposed Climate Change Framework

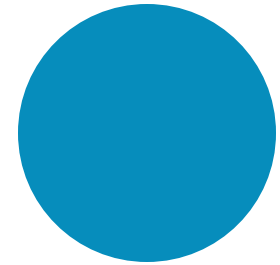
December 9, 2021



The **Rhode Island Office** of
the **Department of Energy**,
in **collaboration** with
toward **achieving** the
reliable and sustainable energy
future.



OER develops policies and
programs that respond to the
state's evolving energy needs,
while advancing
environmental sustainability,
energy security, and a vibrant
clean energy economy.



OER is committed to working
with public- and private-sector
stakeholders to ensure that all
Rhode Islanders have access
to cost-effective, resilient, and
sustainable energy solutions.

A blue-tinted photograph of a car show. In the foreground, a white car has its driver-side door open and its hood up. Several people are gathered around the car, some looking at the engine. In the background, other cars and people are visible under a canopy tent. The scene is outdoors with trees in the distance.

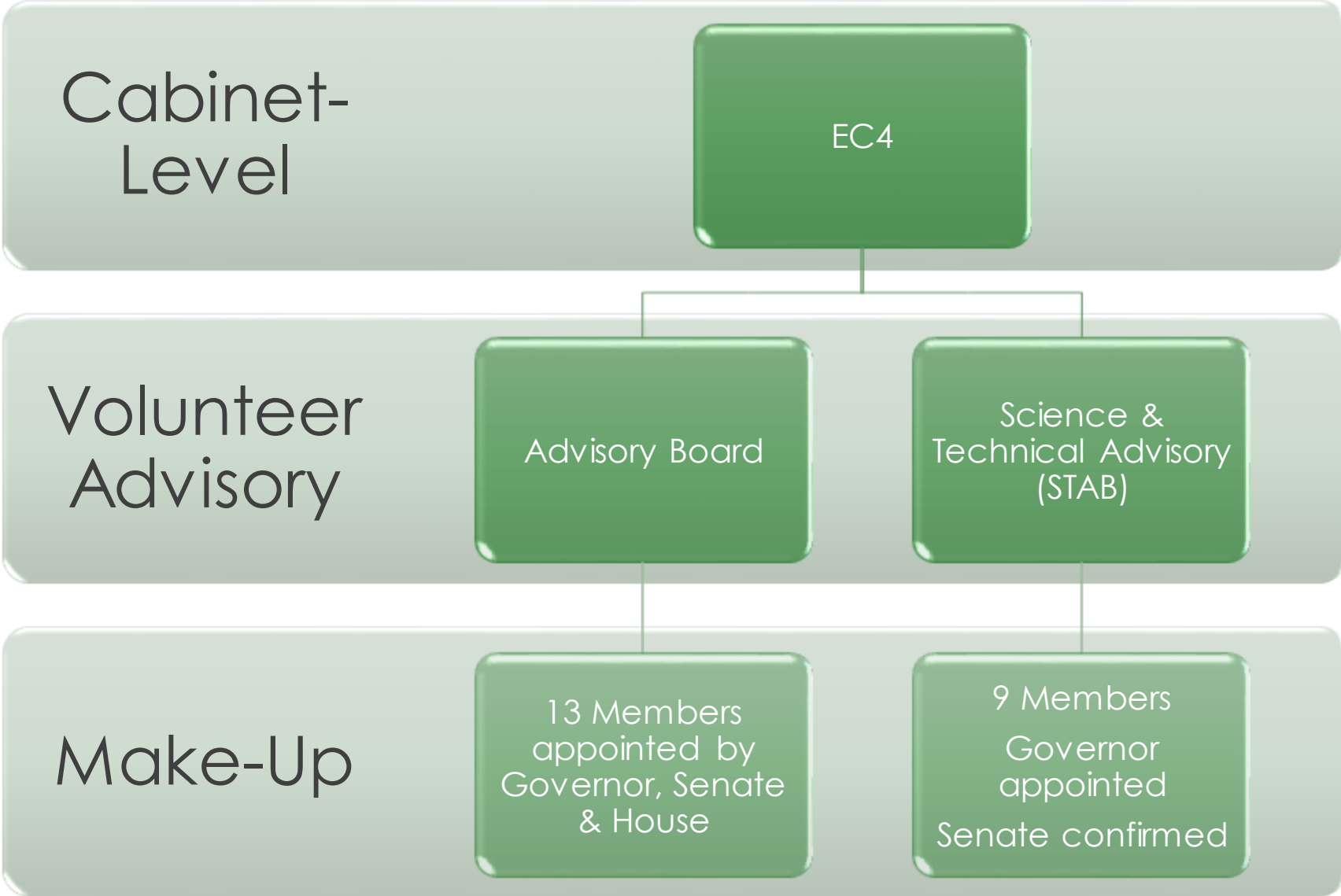
Executive Climate Change Coordinating Council (EC4)

Leadership Team

Executive Climate Change Coordinating Council (EC4)

DEM (Chair)	Statewide Planning
OER (VC)	CRMC
DOA	Infrastructure Bank
DOT	RIPTA
DOH	DPUC
Commerce	HHS
EMA	

Organizational Structure



An aerial photograph of a city, likely Madison, Wisconsin, featuring the Wisconsin State Capitol building with its prominent dome. The image is overlaid with a semi-transparent blue filter. A dark blue horizontal banner is positioned across the middle of the image, containing the text "2021 Act on Climate" in white. The foreground shows a large building with solar panels on its roof and a parking lot.

2021 Act on Climate

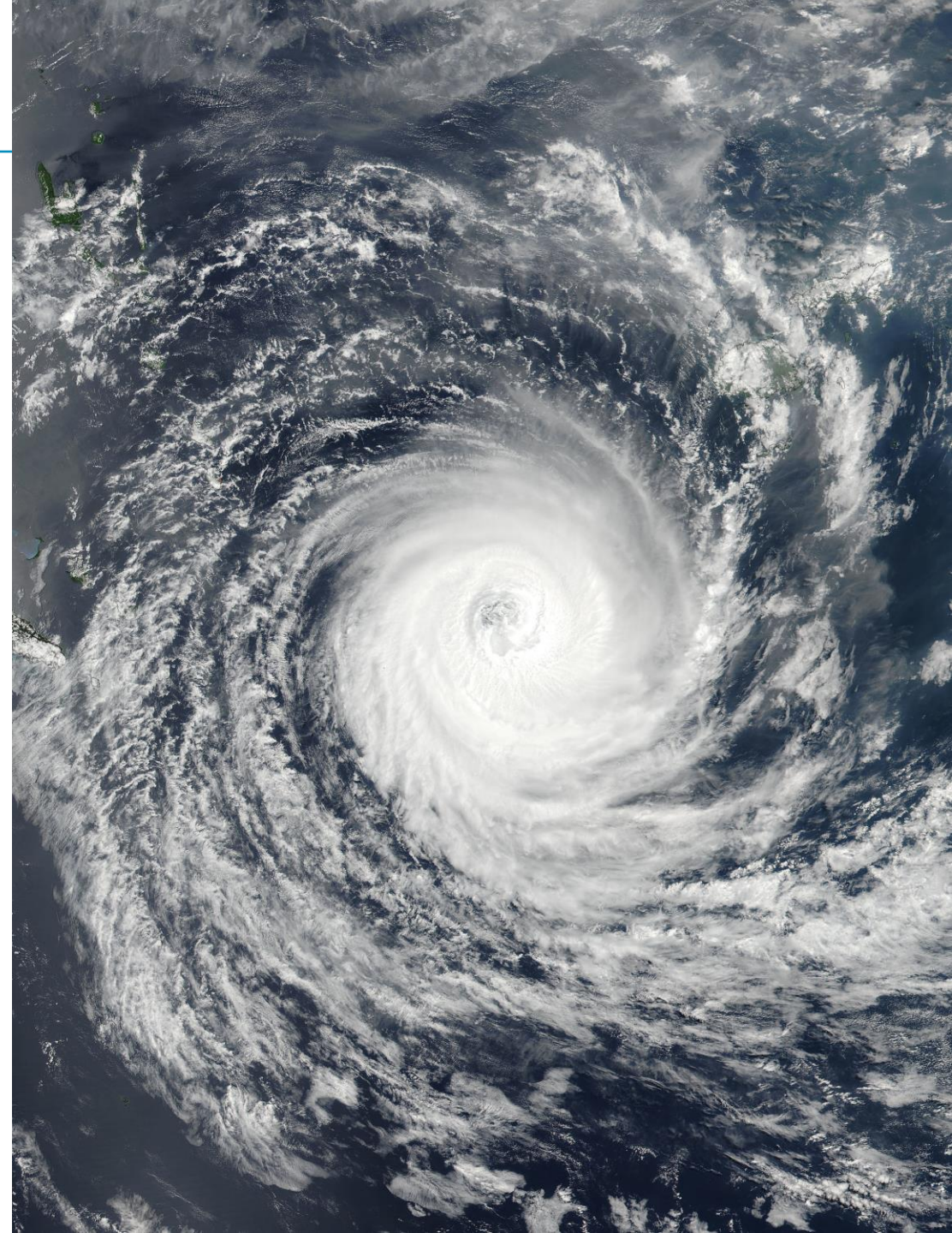
Act on Climate Summary

- The Act on Climate establishes economy-wide emissions reduction targets of:
 - 10% below 1990 levels by 2020;
 - 45% below 1990 levels by 2030;
 - 80% below 1990 levels by 2040; and
 - **Net-zero emissions by 2050**
- Achievement will require, at minimum:
 - Strategies, programs, and actions to meet economy-wide enforceable targets;
 - Metrics for measurement;
 - An equitable transition to redress past environmental and public health inequities; and
 - Support for workers.
- **Mandates enforceable in RI Superior Court**



Act on Climate Mandates

- By 12-31-2022, the EC4 shall submit an update to the [GHG Reduction Plan](#) to Governor & General Assembly (2016)
- By 12-31-2025 (and every 5 years), the EC4 must submit a [Climate Change Strategic Plan](#), following public comment, that includes strategies/programs/actions to meet economy-wide targets for GHG reductions.
- Develop [public metrics and an online public dashboard](#) tracking both emissions reductions and sources of energy consumed by the state, updated at least annually
- Each agency has authority to [promulgate rules and regulations](#) necessary to meet the GHG mandate reduction mandate



Quick Facts



1990-2017

Rhode Island Greenhouse Gas (GHG) Emissions Inventory

Gross GHG Emissions by Economic Sector in 2017



2017 Gross GHG Emissions

11.74
million metric tons of CO₂e

RI Greenhouse Gas Emissions 1990 v. 2017

SECTOR	CHANGE IN MMTCO ₂ E	PERCENT CHANGE	TREND
Transportation	-0.80	16.1%	↓
Electricity Consumption	0.49	17.4%	↑
Residential Heating	-0.50	21.2%	↓
Industrial Heating & Processes	0.31	38.6%	↑
Commercial Heating	-0.27	23.8%	↓
Other	-0.25	38.9%	↓
Total	-0.74	6%	↓

1990 - 2017 Change



Statewide Net
GHG Reductions
(1990-2017)

6%



Context: Electric Sector

Estimating the Gap

We forecasting renewable energy growth from existing programs and contracts. The difference between demand and renewables is the gap: we will need to build or procure ~4,600 GWh of renewable energy by 2030

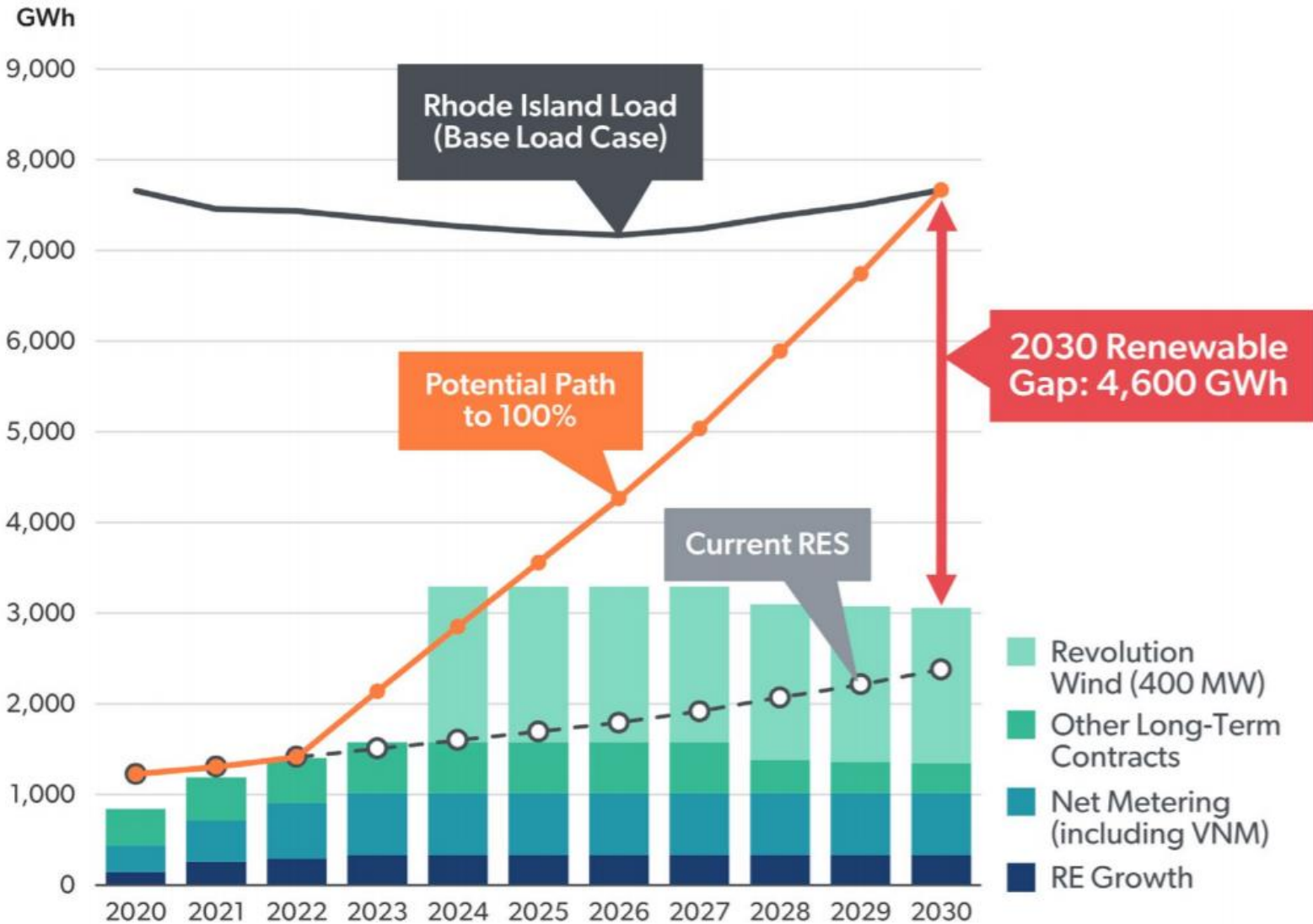


FIGURE 3: RENEWABLE ELECTRICITY GAP TO ACHIEVE 100% RENEWABLES

Filling the Gap in 2030

We considered four renewable energy resource types, first as “technology bookends” and then as pieces of mixed resource portfolios.

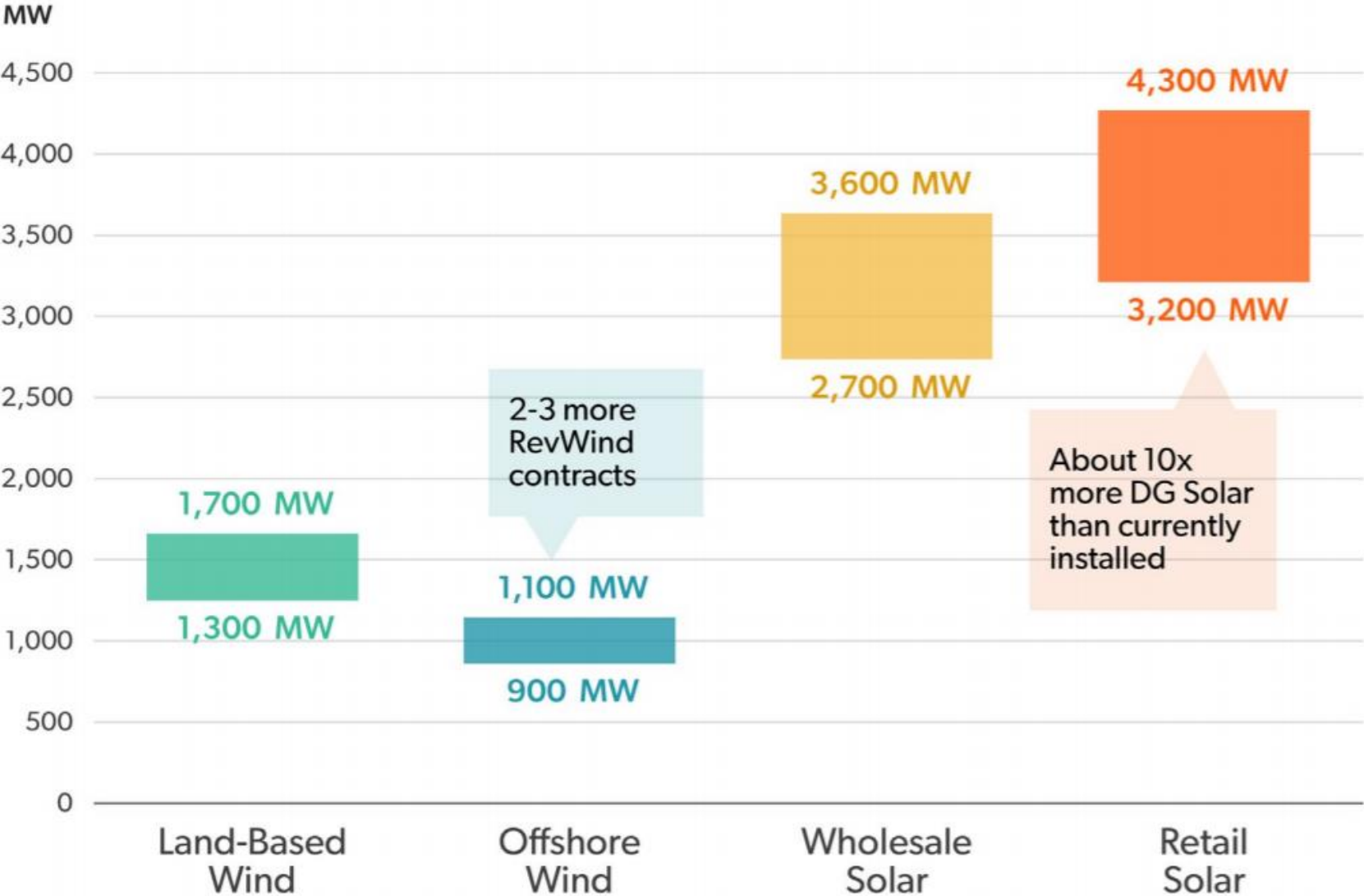
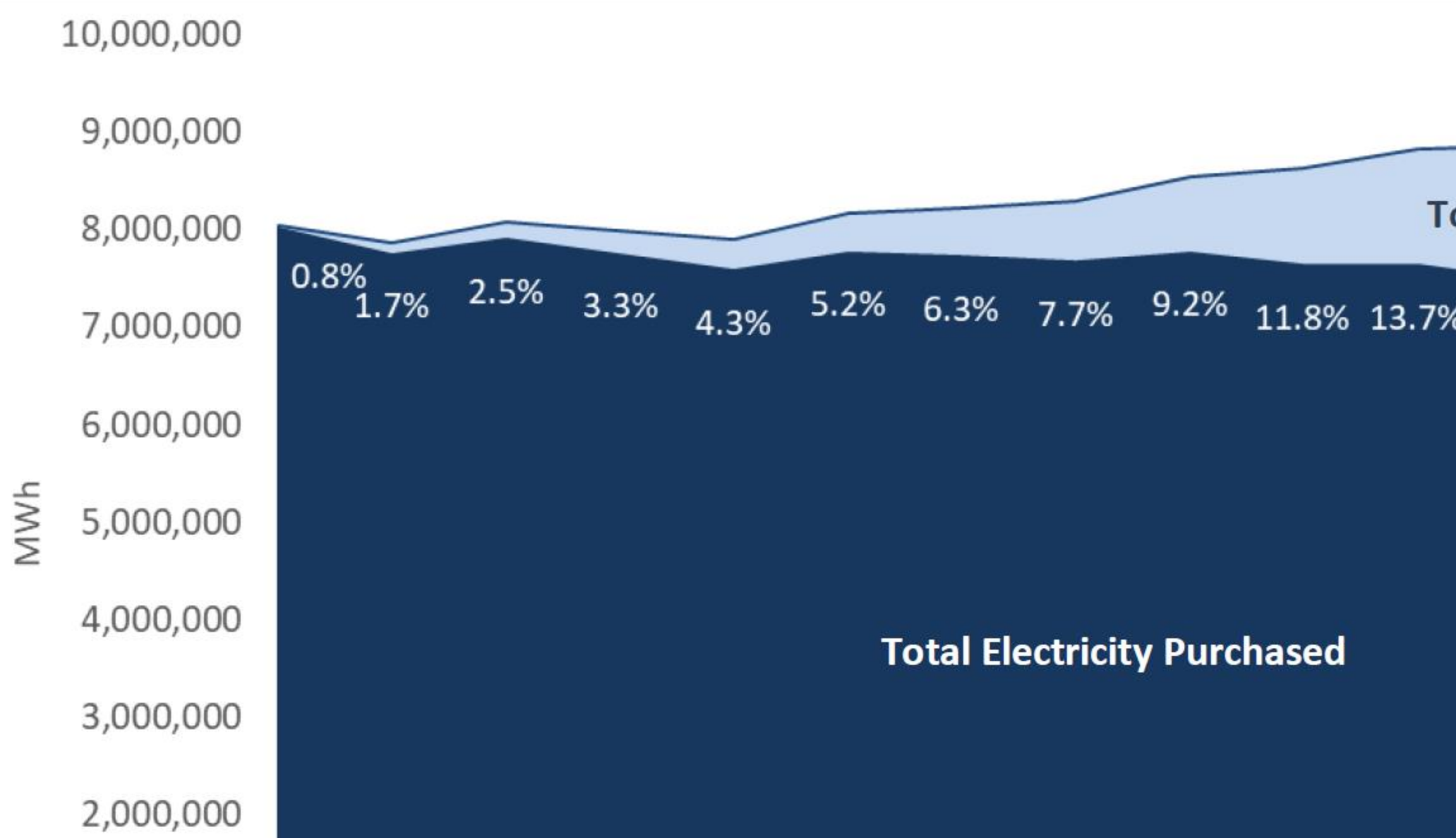


FIGURE 5: CAPACITY OF EACH TECHNOLOGY NEEDED TO FILL 2030 RENEWABLE ENERGY GAP



Foundations for Decarbonization



MWh

Total Electricity Purchased

Total S

Electric Sector Decarbonization

- 100% Renewables by 2030 Analysis
 - www.energy.ri.gov/100percent/
- Regional Greenhouse Gas Initiative (RGGI)
- Nation-leading Energy Efficiency Programs
- Suite of renewable energy programs, including Renewable Energy Growth and Net Metering
- Solar Opportunities Study





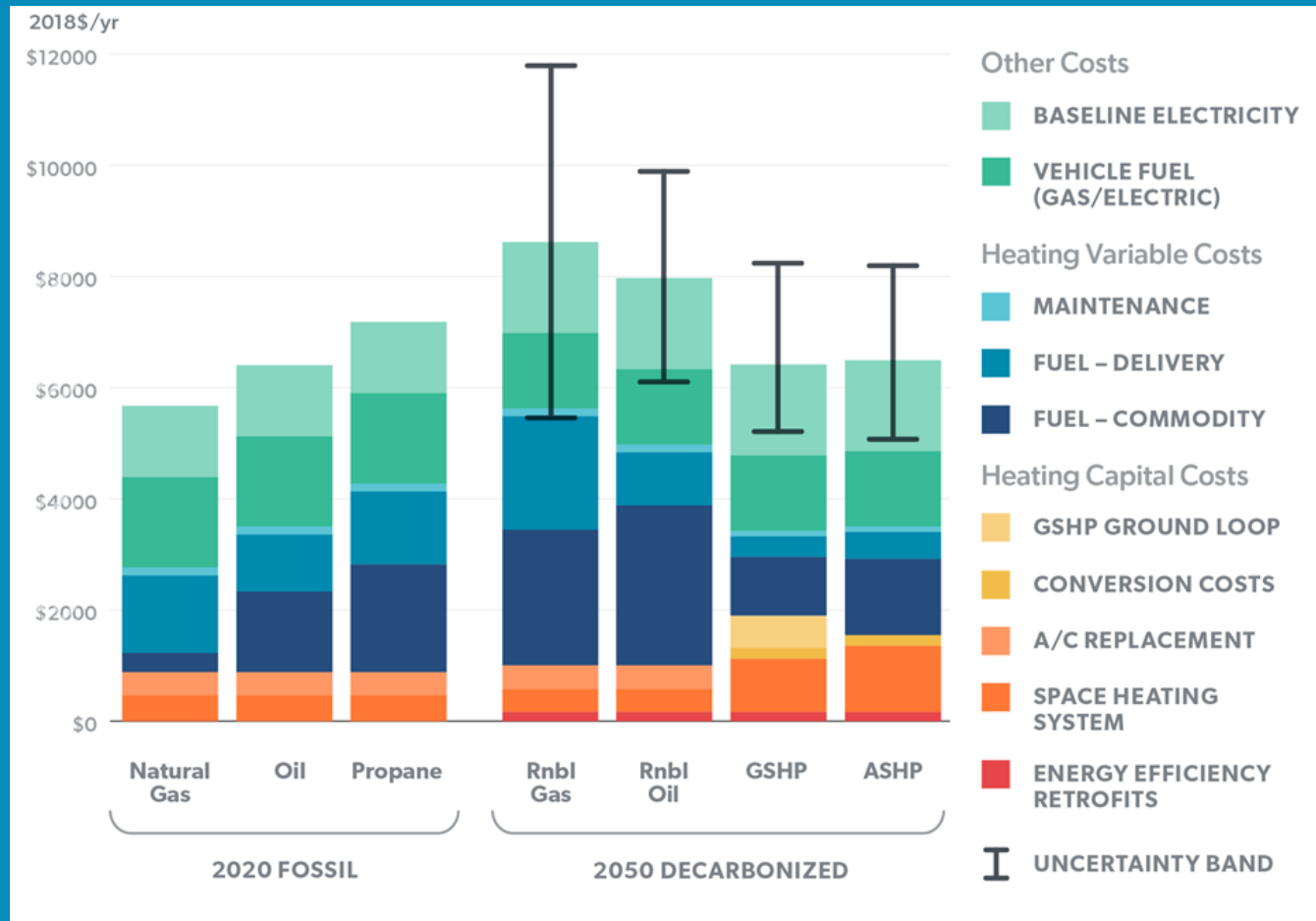
Offshore Wind

- **Block Island Wind Farm**
 - First in North America
 - Operational in December 2016
- Selection of **400 MW Revolution Wind** offshore project
 - 800+ construction jobs
 - \$40 million port investment
 - Represents $\approx 24\%$ of est. 2030 demand



Heating Sector Transformation

HST Report (May 2020) identifies economic, energy, and environmental opportunities and challenges posed by our state's heating sector, and establishes policy and programmatic pathways for sector transformation. www.energy.ri.gov/HST/



Average Consumer Energy Wallet: 2020 vs. 2050

Clean Energy Jobs

Clean energy occupations are a source of sustainable-wage employment for Rhode Island residents and high unemployment communities.

- Entry-level clean energy jobs can provide a premium compared to corresponding statewide medians.
- For entry-level workers – young adults and those with lower educational attainment – clean energy vocational trades present job opportunities.
- **Clean Energy Internship Program**
 - Joint initiative by OER and CommerceRI
 - Year-round during Spring, Summer & Fall semesters
 - Supported by local renewable & ee companies

2019 Rhode Island Clean Energy Jobs At-A-Glance

Pre-COVID

16,021

Clean Energy Jobs

74%

Growth in clean energy workforce since 2014

Largest Growth Sector:
Renewable & efficient heating and cooling added 134 jobs



Workers are becoming specialized, spending more time on clean energy tasks

Public-private partnerships are increasing clean energy jobs training opportunities



An aerial photograph of a city, likely Indianapolis, featuring the Indiana State Capitol building in the center. The image is overlaid with a semi-transparent blue filter. A dark blue horizontal banner is positioned across the middle of the image, containing white text. The foreground shows a large, modern building complex with a parking lot and a road.

EC4 Priority Themes and Key AoC Workstreams

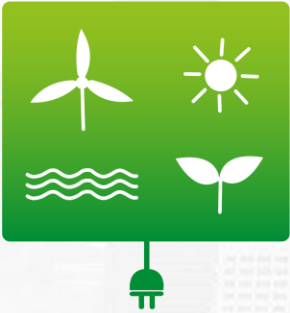
EC4 Priority Themes



Community Resiliency



Clean Transportation



Clean Energy Policies & Programs



Equity and Environmental Justice



Public Health



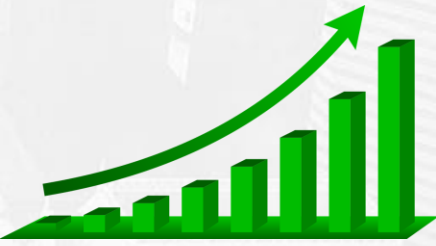
Heating Sector Transformation



Clean Energy Sector Workforce Development



GHG Emissions Inventory



Climate Dashboard and Metrics



Act on Climate Reporting Mandates



Initial Key AoC Workstreams

Workstream A:
Enhance EC4

Workstream B:
Update to 2016 GHG Reduction Plan (12/31/22)

Workstream C:
Climate Change Strategic Plan (12/31/25)

Workstream D:
Public Dashboard & Metrics

Workstream E:
Equity & Environmental Justice Engagement Strategy



Thank You!

www.energy.ri.gov/

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