

CLIMATE ACTION PLANNING

Best Practices for Climate Pollution
Reduction Grants and Beyond

November 15th at 2pm ET

CLIMATE X CHANGE



Introduction

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State Climate Policy
Network Manager

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State Climate Policy Network (SCPN)

- Network of 18,000+ policymakers, advocates, business leaders and experts pushing for effective and equitable climate policies in their states
- Host monthly national calls and webinars
- Share updates, research, and analysis on various climate policy topics

How can we help you?

We specialize in state climate policy tracking, analysis, and expert connections. Reach out to kristen@climate-xchange.org with your questions on:

- **Example states** for a given policy
- **Gap analysis** of your state's climate policy landscape
- **Connections** to other actors working on similar issues

Or, check out our **State Climate Policy Dashboard**, which tracks state-level climate policy and resources across all 50 states.

Climate Action Planning: Best Practices for CPRG and Beyond



Phillip Assmus

*Senior Policy Specialist
State and Local Climate
and Energy Program, EPA*



Drew Veysey

*Senior Associate
US Program, RMI*



Justin Balik

*State Program Director
Evergreen Action*

1. EPA's Quantified Climate Action Measures Directory
2. RMI and Energy Innovation's Energy Policy Simulator
3. Translating to Implementation: Climate Pollution Reduction Grants
4. Q&A

Speaker

Phillip Assmus



Senior Policy Specialist

State and Local Energy
Program, EPA

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EPA's Quantified Climate Action Measures Directory

Phil Assmus

State and Local Climate and Energy Program

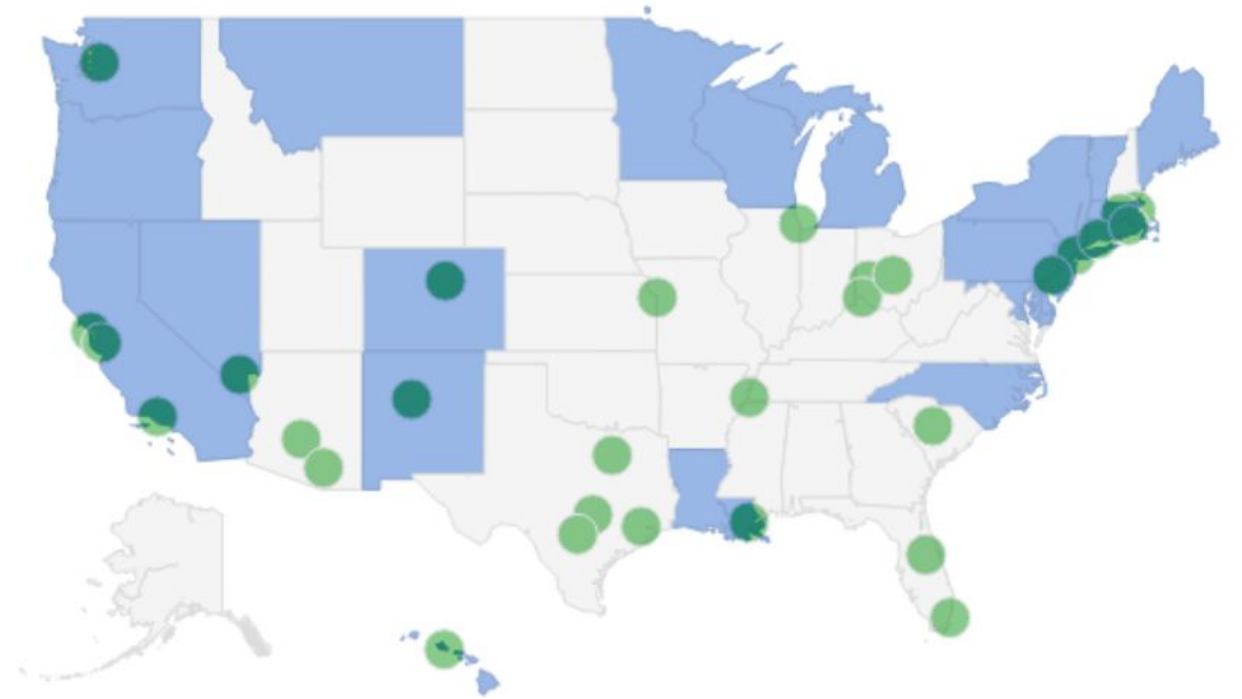
November 15, 2023

Research Motivation

- Many states, municipalities, tribes, and territories may find it helpful to review elements and approaches within an existing climate action plan as they develop or update their own plan.
- CPRG program participants are required to assess GHG emission impacts at the measure level.
- Examples of quantified climate action measures can be challenging to identify given the volume of documents available for review.
- The directory is intended to:
 - Make it easy for planning authorities to identify relevant examples of quantified measures
 - Facilitate conversations between entities developing climate action whose experiences can support each other

State and Local Climate Action Plan Review

- Reviewed 24 state and 32 local climate action plans and supporting technical materials to identify quantified GHG reduction measures and the tools used to quantify them.
- For each quantified measure we recorded:
 - Measure description/type/sector
 - Source CAP/jurisdiction
 - Tool used
- Developed a quantified measure list and tables to summarize what we observed



Context and Limitations for Findings

- The directory lists only quantified GHG mitigation measures. Non-quantified measures and measures with GHG emission estimates bundled into sector or economy-wide totals were generally excluded.
- Inclusion does not imply EPA's endorsement of any specific measure type, quantification tool, or a measure-level quantification approach. Similarly, the absence of a measure type, tool, or quantification approach should not preclude their inclusion as part of a climate action planning exercise.
- All measures and measure-related information listed in the directory are summarized from publicly available state and local documents and are based on EPA's understanding of those plans. Any errors within these summaries are EPA's own.

Measure Identification by Sector

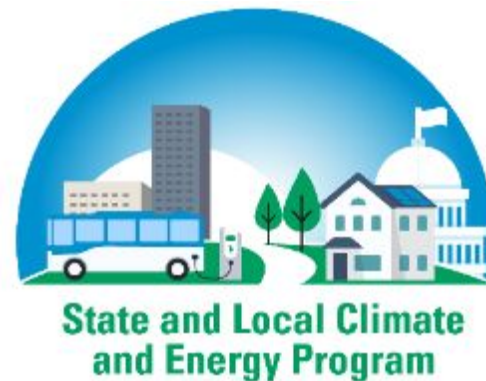
Quantified Measures by Sector	State	Local	State	Local
Transportation	92	97	33%	39%
Commercial and Residential Buildings	56	74	20%	30%
Electricity	43	42	16%	17%
Industry	45	10	16%	4%
Oil & Natural Gas Systems	15	0	5%	0%
Natural and Working Lands	28	13	10%	5%
Agriculture	18	0	7%	0%
Waste and Materials Management	9	36	3%	15%
Total Quantified Measures Identified:	276*	252*	111%**	110%**

*Totals do not align because some measures are multi-sector

**Percentages sum to greater than 100% because some measures are multi-sector and appear in multiple sector counts

Connect with the State and Local Climate and Energy Program

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Reference Slides

What is a Measure?

“Measure” reflects the full breadth of “programs, policies, measures, and projects that will achieve or facilitate the reduction of greenhouse gas air pollution” referenced in the Climate Pollution Reduction Grant Program’s authorizing language.

CPRG Measure Quantification Requirements

- States and locals / tribes and territories have two planning phase deliverables with GHG reduction quantification requirements:
 - Priority Climate Action Plans (PCAPs) due March 1, 2024 / April 1, 2024
 - Comprehensive Climate Action Plans (CCAPs) due 2 / 4 years from award (summer-fall 2025 / summer-fall 2027)
- Participants are asked to identify a diverse range of GHG mitigation measures:
 - Grantees encouraged to “adopt and implement ambitious GHG reduction measures across multiple key sectors” (i.e., industry, electricity generation, transportation, commercial and residential buildings, agriculture/natural and working lands, and waste and materials management)
- They must also quantify the emission reductions associated with each measure:
 - PCAPs require measure-level GHG quantification for priority measures in one or more sectors
 - CCAPs require measure-level GHG quantification for measures across all key sectors

How did this research define “quantified”?

- The plan review counted a measure as quantified if the climate action plan or a supporting document described the measure in sufficient detail, identified the tool used to quantify the measure, and attributed a GHG emission reduction to that measure
- GHG emission reductions attributed to groups of measures were more challenging to assess. Generally, we counted a measure within a grouping as quantified if:
 - The number of grouped measures was small and/or limited to a subsector; or
 - The plan or a supporting document suggested individual measure-level modeling by associating one or more quantitative assumptions with a measure

Summary of Quantified Measure Types by Sector

Sector	Measure Type
Agriculture	Agriculture Operational Practices Sequestration Non-CO ₂ Emissions Management and/or Control
Commercial and residential buildings	Electrification Non-CO ₂ Emissions Management and/or Control Energy Efficiency Low Carbon Fuels Low Embodied Carbon Materials
Electricity	Clean and Renewable Electricity Emission Control Technology - CCS Energy Efficiency
Industry	Electrification Emission Control Technology – CCS Energy Efficiency Industrial Process Efficiency Low Carbon Fuels
Natural and working lands	Forest Management Sequestration
Oil & natural gas systems	Non-CO ₂ Emissions Management and/or Control
Transportation	Electrification Fuel Efficiency Low Carbon Fuels Travel Demand Management
Waste and materials management	Non-CO ₂ Emissions Management and/or Control Waste diversion

Speaker

Drew Veysey



Senior Associate
US Program, RMI

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Using the State Energy Policy Simulator to Support Climate Pollution Reduction Grant Planning

Fall 2023



The **free, open-source** Energy Policy Simulator is a tool to evaluate climate policies and visualize their combined impact on emissions, public health, employment, and economic growth.

North America

Canada

Alberta (2019)

United States

U.S. States

Latin America

Brazil

Mexico

Asia

China (iGDP)

China (NCSC)

Hong Kong

Zhejiang

India

Indonesia

South Korea

Europe

Poland

Middle East

Saudi Arabia

ENERGY INNOVATION  **RMI ENERGY POLICY SIMULATOR**

Region ▾

Docs

Sign in

United States

Alabama

Arizona

Arkansas

California

Colorado

Connecticut

Delaware

Florida

Georgia

Idaho

Illinois

Indiana

Iowa

Kansas

Kentucky

Louisiana

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Maryland

Massachusetts

Michigan

Minnesota

Mississippi

Missouri

Montana

Nebraska

Nevada

New Hampshire

New Jersey

New Mexico

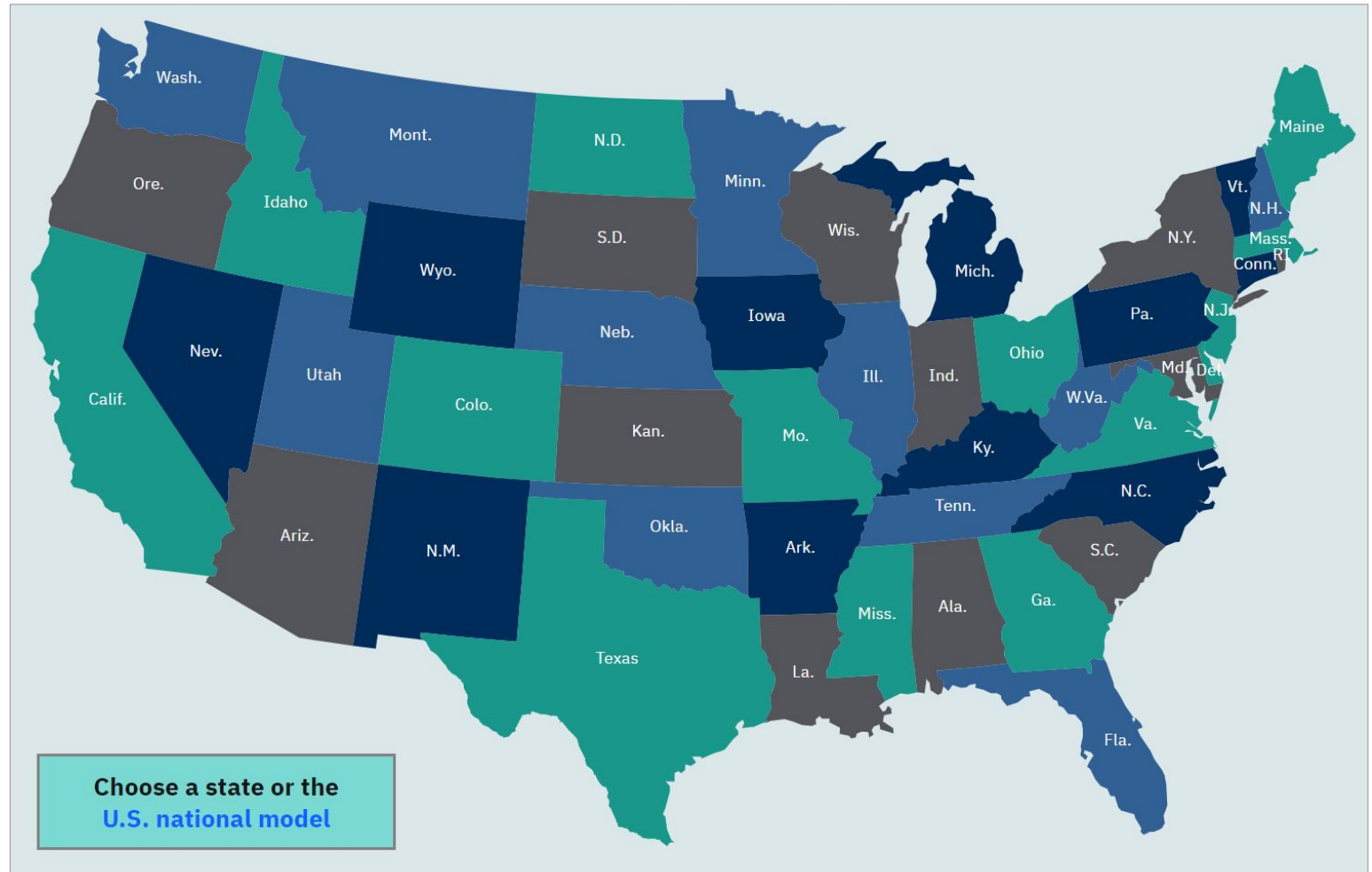
New York

North Carolina

North Dakota

Ohio

Oklahoma



The Energy Policy Simulator (EPS)

Identifies impacts of state policies



A real-time model of emissions/economic impacts

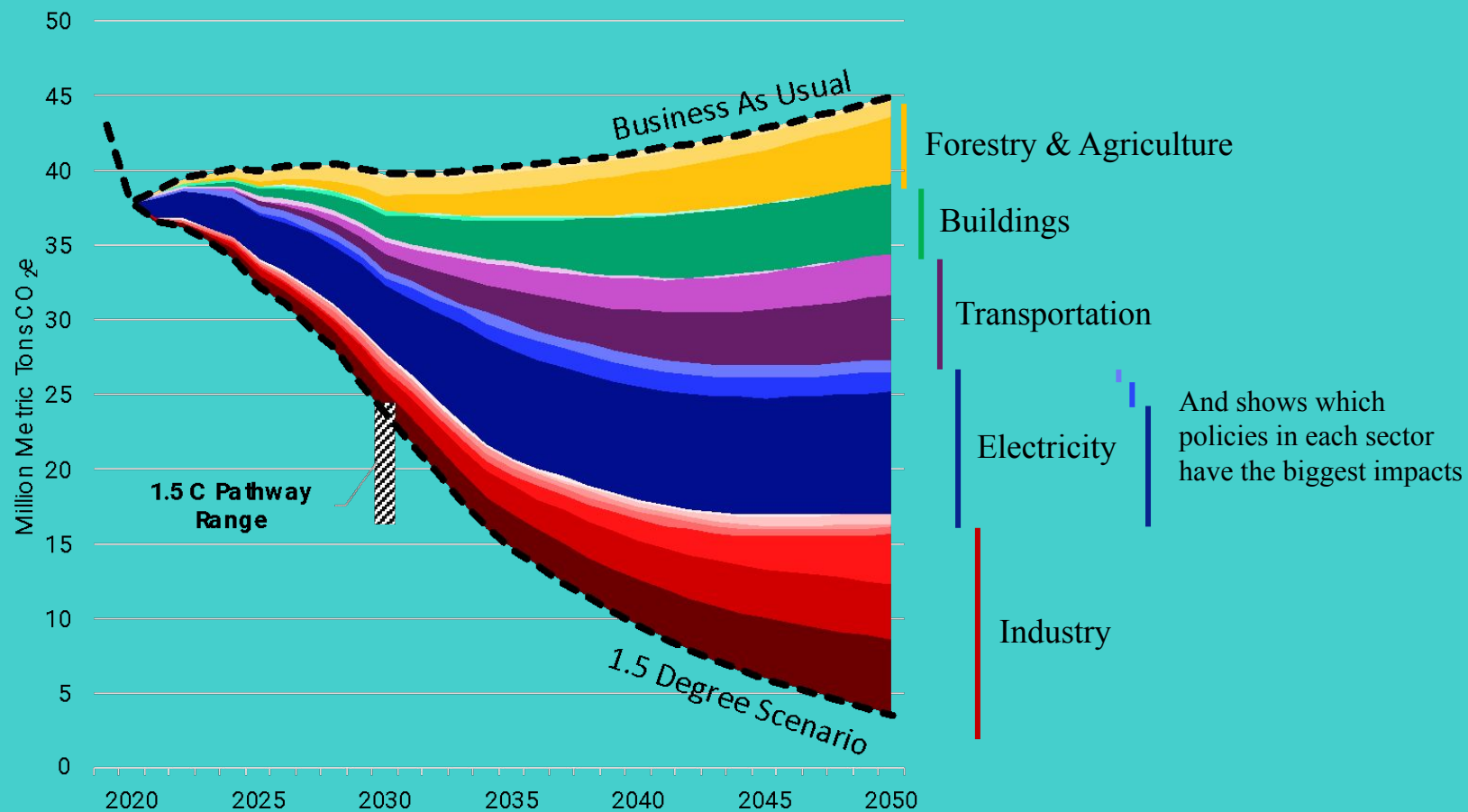
- Unparalleled interactivity for use in a variety of settings
- Users can build scenarios by combining policies
- Measures the impact of individual policies and *policy interactions*



Free, public, open-source, and relatively easy to use

- Based on publicly available data
- Peer-reviewed and transparent methodologies
- Works in a web browser

GHG Reductions by Policy

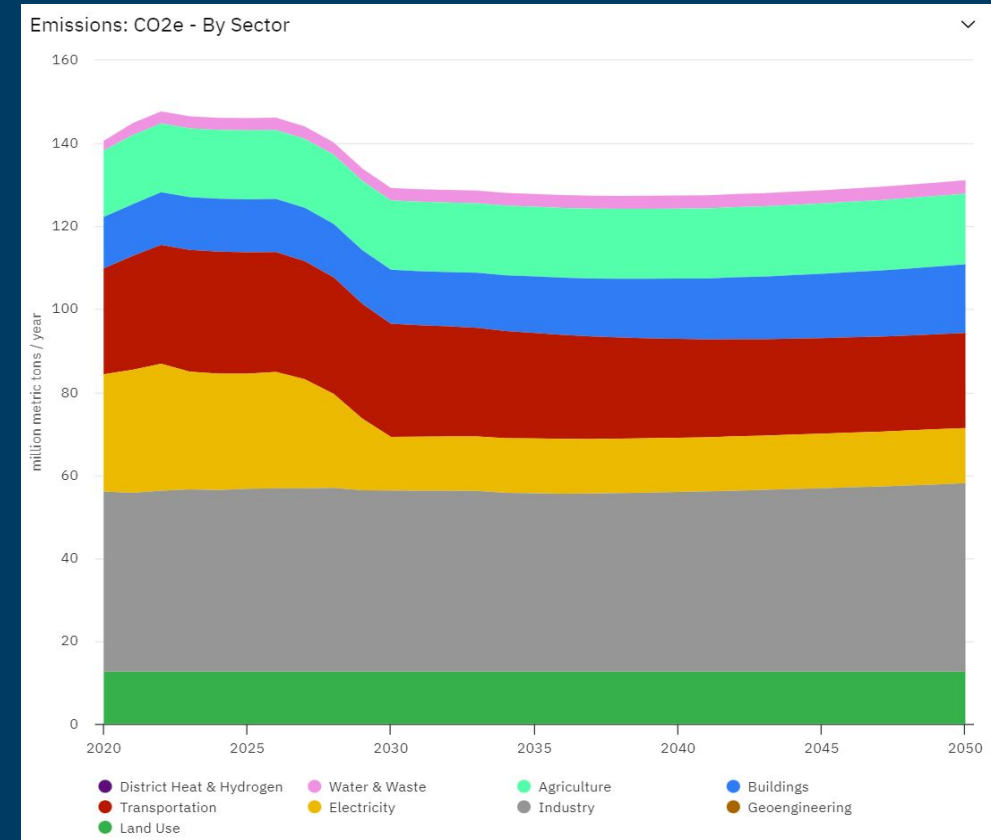
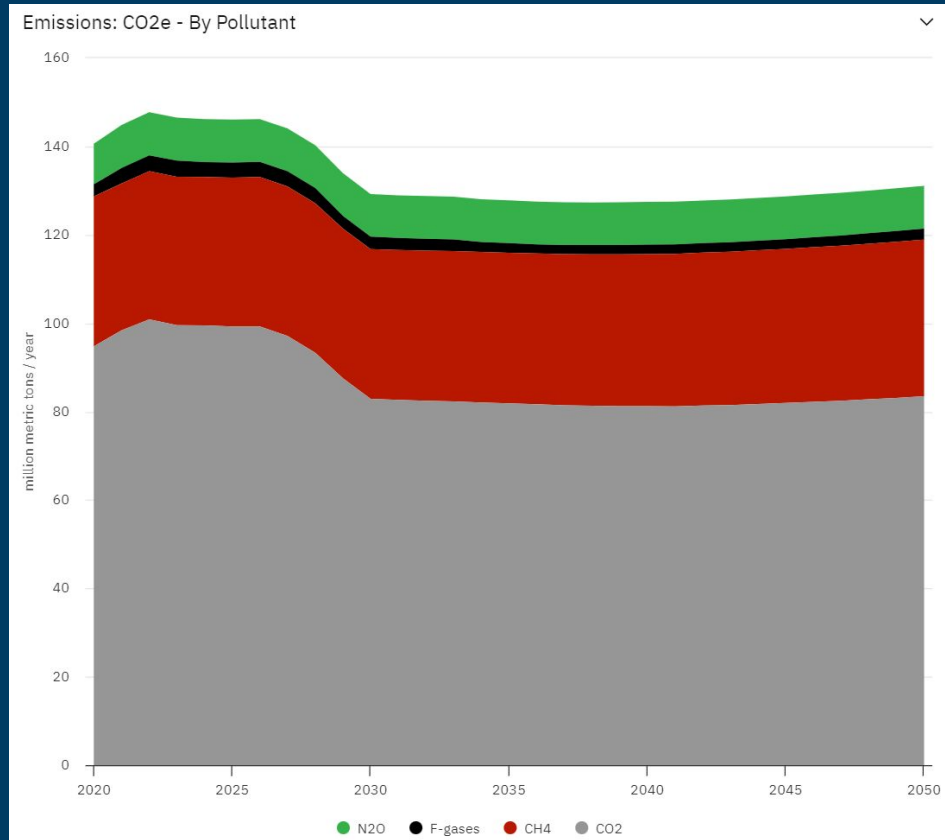


What makes the EPS a good tool to help with Climate Pollution Reduction Grants?

- Scope emissions by source and sector
- Project a state's future emissions
- Set GHG reduction targets
- Identify a diverse range of GHG mitigation measures
- Quantify the emission reductions of each measure
- Estimate public health and economic co-benefits
- Engage community - *it's free to use, transparent, documented, open-source!*

CPRG Requirement: GHG Inventory

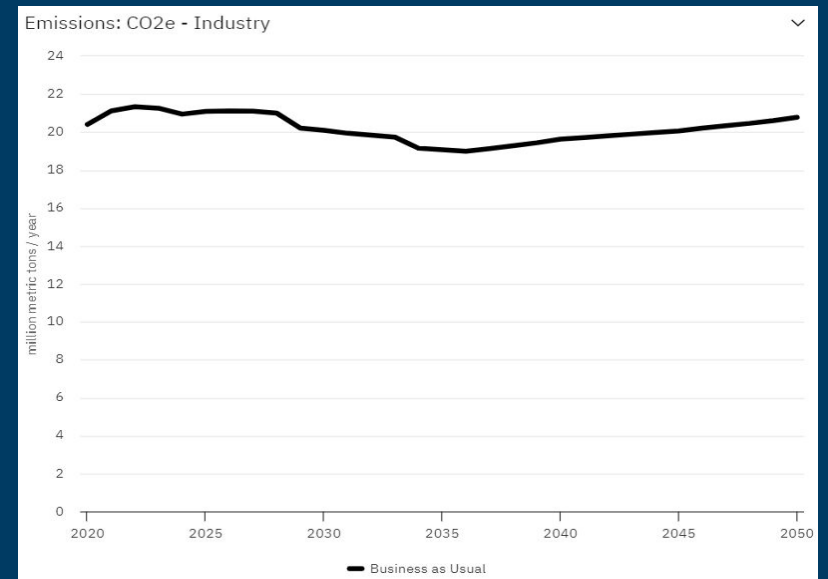
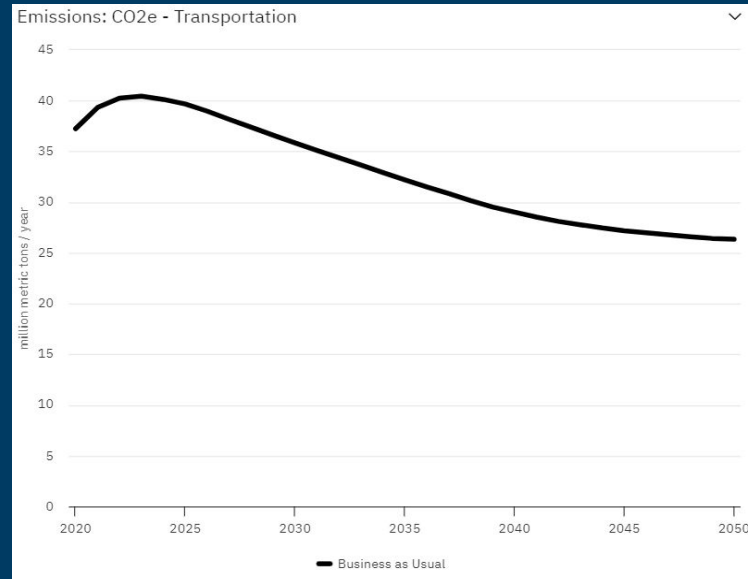
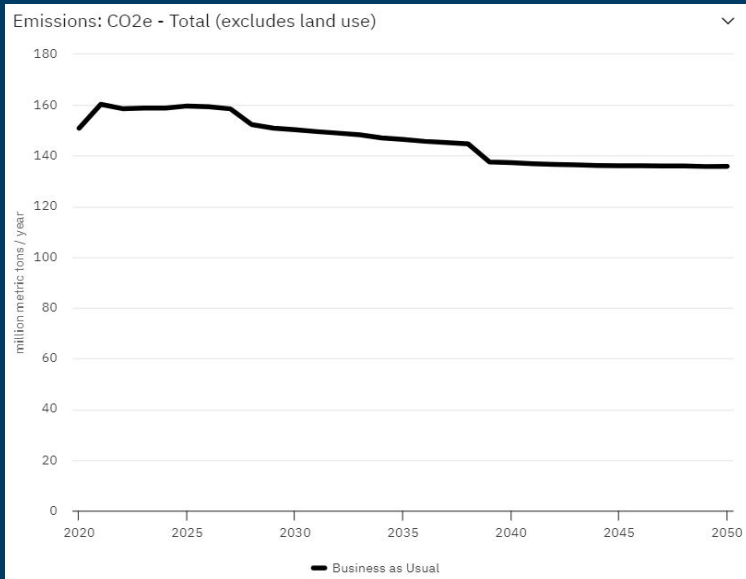
EPS ability: Scope emissions by source and sector



Related to building an inventory, scoping emissions by source and sector helps find where to focus a plan and propose where to bring agency resources to bear.

CPRG requirement: GHG Emissions Projections

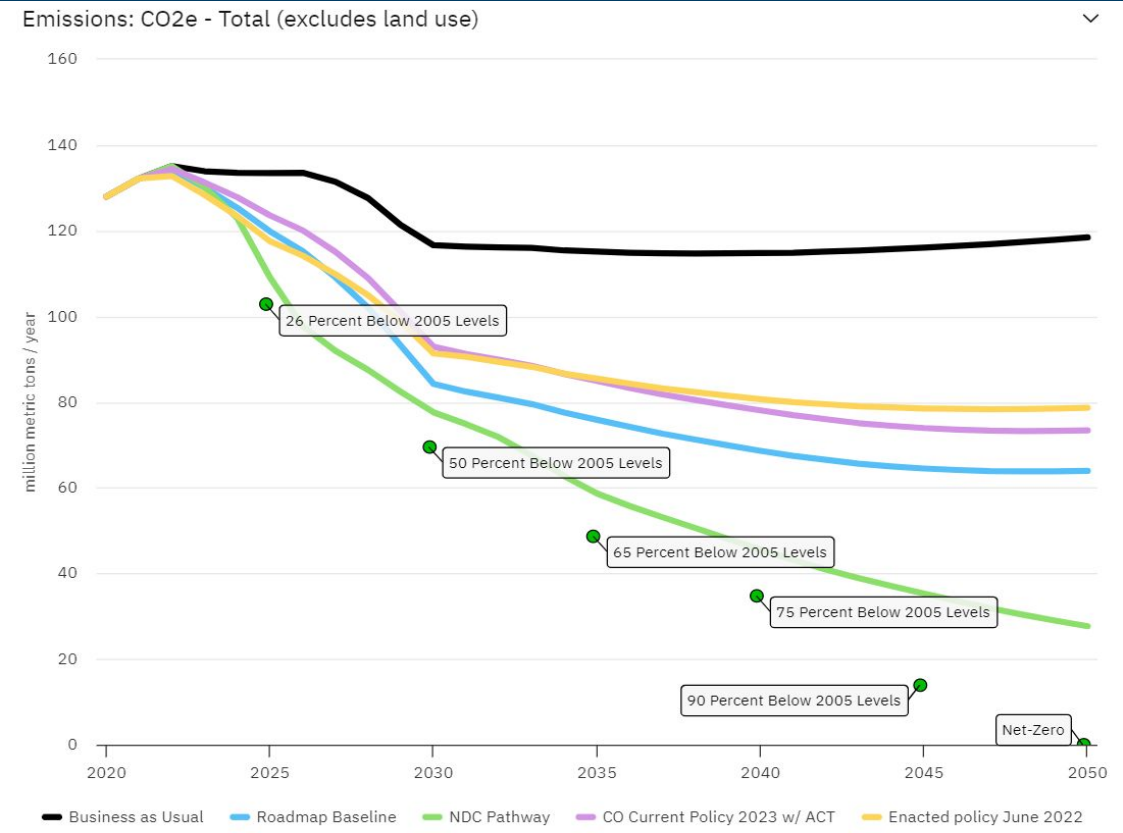
EPS ability: Project state emissions based upon existing sources and policies



The EPS projects state emissions from present year through 2050. EPS can give you a starting point for your state's current emissions so you can begin planning before having your GHG inventory completed yet.

CPRG requirement: GHG Reduction Targets


EPS ability: Build bottom-up scenarios to hit targets



The EPS allows for building and comparing multiple scenarios at a time which allows for setting GHG reduction targets based upon each state's unique situation.

CPRG requirement: identify measures to achieve goals

EPS ability: includes dozens of GHG mitigation measures in each sector

ENERGY INNOVATION  RMI ENERGY POLICY STUDIO

New Scenario

- ▼ Transportation
 - Conventional Pollutant Standards
 - Electric Vehicle Sales Standard
 - Electric Vehicle Subsidy
 - Feebate
 - Fuel Economy Standard
 - Hydrogen Vehicle Sales Standard
 - Low Carbon Fuel Standard
 - Mode Shifting
- ▼ Buildings and Appliances
 - Building Component Electrification
 - Building Energy Efficiency Standards
 - Contractor Training
 - Distributed Solar Carve-Out
 - Distributed Solar Subsidy
 - Improved Labeling
 - Retrofit Existing Buildings
 - Rebate for Efficient Products
- ▼ Electricity Supply

ENERGY INNOVATION  RMI ENERGY POLICY STUDIO


New Scenario

- ▼ Electricity Supply
 - Ban New Power Plants
 - Carbon Capture and Sequestration
 - Clean Electricity Standard
 - Change Electricity Exports
 - Change Electricity Imports
 - Demand Response
 - Early Retirement of Power Plants
 - Grid-Scale Electricity Storage
 - Increase Transmission
 - Reduce Plant Downtime
 - Reduce Soft Costs
 - Reduce Transmission & Distribution Losses
 - Subsidy for Capacity Construction
 - Subsidy for Electricity Production
- ▼ Industry
 - Carbon Capture and Sequestration
 - Cement Clinker Substitution

ENERGY INNOVATION  RMI ENERGY POLICY STUDIO

New Scenario

- Cogeneration and Waste Heat Recovery
- Early Retirement of Industrial Facilities
- Electrification + Hydrogen (Med & High Temp)
- Electrification (Low Temp)
- F-Gas Substitution
- F-Gas Destruction
- F-Gas Recovery
- F-Gas Eqpt. Maintenance & Retrofits
- Improved System Design
- Industry Energy Efficiency Standards
- Material Efficiency, Longevity, & Re-Use
- Methane Capture
- Methane Destruction
- N2O Abatement
- Reduce Fossil Fuel Exports
- ▼ Agriculture, Land Use, and Forestry
 - Afforestation and Reforestation
 - Avoid Deforestation

ENERGY INNOVATION  RMI ENERGY POLICY STUDIO

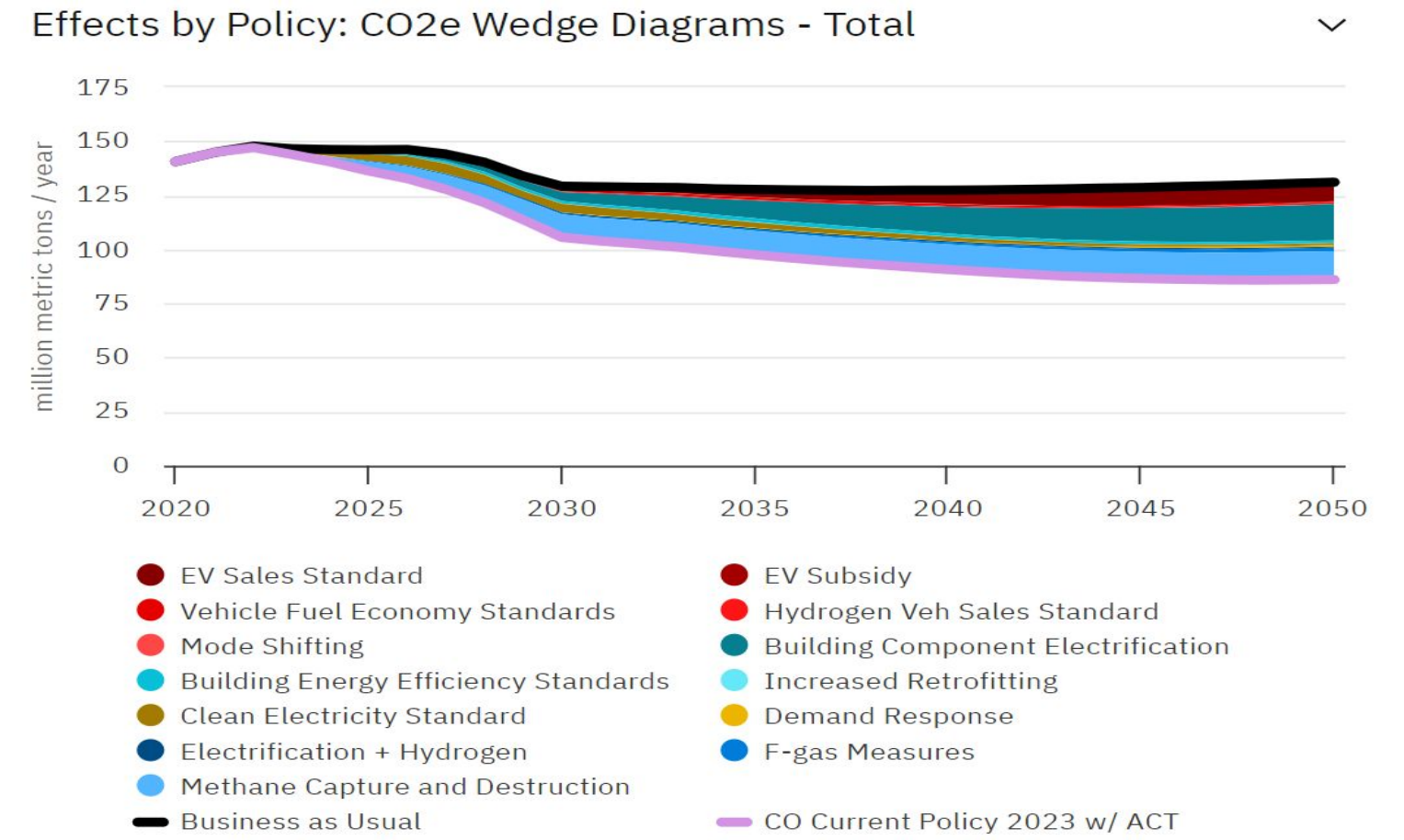
New Scenario

- Avoid Deforestation
- Grassland Restoration and Avoided Conversion
- Forest Set-Asides
- Cropland and Rice Measures
- Improved Soil Measures
- Improved Forest Management
- Livestock Measures
- Wetland Restoration
- Shift to Non-Animal Products
- ▼ District Heat and Hydrogen
 - Use CHP for District Heat
 - Produce District Heat with Hydrogen
 - Shift Hydrogen Production to Electrolysis
- ▼ Cross-Sector
 - Carbon Price
 - End Existing Subsidies
 - Exempt Process Emissions from C Tax: Multiple values
 - Toggle Carbon Tax Border Adjustment: On

The EPS includes many GHG mitigation measures that the user can choose to include in scenario development.

CPRG requirement: Quantified GHG Reduction Measures

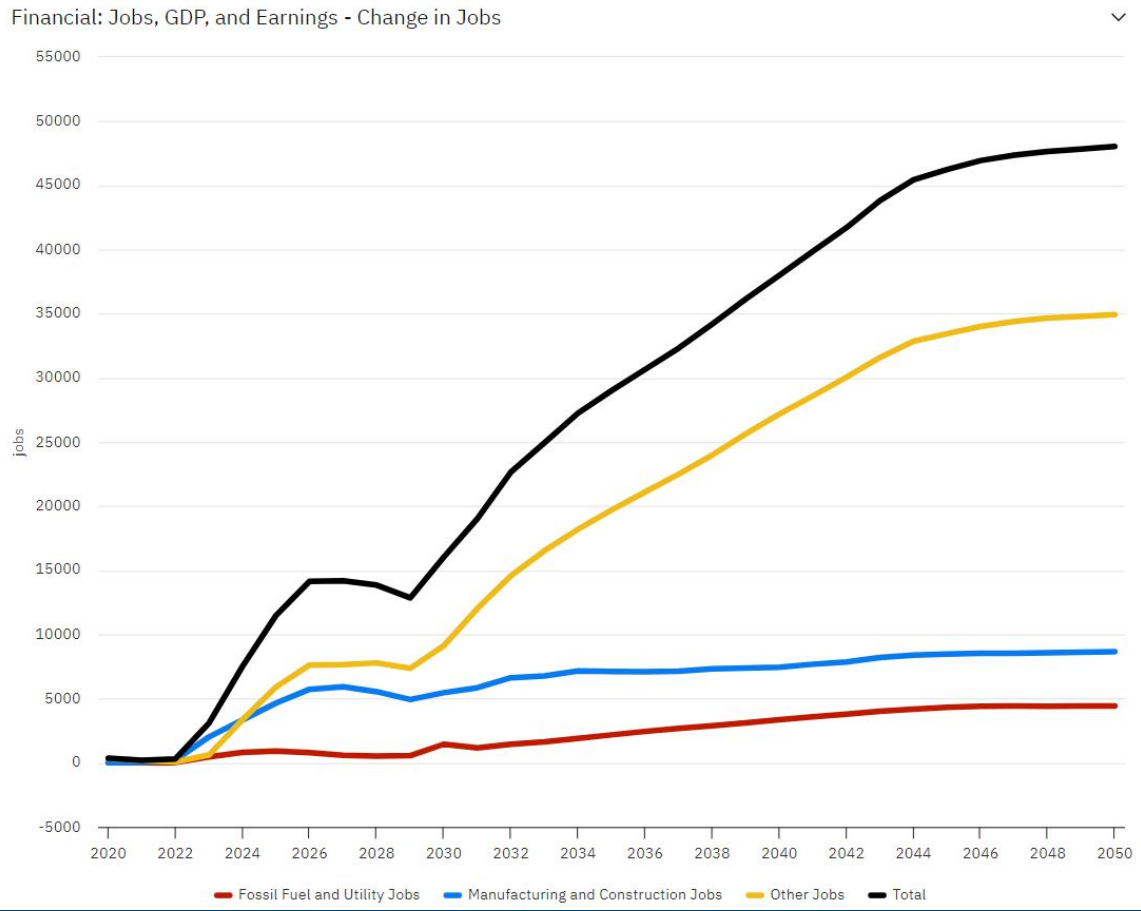
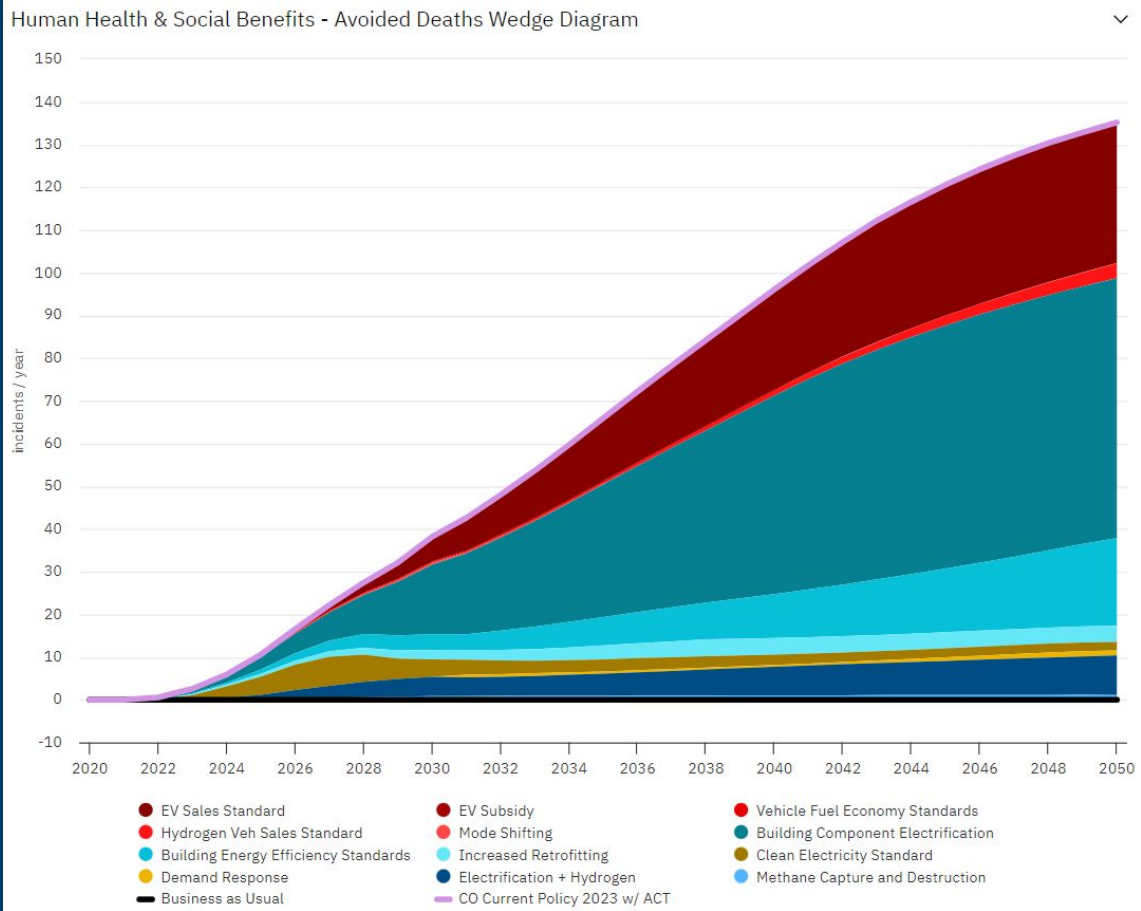
EPS ability: model calculates GHG impact of each measure



Each measure included in the EPS is quantified, and the impact of each measure can vary according to state conditions.

CPRG requirement: Benefits Analysis

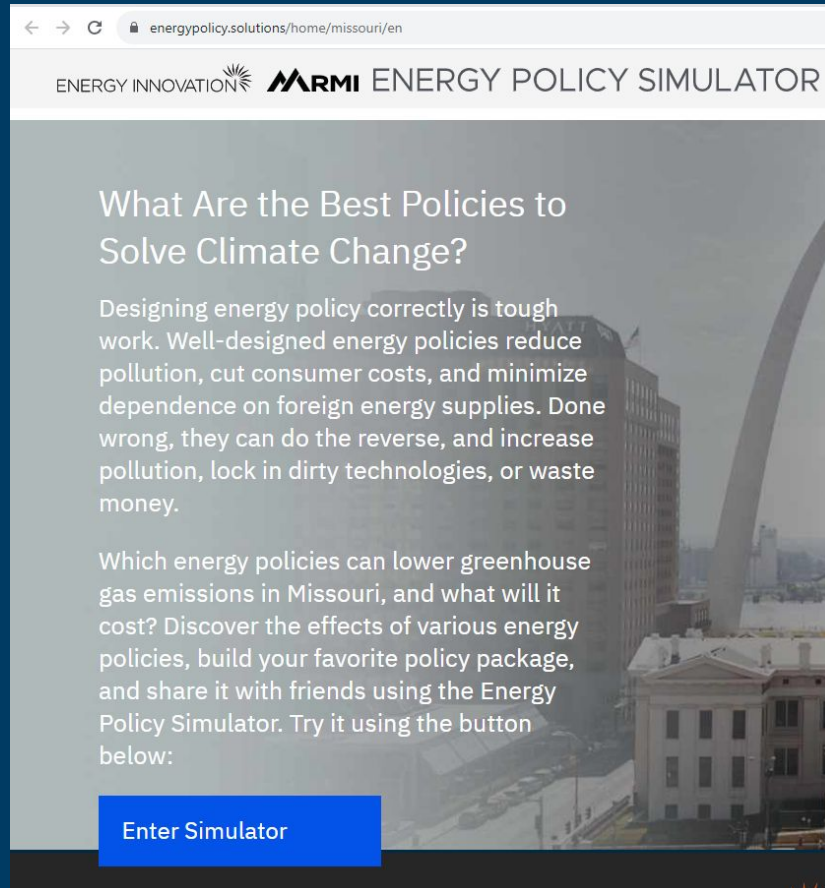
EPS ability: estimates air pollution, public health, and economic impacts



The EPS can estimate the air pollution, public health effects, and economic benefits of policy.

CPRG requirement: public and community engagement

EPS ability: free, transparent, documented, open-source



energypolicy.solutions/home/missouri/en

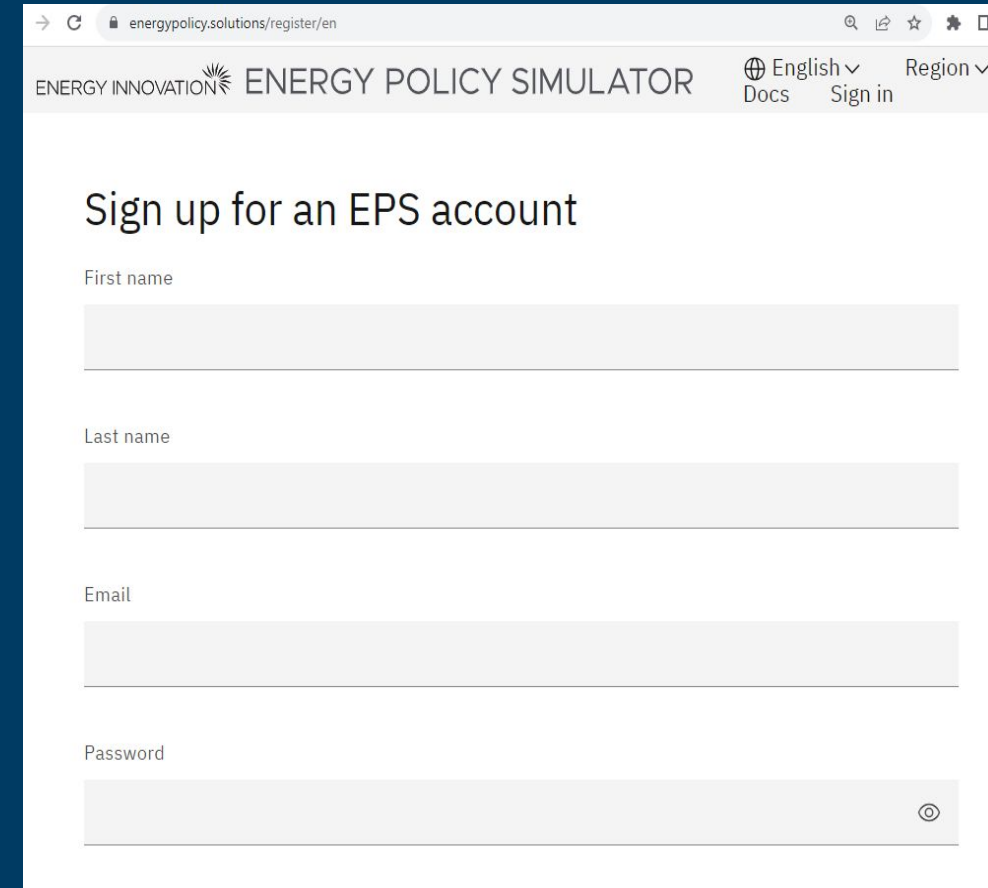
ENERGY INNOVATION **ARMi** ENERGY POLICY SIMULATOR

What Are the Best Policies to Solve Climate Change?

Designing energy policy correctly is tough work. Well-designed energy policies reduce pollution, cut consumer costs, and minimize dependence on foreign energy supplies. Done wrong, they can do the reverse, and increase pollution, lock in dirty technologies, or waste money.

Which energy policies can lower greenhouse gas emissions in Missouri, and what will it cost? Discover the effects of various energy policies, build your favorite policy package, and share it with friends using the Energy Policy Simulator. Try it using the button below:

[Enter Simulator](#)



energypolicy.solutions/register/en

ENERGY INNOVATION **ARMi** ENERGY POLICY SIMULATOR

English Docs Sign in Region

Sign up for an EPS account

First name

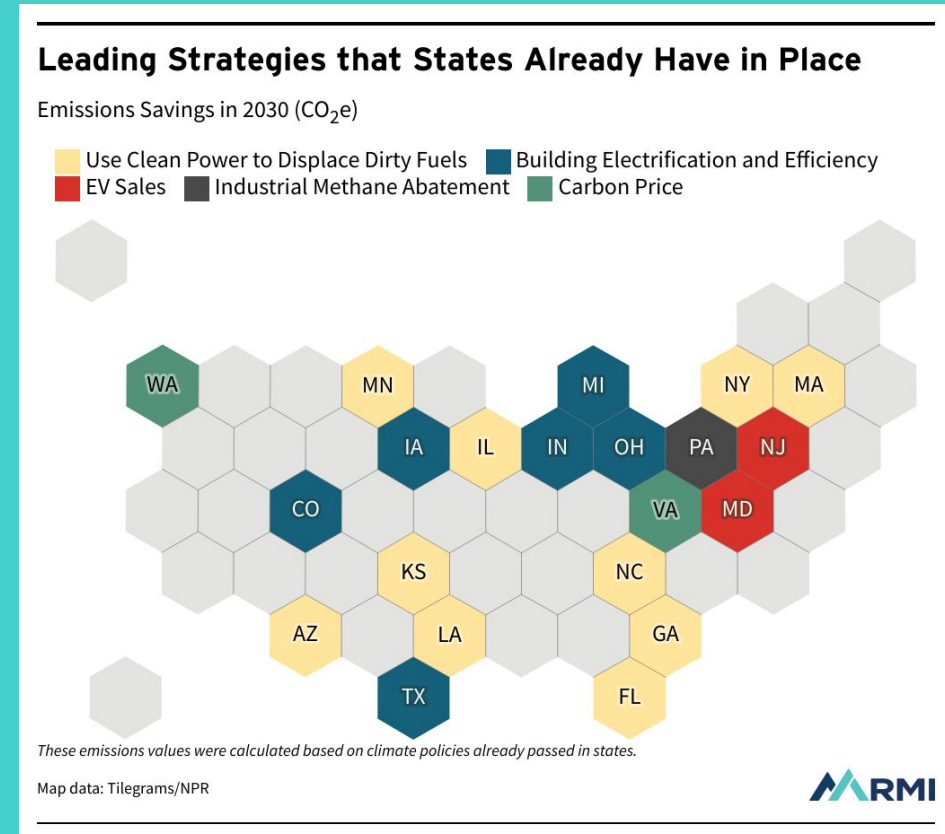
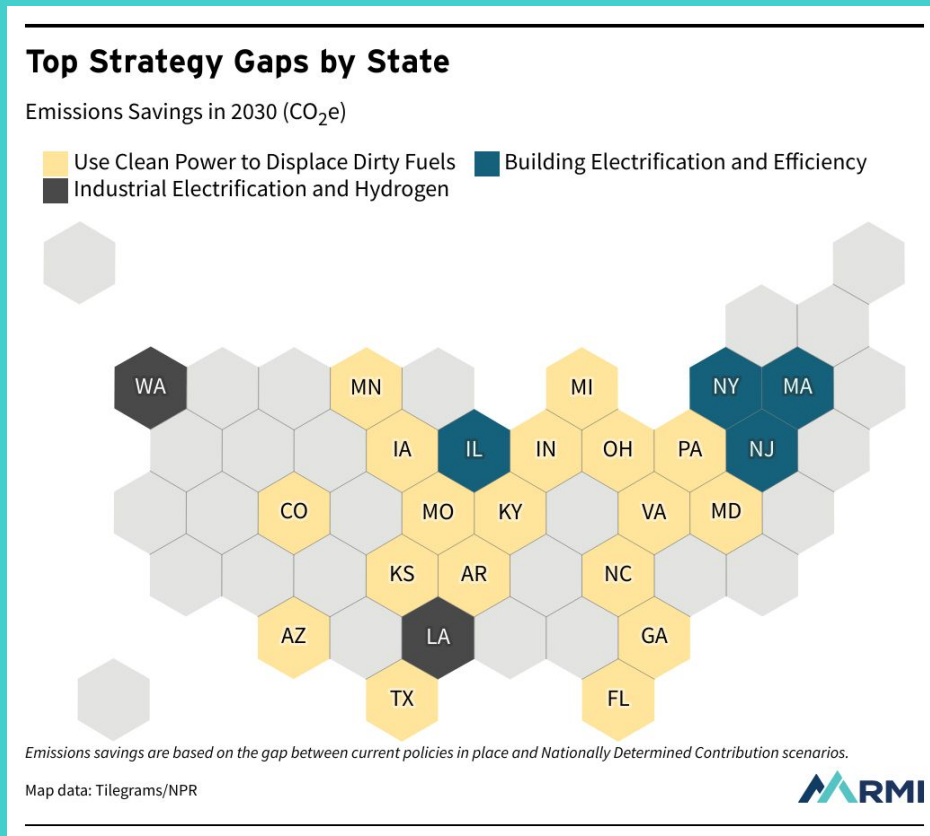
Last name

Email

Password

Because the EPS is **free** to use, transparent, documented, and open-source it can help build trust with communities and the general public.

EPS can be used to isolate the effect of policies, find gaps, and identify leading examples.



* Results from this analysis are embargoed until Nov. 15

Any questions about the presentation?

EPS Demo

Relevant links:

Models Page

<https://rmi.org/energy-policy-simulator/>

State EPS Model Documentation

<https://docs.energypolicy.solutions/us-state-eps-methodology>

Two-page Summary

[why use the eps for cprg fall 2023.pdf \(rmi.org\)](#)

Introductory Training Recording

<https://www.youtube.com/watch?v=xSzHepylwGY>

USanalysis@rmi.org

Speaker

Justin Balik



State Program Director
Evergreen Action

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Climate Pollution Reduction Grants

Accelerating State Policy Leadership and Innovation

Program Background

CPRG Program Context

- Inspired by the State Clean Energy Grants in President's American Jobs Plan
- For entities to work together to create comprehensive plans to reduce pollution, maximize benefits — esp. for disadvantaged communities
- Provide states, Tribes, municipalities, air pollution control agencies with flexible planning resources
- Drive transformative and scalable decarbonization efforts in key sectors
- **Two different components parts and timelines**
 - Planning Grants: \$250 million, portion of which available by formula to all states – to develop climate pollution reduction strategies, opt-in deadline
 - Implementation Grants: \$4.6 billion in competitive solicitation – to put part of plan into action

Evergreen/RMI Joint **Recommendations**

Why this Program Matters

- States can deploy these grants to sprint ahead towards a just clean energy economy.
- The federal rules and \$\$ programs will help create sustained market demand for cleaner technologies
- The CPRG funds can be used to ensure that states unlock these benefits by providing the planning needed and by deploying state-controlled funds in the geographies and sectors that need them most

EPA Program Objectives

- Stimulate transformation toward a decarbonized economy and demonstrate approaches that are replicable
- Benefits accrue to low-income and disadvantaged communities,
- Support measures for which dedicated funding or financing from other sources is unavailable or that leverage other sources of public and private funding
- Achieve GHG emission reductions that are long-lasting and certain
- Incorporate high labor standards, emphasize job quality, and support equitable workforce development
- Ensure accountability by providing clear assumptions, metrics, timelines, authorities, and budget details

Key Dates

1. **March 1, 2024:** PCAP's due to EPA
2. **April 1, 2024:** Implementation Grant applications due
3. **July 1, 2024:** Award decisions made by EPA (anticipated)
4. **October 1, 2024:** Awards made (anticipated)

Tier	Grant Ranges	Funds Per Tier	Number of Expected Grants
A	\$200,000,000 – \$500,000,000	\$2 billion	4-10
B	\$100,000,000 – \$199,999,999	\$1.3 billion	6-13
C	\$50,000,000 – \$99,999,999	\$0.6 billion	6-12
D	\$10,000,000 – \$49,999,999	\$0.3 billion	6-30
E	\$2,000,000 – \$9,999,999	\$0.1 billion	10-50

Recommendations for States

Recommendations for State PCAPS

- Raise ambition, develop new goals, and identify the policies needed
- Unify state governments and stakeholders around accelerated and deepened commitments across the most heavily polluting sectors of the economy, including power, transportation, buildings, and industry.
- Target the biggest sources of emissions and gaps in projected progress.
- Understand what existing federal incentives and grants exist to better support new ambitious policies. Projects with incentives gaps are powerful places to focus on during the planning process, in addition to identifying approaches to strategically align disparate funding sources.
- Thoroughly engage partners, including municipalities, air pollution control agencies, and Tribal governments, as well as community-based organizations that serve disadvantaged communities.

Recommendations for Implementation Grant Applications

- Transform a single economic sector, while linking together opportunities and prioritizing innovation
- Collaborate with other states
- Fill gaps to unlock additional federal funding
- Prioritize disadvantaged communities
- Support high-quality, good-paying jobs
- Enact and advance supportive and ambitious state policies:
 - Increased clean electricity standards
 - New transportation electrification commitments and incentive programs
 - Zero-emission appliance standards for space and water heating and all electric building codes
 - Industrial facility emissions standards

Recommendations for EPA

Recommendations for Funding Awards

- Align awards with the Biden Administration's regulatory agenda
- Coordinate with other agencies so CPRG is maximally impactful
- Reward states for pursuing solutions to their most pressing GHG issues.
- Consider addressing enabling conditions for state success like transmission buildout and workforce strategies

Q&A

Thank you for joining!

**Reach out to
kristen@climate-xchange.org with any
additional questions!**

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