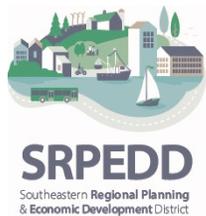
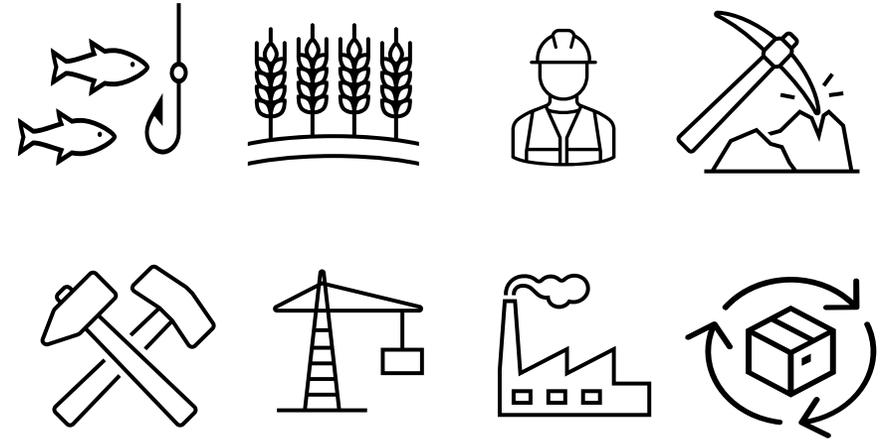


Industrial Sector Decarbonization



May 21, 2025

10:00am – 11:30 m EST

Agenda

✓ Introductions

✓ Climate Pollution Reduction Grant (CPRG)

Overview

✓ Industrial Sector Relevant Context &

Measures

✓ Clean Energy Workforce Planning

✓ Demographic Characteristic Considerations

✓ Open Discussion

✓ Trends

✓ Measures Presented

✓ Needs from the region

✓ Past experiences with climate policy

✓ Next Steps

Introductions

- Name
- Organization
- Role
- What area or region you typically work in
- Why you attended today

Climate Pollution Reduction Grant (CPRG) Overview

Program Goals:

Through the Inflation Reduction Act of 2022, Congress provided tools to pursue greenhouse gas (GHG) pollution reductions, including the Climate Pollution Reduction Grants (CPRG) program.

In implementing this program, EPA seeks to achieve three broad objectives:

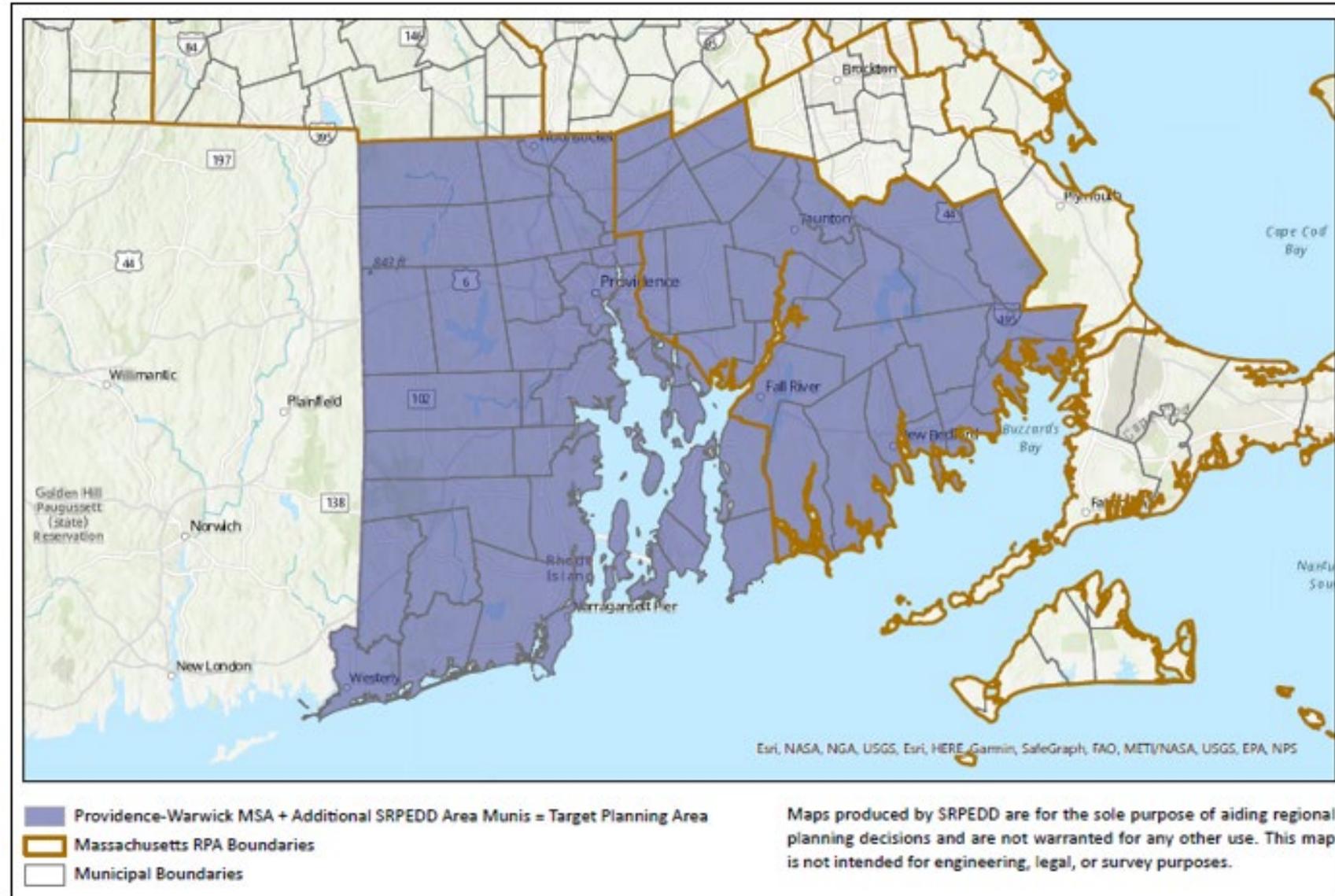
1. Tackle damaging climate pollution while supporting the creation of good jobs and lowering energy costs for families.
2. Accelerate work to address environmental injustice and empower community-driven solutions in overburdened neighborhoods.
3. Deliver cleaner air by reducing harmful air pollution in places where people live, work, play, and go to school.

Climate Pollution Reduction Grant (CPRG) Overview

What is an MSA?

Delineated by the Census Bureau, MSAs represent "a core area containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core."

Figure 1: Providence-Warwick MSA CPRG Planning Area



Climate Pollution Reduction Grant (CPRG) Overview

Comprehensive Climate Action Plan (CCAP) Requirements:



A GHG inventory



GHG emission projections



GHG reduction targets



Quantified GHG reduction measures



A benefit analysis for the full geographic scope and population covered by the plan



A low-income and disadvantaged communities benefits analysis



A review of authority to implement



A plan to leverage other federal funding



A workforce planning analysis

Southeastern Massachusetts (SEMA)'s Economic Significance:

Real GDP increased 2.9% from the previous year. Southeast MA is a strategic location along major highways and proximity to ports, well-situated to support a thriving logistics sector. SEMA encompasses several counties, including Bristol, Barnstable, Plymouth, and Dukes. These counties are less densely populated and industrialized than Greater Boston, which dominates the state's economy.

Manufacturing remains a cornerstone of SEMA's economy, employing nearly 10% of the regional workforce as of 2016. While traditional sectors like primary metal manufacturing still hold substantial employment, there's a notable shift towards high-tech industries such as medical devices, electronics, and life sciences. Cities like Fall River, New Bedford, and Taunton are central to this transformation. [SRPEDD](#)

Major Industrial Employers:

Waters Corporation (Taunton): A global leader in analytical instruments, known for its energy-efficient manufacturing facility. Their LEED-certified chemical manufacturing facility is among the few in Massachusetts, highlighting a commitment to energy efficiency and reduced emissions

- Moderna and Thermo Fisher Scientific: Prominent players in the biotechnology and pharmaceutical industries, contributing significantly to the region's economic landscape. [MassEcon](#)

Fisheries: The Port of New Bedford has been the nation's most lucrative fishing port for 23 years in a row: \$443.2 million worth of seafood in 2022. [South Coast Today](#)

MA GDP Composition

Real GDP Total: \$633.6 billion

- Professional and business services industry: \$140.95B
- Real estate, rental, and leasing: \$86.49B
- Educational services, healthcare, and social assistance: \$76.94B

Total Manufactured Goods Exported from MA in 2024: \$33.5 billion

1. Chemicals: \$7.0 billion
2. Computer & Electronic Products: \$6.2 billion
3. Machinery (except electrical): \$6.0 billion
4. Primary Metal Manufacturing: \$4.3 billion
5. Miscellaneous Manufactured Commodities: \$3.1 billion

[Nam.org](https://www.nam.org) MA

Rhode Island Economic Significance: Real GDP increased 3.2% from the previous year. The state's economy is diverse, with significant contributions from real estate, professional services, and healthcare sectors. Manufacturing plays a pivotal role, adding \$5.5 billion to the state's economy, which constitutes 7.1% of Rhode Island's GDP. The sector employs over 40,000 individuals across more than 1,000 establishments. [NAM](#)

Decarbonization Efforts: Rhode Island has set ambitious renewable energy targets, aiming for 100% clean energy by 2033. The state is also a leader in offshore wind energy, with the first U.S. offshore wind farm operational, underscoring its commitment to sustainable energy solutions. [The Guardian](#)

Major Industrial Employers

- General Electric (GE): A major employer in the state's manufacturing sector, particularly in energy solutions.
- Electric Boat (North Kingstown): Specializes in submarine construction, employing a substantial workforce.
- Toray Plastics and Teknor Apex: Leaders in advanced materials and plastics manufacturing, respectively.

Rhode Island GDP Composition

Real GDP Total: \$65.3 billion

- Real Estate, Rental, and Leasing: \$9.8 billion
- Professional and Business Services: \$9.6 billion
- Educational Services, Health Care, and Social Assistance: \$8.9 billion
- Utilities: Notably, the utilities sector experienced significant growth, with its 2024 GDP being 1.5x the GDP value in 2014 .

Total Manufactured Products Exported from RI in 2024: \$2 billion

Top Export Categories:

- Chemicals: \$658 million
- Misc. Machinery: \$262 million
- Primary Metal Manufacturing: \$221 million
- Computer & Electronic Products: \$167 million
- Machinery (not including electrical): \$150 million.

Industrial Sector Measures

B1. Work with utilities and energy efficiency vendors to ensure municipal wastewater treatment plants are utilizing energy efficiency incentive programs; expand program funding if necessary.

Potential Project Examples:

- Gather information to be able to develop a report for every wastewater treatment plant, pertaining to their energy consumption and energy efficiency. Make this report publicly available and share it with each facility.
- Publicize those that are using incentive programs

Industrial Sector Measures

B2. Support efficiency in industrial operations: expand technical assistance programs, incentivize industrial redevelopment through programs such as municipal tax increment financing (TIF) agreements.

Project Examples:

- The MA Office of Technical Assistance's free and confidential inspections for private and public processes
- Utilizing programs created by the EOED in the State of Massachusetts
- Utilizing and presenting Federal and State grants that provide for updates to facility machinery that is energy efficient
- Clean Ports initiative that was applied this past year in New Bedford

B3. Support wash and scrubbing facilities, sorting facilities, and refilling facilities to facilitate more material reuse in industrial operations.

Potential Project Examples:

- Offer an incentive / subsidy / tax break to encourage the emergence of new scrubbing, sorting, & refilling facilities that operate sustainably.
- Recognize the excellence of existing, high-performing facilities with special honors or awards.
- Include stories about high-performing facilities in the quarterly newsletter.
- Mail newsletters on a quarterly basis to every industrial small business in southeast Massachusetts and Rhode Island.

Industrial Sector Measures

B4. Cohesive workforces with GHG reduction and legacy; providing plans and strategies with both older manufacturing and industrial workforce leaders at the table

Project Examples:

- Port analysis plans and harbormaster meetings inclusion
- Providing workforce development opportunities that is for both climate jobs and best practices in current industrial work

B5. Education on rebates for energy efficient appliances and equipment for smaller scale businesses

Potential Project Examples:

- Encourage energy-efficient operations by create new incentives and highlighting built-in cost savings from EE measures.
- Create an incentive for industrial businesses that operate in LEED-certified facilities.
- Illustrate the cost savings that would result from energy consumption-reducing automation, from enrollment in a demand response program, and from switching to smart thermometers and LED lighting.
- Mail and email newsletters on a quarterly basis to every industrial small business in southeast Massachusetts and Rhode Island.

Industrial Sector Workforce Planning: *Massachusetts*

- **New Bedford Area:** the ports employ around 7,000 employees and average around 500 plus ships in commercial shipping in the harbors. The port generates \$11 billion in economic activity, providing over 40,000 jobs total
- **Ocean Tech Hub:** Anchored by a supply chain of over 8,294 companies and a 54,000-strong ocean workforce, the hub leverages regional strengths in marine science, robotics, and composites to support national security and dual-use commercialization across seven deepwater ports in RI and Southeast MA.
- **Energy Efficiency Manufacturing Jobs:** Southeast Massachusetts is projected to see significant growth in energy-efficient manufacturing by 2030, with roles like Structural Metal Fabricators (140 new jobs), Welders and Brazers (139), and Miscellaneous Assemblers (358) leading the way.
- **MassHire Greater New Bedford Workforce Board:** Received \$98,358 in 2023 to train and place 13 apprentices in advanced manufacturing in clean energy.
- **UMass Dartmouth School of Marine Science and Technology:** Received \$99,290 to develop real-time net monitoring technology that allows fishermen to identify and avoid unwanted catch during trawling operations.

Industrial Sector Workforce Planning: *Rhode Island*

- **Real Jobs Rhode Island:** Trained and placed over 1,500 Rhode Islanders in 10 trades through the “Pipeline to Manufacturing Careers in Shipbuilding” partnership with Electric Boat with 500 currently enrolled, achieving a 98% job placement rate and 30% higher retention than comparable programs.
- **Ocean Tech Works:** In Rhode Island a federal Good Jobs Challenge Grant was awarded to train 400 individuals in CNC machining, welding, robotics, and marine tech trades through a regional coalition led by URI, Polaris MEP, and key industry, education, labor, and community partners.

SECTOR	DESCRIPTION	JOBS	VALUE
Energy Efficiency	Updating and modifying grid network	745	\$127 million (direct effect)
Fisheries and Related	Harvesting and processing capacity of fishing industry.	2,965	\$151.5 million (direct effect)
Marine Trades	Boat building, repair, and retail industries, diving (direct effect), and marine construction industries, and select tourism and recreation industries, including charter.	13,337	\$1.45 billion (direct effect)
Construction	Developing net zero homes	60,000	\$12 billion (Projected needed for 2032 goals)

Industrial

Massachusetts and Rhode Island GHG Inventory

Sector	Emissions (MMT CO2e)	% of Gross Emissions	% of Emissions in Respective Sector
Electricity Consumption	2.540	17.11%	
Building Heating	4.945	33.32%	
Residential Heating	3.177	21.41%	64.25%
Commercial and Industrial Heating	1.768	11.91%	35.75%
Transportation	6.189	41.70%	
Highway Vehicles	5.841	39.35%	94.37%
Transit	0.006	0.04%	0.10%
Non-Road Sources	0.343	2.31%	5.53%
Industrial Processes	0.854	5.75%	100.00%
Total Waste	0.314	2.12%	
Municipal Solid Waste	0.143	0.97%	45.67%
Wastewater	0.171	1.15%	54.33%
Natural & Working Lands	-1.413	-	
Gross Emissions	14.843		
Net Emissions	13.431		

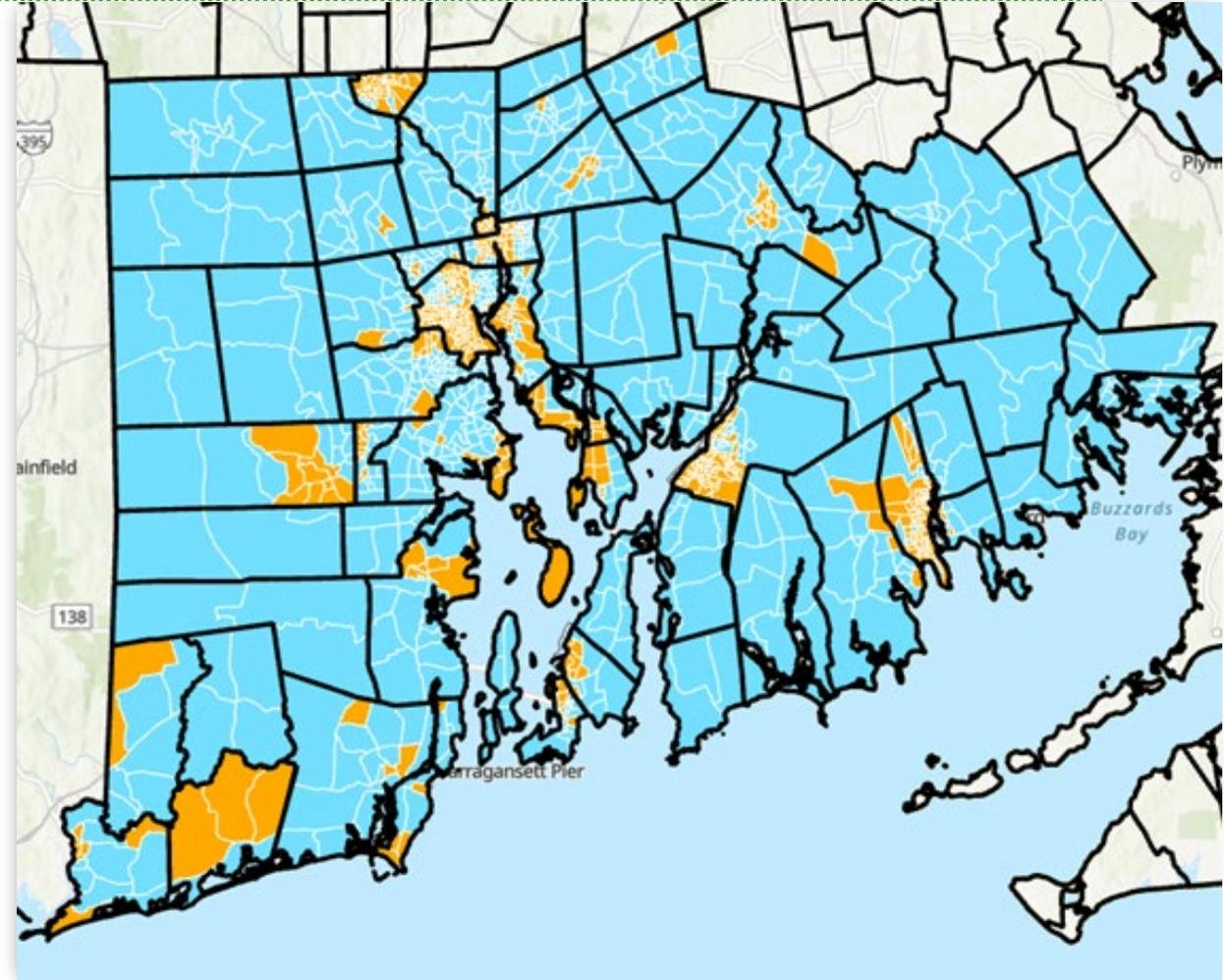
	Combined (MMT CO2e)	Rhode Island (MMT CO2e)	Massachusetts (MMT CO2e)
Industrial Processes	0.854	0.385	0.469

Industrial Sector: Workforce Development Needs

- Where are there gaps in workforce education in the Industrial sector?
- What specific roles are needed to advance the transition to industrial decarbonization?
- What experiences / certifications / trainings are most helpful for professionals who work in this sector? What is it like to be an ESG professional in a corporate industry?

Demographic Characteristics

- Want to avoid harming communities that have previously been overlooked. Polluting industries tend to be sited alongside underserved communities.
- Income per capita (2024) in RI: \$69,936
- Projected population of RI (2025): 1.1 million
- Income per capita (2024) in MA: \$93,927
- Projected population of MA (2025): 7.2 million



Open Discussion

1. What are the priorities in your field of work for Industrial sector decarbonization?
 2. Which decarbonization programs & strategies are effective? Which ones are missing the mark?
 3. What needs are you experiencing regionally?
 4. Are there new innovations you would hope to integrate that you have not been able to yet?
 5. What has been your experience with ESG measures/policies, and with workforce training programs?
- Manufacturing
 - Fashion
 - Healthcare
 - Tech
 - Academics
 - Shipping
 - Fishing

Key resources for further learning

- [US Bureau of Economic Analysis](#)
- [Office of the US Trade Representative](#)
- [National Association of Manufacturers](#)
- [USAfacts.org](#)
- [World Population Review](#)
- [SRPEDD Market Data](#)

Next Steps

If your work relates to the Industrial sector:

<https://www.surveymonkey.com/r/sectorcprgpvd>

If you are a municipal official: <https://www.surveymonkey.com/r/JBF6FXF>

If you are a member of the public:

<https://www.surveymonkey.com/r/KXSM7BN>

If you have other thoughts or concerns, please feel free to email

amatthews@srpedd.org

Thank you!



Please visit the project page at: srpedd.org/CPRG/

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