EC4 ADVISORY BOARD

REPORT TO EC4

SEPTEMBER 22, 2022

EC4 ADVISORY BOARD MEMBERSHIP

- **Diane Williamson** appointed by the Governor
- **Rachel Calabro** appointed by the Governor

- **Amy Rainone** appointed by the House
- **David Caldwell Jr.** appointed by the House
- **Patrick Crowley** appointed by the House
- **Priscilla De La Cruz** appointed by the House

- **Eric Wagner** appointment by the Senate
- **Kenneth Filarski** appointment by the Senate
- **Pam Rubinoff** appointment by the Senate
- **Sheila Dormody** appointment by the Senate

- 3 Governor vacancies

CLIMATE DASHBOARD

Act on Climate Mandates

On April 14, 2021, Governor Dan McKee signed into law the 2021 Act on Climate, which sets mandatory, enforceable climate emissions reduction goals leading the state to achieve net-zero emissions economy-wide by 2050. This legislation updates the previous 2014 Resilient Rhode Island Act, positioning the state to boldly address climate change and prepare for a global economy that will be shifting to adapt to clean technology.

Act on Climate as it pertains to a Climate Change Dashboard:

"To support the council's (EC4) work, state agencies shall:
Foster public transparency by developing public metrics and an online public dashboard that shall track both emissions reductions and sources of energy consumed by the state. The metrics and the dashboard shall be updated at least annually."

R.I. Gen. Laws § 42-6.2-3.

www.climatechange.ri.gov/aoc

EC4 Memorandum

February 2022:

The 2021 Act on Climate requires the Executive Climate Change Coordinating Council (EC4) to "foster public transparency by developing public metrics and an online public dashboard that shall track both emissions reductions and sources of energy consumed by the state" (RIGL 42-6.2-3.13).

The EC4 is requesting advice and guidance from the Advisory Board to develop a draft outline of a climate dashboard by October 31, 2022.
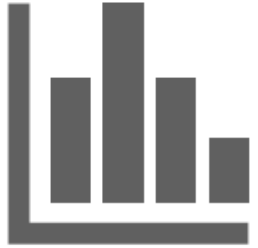
Guiding Principles:
➢ Meet the letter of the law
➢ Maximize transparency
➢ Consider facets of climate change beyond emissions
➢ Build on best practices
➢ Balance information with administration
➢ Consider the dashboard a living document

West Warwick, National Weather Service

Climate Dashboards across Different States

What are best practices from different dashboards?

Manipulable/interactive data accompanied by explanations

Easily viewable and understandable trends

Inexpensive interface programs

Inclusion of Climate Equity (mapping and criteria)

Quarterly updating

Public feedback on the website (for clarification or inquiries)

Align dashboard metrics with data that is already collected

To View RI's Current Climate Snapshot, visit:
www.climatechange.ri.gov/climatesnapshot

To view climate dashboards from other states, visit:
Linktr.ee/RIEC4

Climate Dashboards across Different States

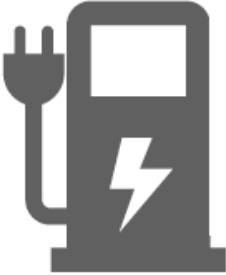## What do different states track on their dashboards?

ZEV & State green-fleets

Fuel use

Renewable energy generation

EV Charging Infrastructure

Sea level rise: potential and flooding

Total energy consumption/generation

Utility cost & savings

Drought

Resiliency

Weather: storms, temperature, precipitation

RGGI Funding

WHAT CATEGORIES SHOULD WE DISCUSS?

March 24th Session

- Greenhouse gas emissions
- Climate justice and equity
- Resilience and adaptation
- Economic considerations
- Education, outreach
- Workforce development

March 25th Session

- Greenhouse gas emissions
  - Electric Sector
  - Housing
  - Consumption of Goods
  - Transportation
  - Food
- Climate justice and equity
- Resilience and adaptation

March 29th Session

- Greenhouse gas emissions
  - Emissions inventories, collaboration, frequency
- Climate justice and equity
  - Metrics specific to EJ Communities
- Resilience and adaptation
- Buildings
- Other categories: housing, land use, development, transportation
- Opinions of Rhode Islanders, particularly those in EJ Communities; role of social science methods in tracking

Proposed Categories of Metrics

Need for State Agency Review of Data Sources

Need for the State to Establish Goals

Need for 3 People to be Appointed to the Advisory Board

	PRIMARY CONSIDERATION	Is Data Available / Frequency	Who has the data & data source	Notes from 8/17 & 8/25

Emissions	• Reduced emissions (CURRENTLY TRACKING)
	    ○ By gross state product (GSP)
	    ○ By population
	    ○ Per capita
	    ○ YTD data
		- YES; RI GHG Inventory prepared annually.	- DEM; EPA SIT tool.	• DEM produces an annual GHG emissions inventory (statewide); 3-year lag on data; it can be diced (e.g. by population) after it's completed if need be; cannot be diced by geographic region (statewide data).

Transportation	• EV incentives by demographic (VIABLE)
	    ○ By community
	    ○ By inventive type
	• EV's/Clean cars (CURRENTLY TRACKING)
	• Lead-by-Example program
	    ○ Mileage (TBD)
	    ○ State fleets EVs, ZEVs (CURRENTLY TRACKING)
	• EV infrastructure (VIABLE)
	    ○ By municipality & county
	    ○ Emphasis on charging in EJ focus areas
	• Advances Clean Trucks (ACT) (NOT VIABLE… YET)
	    ○ RI adopting CA rule
	• Progress towards mobility plan (2021) TBD
	• RIPTA ridership (VIABLE)
	    ○ By area and line
	• Vehicle miles traveled (VMTs) (REPLACE WITH FUEL SALES)
	    ○ By fuel type
	• Fuel usage
		- YES for past EV incentives.
		- YES for newer DRIVE-EV incentive; can be updated semi-annually.
		- YES; updated quarterly (LBE state fleet).
		YES; updated semi-annually.
		
		- Data not available yet (ACT).
		
		- TBD
		- YES; data available on an as needed basis (from RIPTA).
			- OER has data from RI specific EV incentive programs.
			
			- DEM; DMV.
			
			- DCAMM; DCAMM.
			
			- DEM; data source ??? (can be sorted either by city/town OR zip code)
			
			- Data not available yet (ACT).
			
			- TBD
			- RIPTA
				• EV incentives – OER has both historical data on past EV incentives and will be tracking newer DRIVE-EV incentives that are starting in 2022. OER confirmed that it can pull out historical EV rebate data (and sort by zip code).
				• EV/clean cars – DEM pulls data on new registrations quarterly from RIDMV (by zip code).
				• LBE – Suggestion was to focus on # of EVs in the state fleet as it relates to Raimondo EO 15-17 requiring *"a minimum of 25 percent of new light-duty state fleet purchases and leases will be zero-emissions vehicles by 2025."* DCAMM has this info and can provide regularly.
				• EV infrastructure – available by city or town.
				• ACT – rule won't be finalized until early 2023; data won't be available for sometime. We could highlight the adoption of the Act rule as a spotlight story?
				• Mobility plan – DOT suggested that maybe we try to track investments in EJ communities? Data might not be there quite yet.
				• RIPTA ridership: They track by route (so many routes cross city/town lines that municipal level data is challenging).
				• VMTs/Fuel usage – DOT has VMT numbers; but it's not a clear indicator because we don't know how many of those miles are driven in RI or elsewhere. Many states are measuring and reporting on FUEL SALES instead.
				• Traffic Congestion?

	o Consumption of gas and diesel			

Electricity	• Clean energy (CURRENTLY TRACKING)
	     o By type: solar, wind
	 • Progress towards 100% clean energy standard (VIABLE)
	 • Energy efficiency
	     o Heat pumps ????
	 • Emissions avoided by energy efficiency (CURRENTLY TRACKING)
	 • Utility costs & savings (VIABLE)
		- YES; MW's quarterly.
		
		 - See notes; PUC or OER can assist.
		
		 - OER; annually.
		
		 - See notes.
			- OER.
			
			 - RI Energy provides data.
				• OER tracks new clean energy projects that come online (can utilize their data); need to determine how far it goes back to show trends?
				 • Todd Bianco (PUC) can provide historical data on state's progress on its Renewable Energy Standard (PUC tracks; however, there is a~ 2 year data lag). Need to connect with OER/PUC on who/how that state will measure and track progress towards the new 100% by 2033 target.
				 • Need more specifics on what specifically they mean by "EE – Heat Pumps".
				 • Emissions avoided by energy efficiency – this is currently tracked & on the current climate dashboard; OER gets data from utility (RI Energy).
				 • Utility cost and savings – EIA tracks historical prices for electricity and NG in RI. Is this what the group wants to display on a dashboard? Or would it like to focus on energy burden?

Heating & Buildings	• Amount of incentives (VIABLE)
	     o Solar and heat pump programs
	     o Funding distributed
	     o By demographic
	     o Recipient type
	 • Number of energy audits (RISE program) (VIABLE)
	     o Low vs moderate income
	     o By sector
	 • Fuel usage (TBD)
	     o Oil, gas, electric
	 • Oil, propane, and natural gas customers (VIABLE)
		- YES; semi-annually.
		
		 - YES; frequency unknown.
		
		 - Yes; annually
			- OER (heat pumps) and Commerce Ri (solar).
			
			 - Yet to be determined if OER or RI Energy will provide.
			
			 - ACS (Census).
				• REF (Commerce RI) – data can be used to show investments in solar (existing).
				 • Looking ahead – the new heat pump program will begin to gather data that can be tracked (amount of incentive, #'s installed, geographically tracked (even more granularly than zip); there doesn't exist a good system to track all heat pump installs across RI consistently.
				 • EERMC/OER should be able to get RISE audit data annually (how far back does tracking go?). Unsure if it's tracked by income level; it was strongly suggested that we try to get data on # of audits that actually lead to upgrades/improvements vs. those that do not result in upgrades.
				 • 'Black Box' on fuel usage and customer #'s: RIE is the only good local source of data on # of NG customers and fuel usage (and #'s that have switched away from oil/propane). OER has estimates from the HST report (but this data is 4+ years old now and now being updated regularly). The ACS does have fuel use data that can be utilized.

Workforce & Education	• Green Jobs (clean energy sector jobs) (CURRENTLY TRACKED)
	     o Demographics of workers
	 • Union training programs with a clean energy focus (TBD)
	 • Job conversions (TBD)
	     o Legacy fossil fuel to renewable
	        ▪ By salary comparison
		- YES; updated annually.
		
		 - SEE NOTES.
			- OER provides analysis; data is from US Energy and Employment Report (USEER).	• OER prepares an annual report on clean energy employment in RI. Last prepared Sept. 2021. Based upon data from annual US Energy and Employment Report (USEER), an annual nationwide survey of ~35,000 energy employers in the US.
				 • In conversations with DLT, it was suggested that Real Jobs data for training can be accessed for ~10 different programs (including number of workers trained and number of workers placed in a job).
				 • In conversations with DLT, it was suggested that the dashboard could spotlight, for now, the offshore wind certificate training program about to kick off at CCRI, and then transition to tracking number of participants (including # of placements in offshore wind jobs).

				In conversations with DLT, it was suggested that the dashboard could track the # of students graduating in a "green" field. WOULD REQUIRE DATA GATHERING FROM ALL INSTITUTIONS OF HIGHER ED IN RI.

Resilience & Carbon Sequestration	• Jobs for infrastructure
	   o Resilience focused work (TBD)
	• Protected land (CURRENTLY TRACKED)
	• RIIB Municipal Resilience Program (MRP)
	   o Participating communities (CURRENTLY TRACKED)
	   o Actions taken (VIABLE)
	   o Funding distributed from RIIB (VIABLE)
		- YES, annually.	TBD
			
			- DEM/DEM.
				• Jobs for infrastructure – Did not identify any detailed information which could support this metric.
				• Protected land – Already tracked on current climate dashboard (measures # of acres that have been protected by the state). Baseline is 2010.
				• RIIB MRP – # of participating communities is already tracked on current climate dashboard.
				• Number of action grants awarded is tracked and can be reported by RIIB.
				• Funding distributed by RIIB for resilience projects is tracked and can be reported by RIIB.

Climate Change Impacts	• Weather
	   o Precipitation (VIABLE)
	   o Temperature (heat) (VIABLE)
	   o Sea level rise (VIABLE)
		- YES, annually	- DEM & CRMC based on NOAA data.	• CRMC can provide SLR trends. RIDEM Climatologist can provide temperature and precipitation trends. All data is from NOAA. Numbers are statewide.

Environmental Justice	• Apprenticeship demographics (TBD)
	   o Just transition jobs
	   o By salary & community
		TBD	TBD	• TBD. While apprenticeship programs are working in more "green" elements as part of overall training, it appears to be difficult to ascertain how many might be considered "just transition" job shifts.

Other				

OTHER ISSUES RAISED:

o Can RI apply for USCS technical assistance to develop the dashboard?

o Purchasing regulations re/ EVs a big roadblock to bring on new EVs as part of state fleet; RI should poise itself to take advantage of manufacturer incentives, but it's challenging. EPAC 2005?

o Allision (DEM) mentioned in the chat that it would be great to add Biodiesel fuel use as a metric (transportation or heating)? Follow-up with Allison/Joe.

V.2 (9/13/22)

NEXT STEPS

Continue to Refine Metrics with State Agencies

Need for the State to Establish Goals

Need for 3 People to be Appointed to Advisory Board

13

EC4AB

Next Meetings

October 26, 2022
December 1, 2022
10:30am-noon