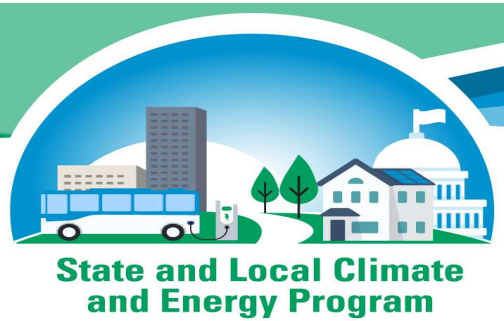
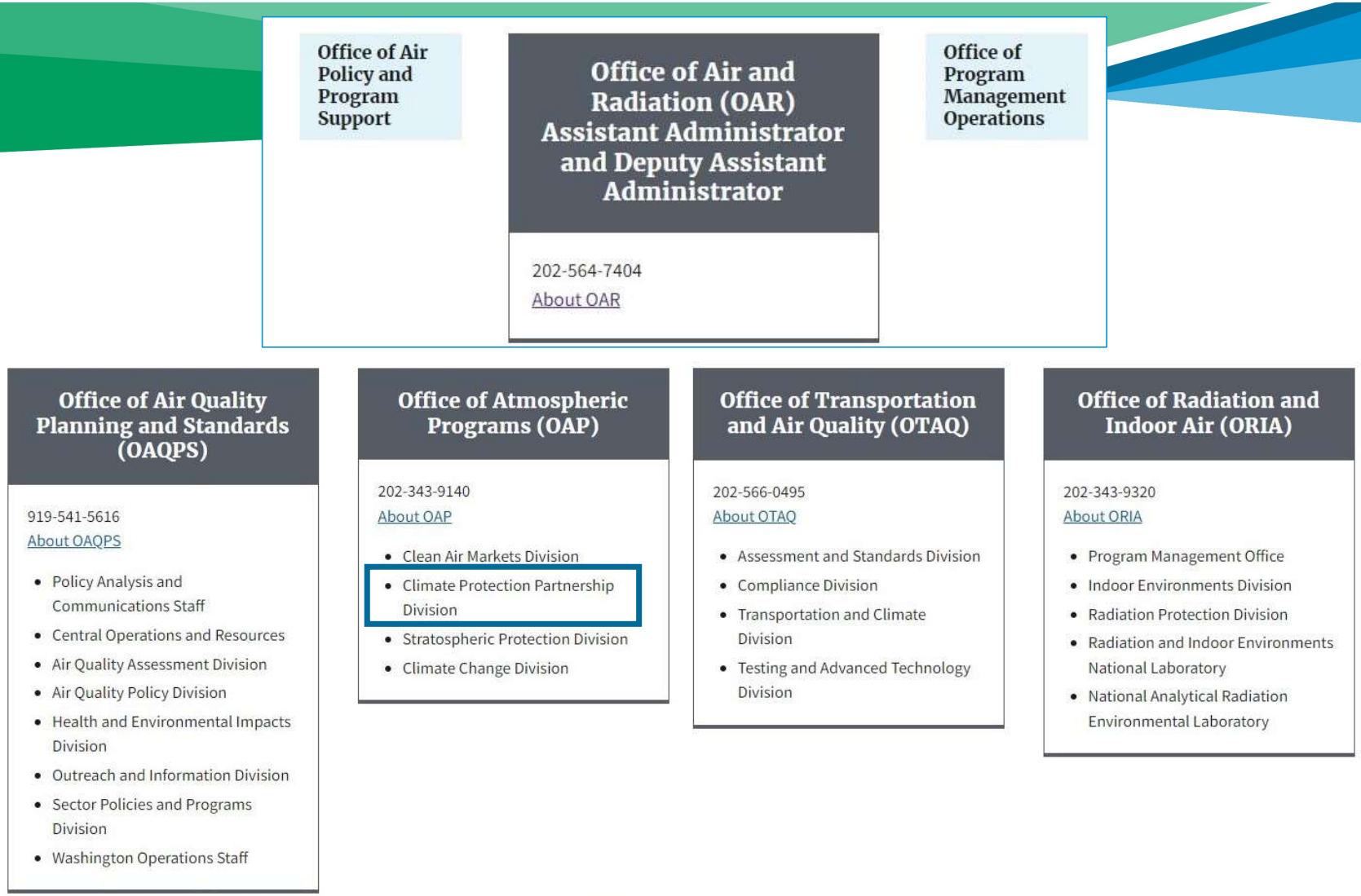


EPA Climate Protection Partnership Resources for State Energy Offices

September 27, 2022


Office of Air Policy and Program Support
Office of Air and Radiation (OAR) Assistant Administrator and Deputy Assistant Administrator
202-564-7404
About OAR
Office of Program Management Operations
Office of Air Quality Planning and Standards (OAQPS)
919-541-5616
About OAQPS
Policy Analysis and Communications Staff
Central Operations and Resources
Air Quality Assessment Division
Air Quality Policy Division
Health and Environmental Impacts Division
Outreach and Information Division
Sector Policies and Programs Division
Washington Operations Staff
Office of Atmospheric Programs (OAP)
202-343-9140
About OAP
Clean Air Markets Division
Climate Protection Partnership Division
Stratospheric Protection Division
Climate Change Division
Office of Transportation and Air Quality (OTAQ)
202-566-0495
About OTAQ
Assessment and Standards Division
Compliance Division
Transportation and Climate Division
Testing and Advanced Technology Division
Office of Radiation and Indoor Air (ORIA)
202-343-9320
About ORIA
Program Management Office
Indoor Environments Division
Radiation Protection Division
Radiation and Indoor Environments National Laboratory
National Analytical Radiation Environmental Laboratory

Climate Protection Partnerships Division (CPPD)

- ENERGY STAR
  - Products
  - New Homes
  - Commercial Buildings
  - Industrial
- State and Local Climate and Energy Branch
- Energy Supply and Industry Branch

EPA's Climate Protection Partnerships Division

ENERGY STAR

State and Local Climate and Energy Program

EPA GREEN POWER PARTNERSHIP

EPA CENTER FOR CORPORATE CLIMATE LEADERSHIP
U.S. Environmental Protection Agency

EPA CHP COMBINED HEAT AND POWER PARTNERSHIP

State and Local Climate and Energy Program

Our Tools and Resources Support State, Local and Tribal Stakeholders on Climate and Energy

Develop Inventories and Set Goals

GHG INVENTORY TOOLS
State
Local
Tribal

State Inventory and Projection Tool
Develop and update inventories for 11 sectors. Forecast emissions through 2050

Local Inventory Tool
Develop community-wide inventories or inventories of local government operations only

Tribal Inventory Tool
Develop community-wide inventories or inventories of tribal government operations only

Design, Compare, or Evaluate Policy

AVERT

AVoided Emissions and geneRation Tool
Evaluate changes in power plant emissions from energy policy

COBRA

Co-Benefits Risk Assessment Health Impacts Screening and Mapping Tool
Quantify and monetize health impacts of reducing emissions

HEALTH BENEFITS per kilowatt-hour

Health Benefits per kWh
Estimate the health benefits per kWh of clean energy

ESIST Energy Savings and Impacts Scenario Tool

Energy Savings and Impacts Scenario Tool
Analyze energy savings, costs, and multiple benefits from energy efficiency programs

Communicate and Support Policy Implementation

CO_2 Greenhouse Gas Equivalencies CALCULATOR

Greenhouse Gas Equivalencies Calculator
Convert a unit of energy to the equivalent amount of CO_2 emissions from using that amount

HEAT ISLAND REDUCTION PROGRAM

Heat Island Reduction Program
Resources to implement heat island mitigation policies and projects

Technical Support
Provide 1-1 technical support for state, local and tribal stakeholders

Convene Stakeholders
Engage state, local and tribal decision-makers

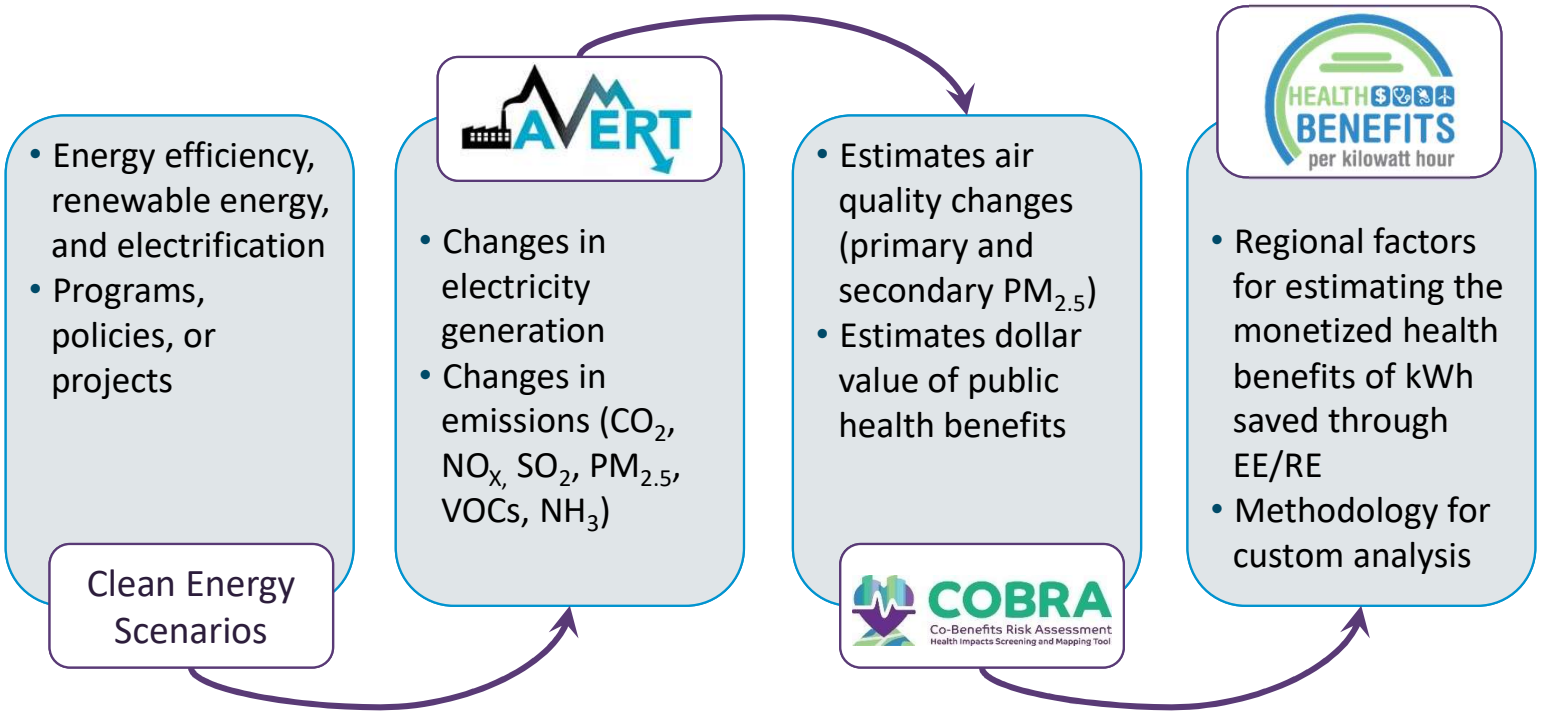
Local Action Framework:
A Guide to Help Communities Achieve Energy and Environmental Goals

State Energy and Environment Guide to Action: A best practices guide to help states design and implement policies that reduce emissions from electricity generation and energy consumption

Quantifying the Multiple Benefits of Energy Efficiency and Renewable Energy:
A Guide for State and Local Governments

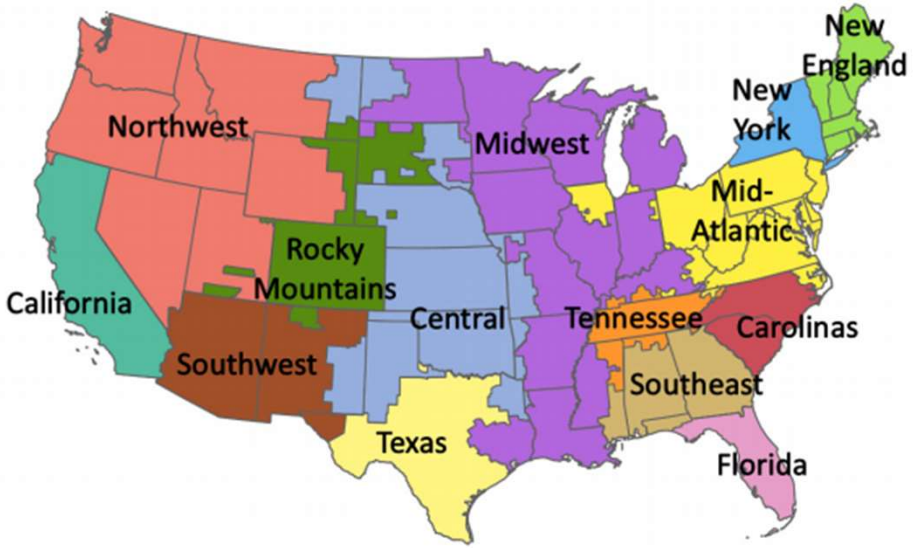
Local Government Climate and Energy Strategy Series:
A Guide to Developing and Implementing Greenhouse Gas Reduction Programs

EPA offers a suite of tools for quantifying electricity, emissions, air quality, and health impacts of clean energy



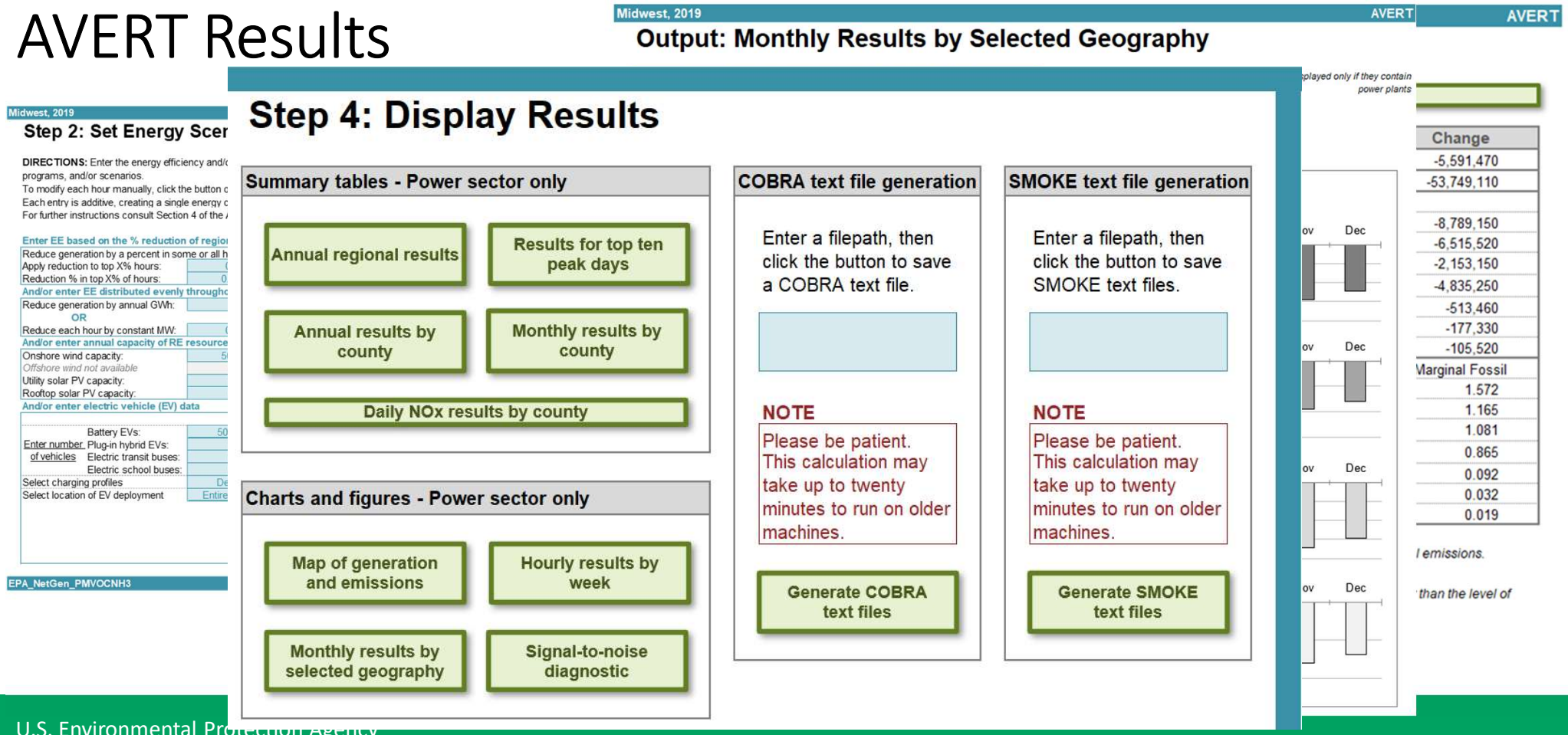
AVERT Details

- Free, easy to use:
  - Policy, program, and project analysis
- Excel & Web Editions
- Default load profiles for EE/RE
- Produces hourly marginal emissions (CO_2, NO_x, SO_2, $PM_{2.5}$, VOCs, NH_3)
- Annually updated
- EVs (coming soon…)



For more info: https://www.epa.gov/avert
Or search: "EPA AVERT"

AVERT Results



What is COBRA?

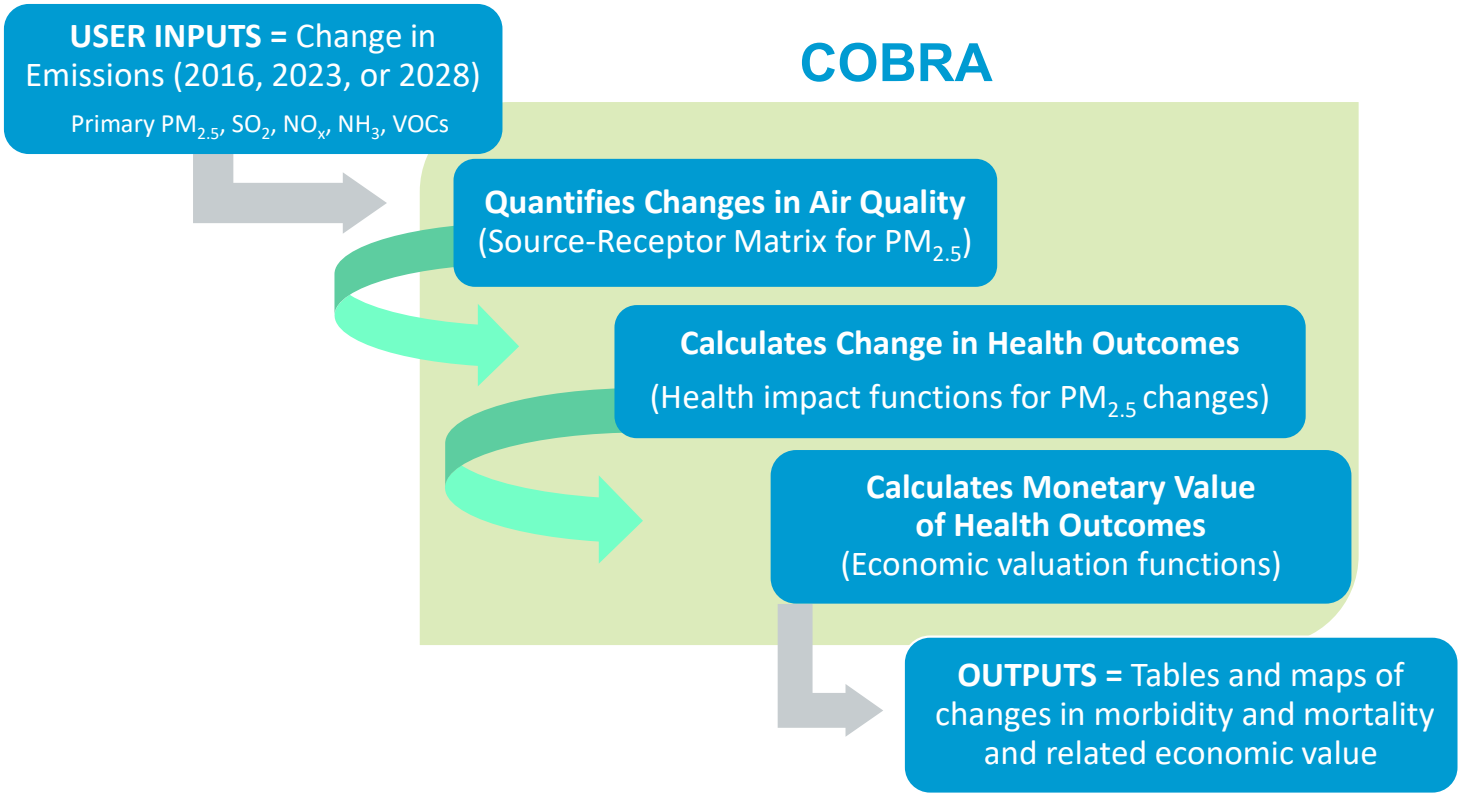
Free, easy-to-use, peer reviewed screening model that quickly:

Estimates county-level **health impacts** from changes in criteria air pollutants that affect $PM_{2.5}$ concentrations

Monetizes the **economic value** of those benefits

Presents results in **tables and maps** that facilitate visualization of the results

How does COBRA work?



COBRA Results

B. Map of Health Effects and Air Quality Results

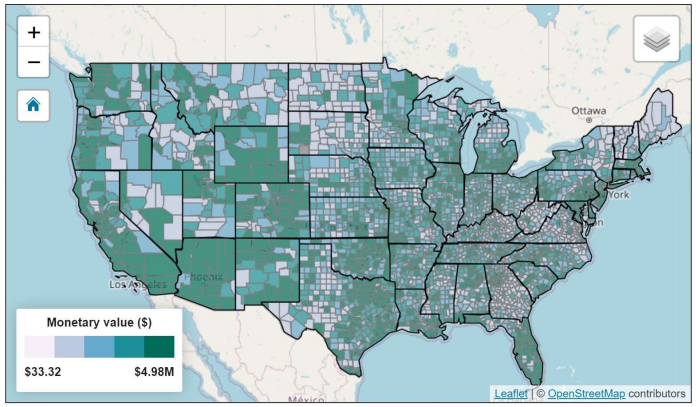
Below is a map showing health effects and air quality data based on your scenario.

Use the filter below to change the map's data layer. Click on a county on the map to explore the data.

Select the map's data layer:

Total Health Benefits ($, high estimate)

Displaying: Total Health Benefits ($, high estimate)



Step 3: View Results

BUILD NEW SCENARIO

A. Summary of Health Effects Results

Below is a table with the health effects results based on your scenario.

You are viewing results for all contiguous U.S. states. This is because changes in air quality can impact health endpoints in multiple locations due to the transportation of emissions across state and county lines.

Use the filters below to see health effects for a specific state or county.

1. Filter by state: All contiguous U.S. states

2. Filter by county: (optional) All counties

Results for: All Contiguous U.S. States

Export: All results | Current filter

Health Endpoint	Change in Incidence (cases, annual)		Monetary Value (dollars, annual)	
	Low	High	Low	High
Mortality *	3.577	8.107	$39,142,459	$88,710,872
Nonfatal Heart Attacks *	0.373	3.466	$59,813	$555,765
Infant Mortality	0.021	0.021	$261,254	$261,254
Hospital Admits, All Respiratory	0.848	0.848	$31,461	$31,461
Hospital Admits, Cardiovascular **	0.810	0.810	$41,467	$41,467
Acute Bronchitis	5.420	5.420	$3,345	$3,345
Upper Respiratory Symptoms	97.827	97.827	$4,180	$4,180
Lower Respiratory Symptoms	68.868	68.868	$1,860	$1,860
Emergency Room Visits, Asthma	1.886	1.886	$1,062	$1,062
Asthma Exacerbation	102.390	102.390	$7,598	$7,598
Minor Restricted Activity Days	2,808.367	2,808.367	$246,195	$246,195
Work Loss Days	476.860	476.860	$95,461	$95,461
Total Health Effects			**$39,896,156**	**$89,960,521**

* The Low and High values represent differences in the methods used to estimate some of the health impacts in COBRA. For example, high and low results for avoided premature mortality are based on two different epidemiological studies of the impacts of $PM_{2.5}$ on mortality in the United States.

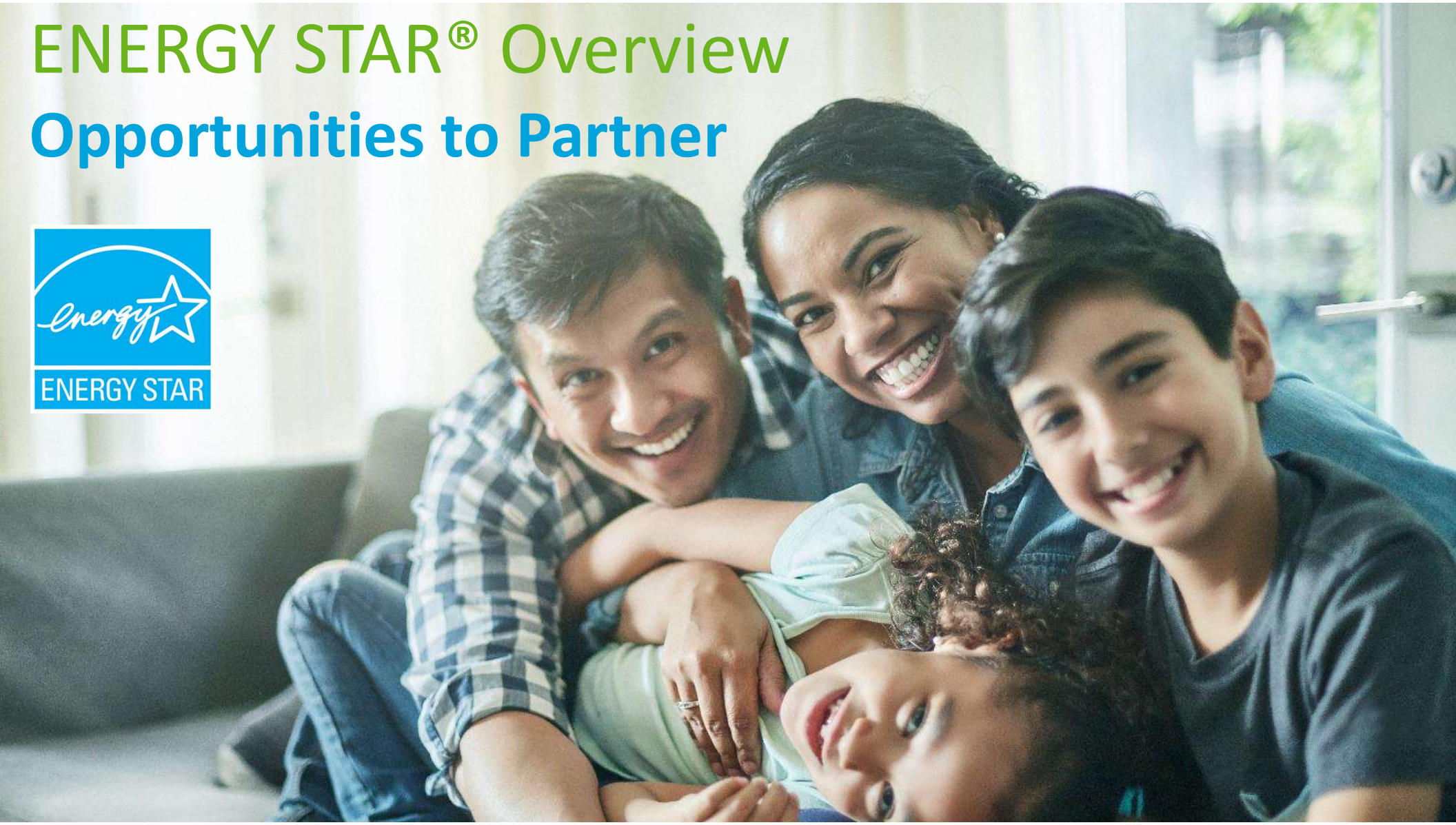
** Except heart attacks.

Technical Assistance

- Customer service on tools
- Webinars, trainings, and office hours
- One-on-one assistance
  - Emissions analysis beyond these tools
  - Co-benefits analysis support
  - Energy equity
- States we worked with in the last year:
  - Michigan, Minnesota, Illinois, Connecticut, North Carolina, California

ENERGY STAR® Overview

Opportunities to Partner



Strong Brand Identity & Awareness & Value to Partner Brands

In American Households:

MORE THAN **90%** RECOGNIZE THE ENERGY STAR® LABEL

NEARLY **85%** UNDERSTAND WHAT IT MEANS

IN THE PAST YEAR **45%** PURCHASED ENERGY STAR-LABELED PRODUCTS

OF THESE PURCHASERS

74% were influenced by the label in their decision

80% are likely to recommend ENERGY STAR to a friend

\+ ENERGY STAR = **60% INCREASE** IN CLICK-THROUGH-RATE

Customer Segmentation & Consumer Research

- About 50% of all households are currently saving/intending to save energy
- ENERGY STAR is a trusted resource for energy savings and electrification among all segments, including unengaged

Segment A: **OLD SCHOOL ENERGY SAVERS**		Segment B: **STRIVING ENERGY INTENDERS**	Segment C: **EMERGING ENERGY INTENDERS**	Segment D: **ENGAGED ENERGY INTENDERS**	Segment E: **ENERGY SAVING ADVOCATES**
60+	35 – 44	35 – 44	25 – 34	35 – 44	55+
$100K+ Income		$30K – 75K Income	$75K+ Income	$100K+ Income	$100K+ Income
Homeowner		Renter	Homeowner	Homeowner	Homeowner
Empty nest	1+ Children at home	Single	1+ Children at home	1+ Children at home	1+ Children at home
Retired		Intend to purchase a home in 3 years			Within 5 – 10 years of retirement

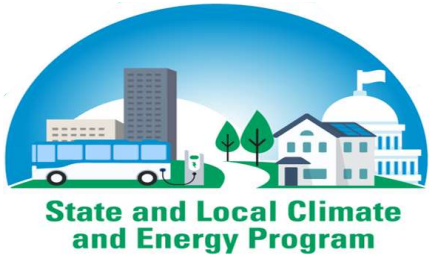
Resources & Marketing Materials for Consumers & Partners at energystar.gov

ENERGY STAR Home Upgrade

- A set of six generally applicable, high-impact, electric energy-efficiency improvements that can be made as equipment is replaced.
- Measures include ENERGY STAR certified:
  - Heat Pump
  - Heat Pump Water Water
  - Smart Thermostat
  - High-Performing Windows or Storm Windows
  - Well-Insulated and Sealed Attic
  - Electric Ready

On average, a homeowner could save approximately $500 a year on utility bills if installing all measures in the ENERGY STAR Home Upgrade

Contact Information



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