

US EPA ARCHIVE DOCUMENT

Clean Energy Analysis Tools

Tools/Organization	Type	Description	Inputs	Outputs	URL/Source
Tools for Assessing Building Performance					
Portfolio Manager (ENERGY STAR)	Web-based tool	<ul style="list-style-type: none"> Enables states to rate their facilities' energy performance and identify priority opportunities. Assists states in applying for the ENERGY STAR label for facilities scoring 75 or higher. 	<ul style="list-style-type: none"> Facility space type. Meter information. Energy type. Energy use. 	<ul style="list-style-type: none"> ENERGY STAR energy performance rating (1–100). Portfolio profile, including information on status, progress, financials, performance, environment, and energy intensity. 	http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager
Target Finder (ENERGY STAR)	Web-based tool	<ul style="list-style-type: none"> Allows states to assess the design of new buildings and compare simulations with existing buildings, based on data provided. Helps set energy performance goals and receive an energy rating for design projects. 	<ul style="list-style-type: none"> Facility location, type, size, occupancy, number of computers, and operating hours per week. Energy target rating or energy reduction target, energy source, estimated energy usage, and energy rate. 	<ul style="list-style-type: none"> Projected ENERGY STAR energy performance rating (1–100). Projected energy reduction (%) (from an average building). Projected energy use intensity. Projected annual source energy use. Projected site energy use. Projected energy costs. 	http://www.energystar.gov/index.cfm?c=new_bldg_design.bus_target_finder
Small Business Calculator (ENERGY STAR)	Web-based calculator	<ul style="list-style-type: none"> Estimates a facility's energy intensity and potential energy cost savings from upgrades. 	<ul style="list-style-type: none"> Facility size. Facility type. Previous 12 months energy bill figures. 	<ul style="list-style-type: none"> Energy intensity (energy used per square foot). Potential cost savings from energy efficiency upgrades. 	http://www.energystar.gov/index.cfm?c=small_business.sb_calculate
Life-Cycle Cost Program (National Institute of Standards / Technology)	Computer software	<ul style="list-style-type: none"> Enables states to evaluate alternative designs that may have higher initial costs, using a life-cycle costing method. 	<ul style="list-style-type: none"> Initial and contract costs Base-year energy costs. Maintenance and repair costs. Time period. Emissions inputs. 	<ul style="list-style-type: none"> Costs and benefits of energy and water conservation and renewable energy projects. Economic analyses (net savings, savings-to-investment ratio, rate of return, payback period). 	http://www1.eere.energy.gov/femp/information/download_blcc.html

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Emission Inventory Tools					
Clean Air and Climate Protection Software (National Association of Clean Air Agencies)	Computer software	<ul style="list-style-type: none"> Tracks emission reductions and forecasts emissions from proposed reduction measures. Develops government baseline inventory. 	<ul style="list-style-type: none"> Fuel and energy use by type of source (e.g., coal, solar, wind). Sector information. Emissions factors (default provided) 	<ul style="list-style-type: none"> Equivalent GHG emissions from fuel and electricity use, presented in reports outlined by sector, by location, by source, or by indicator. 	http://www.cacpsoftware.org/
Greenhouse Gas Equivalencies Calculator (U.S. EPA)	Web-based calculator	<ul style="list-style-type: none"> Translates GHG reductions into terms that are easier to conceptualize. States can also use the calculator "in reverse." 	<ul style="list-style-type: none"> Quantity of emission reductions (e.g., metric tons of CO₂ equivalent). 	<ul style="list-style-type: none"> Gallons of gasoline not consumed. kWh of electricity not consumed. Number of cars and light trucks not driven in one year. 	http://www.epa.gov/cleanenergy/energy-resources/calculator.html
e-GRID (U.S. EPA)	Online database	<ul style="list-style-type: none"> Allows states to obtain information on power plants. Develop emissions inventories for buildings. 	<ul style="list-style-type: none"> Year of data. Plant(s) or state(s) of interest. 	<ul style="list-style-type: none"> NO_x, SO₂, CO₂, and mercury, with emissions reported in tons, input and output rates. Generation resources mix, in MWh and percentage. 	http://www.epa.gov/cleanenergy/egrid/index.htm
State Inventory Tool (EPA; under development)	Interactive spreadsheet	<ul style="list-style-type: none"> Enables states to develop GHG emissions inventories 	<ul style="list-style-type: none"> State-specific data (pre-loaded default data used otherwise) 	<ul style="list-style-type: none"> Comprehensive GHG emissions inventory covering multiple industry sources 	http://www.epa.gov/climatechange/wycd/stateandlocalgov/analyticaltools.html
Emissions Forecasting Tool (EPA; under development)	Interactive spreadsheet	<ul style="list-style-type: none"> Enables states to forecast business-as-usual emissions through 2020 	<ul style="list-style-type: none"> State assumptions relating to future growth and consumption patterns 	<ul style="list-style-type: none"> Estimation of future emissions through linear extrapolation of State Inventory Tool output and federal forecasts 	http://www.epa.gov/climatechange/wycd/stateandlocalgov/analyticaltools.html

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Community-Level Energy Saving Tool					
Community Energy Opportunity Finder (Rocky Mountain Institute)	Web-based calculator	<ul style="list-style-type: none"> Helps identify potential community benefits resulting from energy efficiency upgrades and renewable energy opportunities. 	<ul style="list-style-type: none"> Community and building characteristics. Building energy consumption. Energy costs. Emissions data. 	<ul style="list-style-type: none"> Energy savings. Dollar savings. Reductions in CO₂, NO_x, and SO₂ emissions. Job creation. 	http://www.energyfinder.org
Financial and Economic Analysis Tool					
Cash Flow Opportunity Calculator (ENERGY STAR)	Web-based calculator	<ul style="list-style-type: none"> Calculates the amount of equipment that can be purchased using anticipated savings. Compares costs of financing and waiting for cash. 	<ul style="list-style-type: none"> Facility size. Energy costs and savings target Financing rate and term. % savings to be committed to upgrades. 	<ul style="list-style-type: none"> Suggested spending on energy efficiency (\$/ft²). Potential lost savings due to waiting one year to avoid financing. Potential cost of waiting for better interest rate. 	http://www.energystar.gov/ia/business/cfo_calculator.xls