

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	- 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.	- Facility space type. - Meter information. - Energy type. - Energy use.	- 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_portfolioportfoliomanager
Target Finder (ENERGY STAR)	Web-based tool	- 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.	- 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.	- 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	Estimates a facility's energy intensity and potential energy cost savings from upgrades.	- Facility size. - Facility type. - Previous 12 months energy bill figures.	- 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	Enables states to evaluate alternative designs that may have higher initial costs, using a life-cycle costing method.	- Initial and contract costs - Base-year energy costs. - Maintenance and repair costs. - Time period. - Emissions inputs.	- 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	- Tracks emission reductions and forecasts emissions from proposed reduction measures. - Develops government baseline inventory.	- Fuel and energy use by type of source (e.g., coal, solar, wind). - Sector information. - Emissions factors (default provided)	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	Translates GHG reductions into terms that are easier to conceptualize. States can also use the calculator "in reverse."	Quantity of emission reductions (e.g., metric tons of CO₂ equivalent).	- 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	- Allows states to obtain information on power plants. - Develop emissions inventories for buildings.	- Year of data. - Plant(s) or state(s) of interest.	- 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 spread-sheet	Enables states to develop GHG emissions inventories	State-specific data (pre-loaded default data used otherwise)	Comprehensive GHG emissions inventory covering multiple industry sources	http://www.epa.gov/climatechange/wycd/stateandlocalgov/analyticaltools.html
Emissions Forecasting Tool (EPA; under development)	Interactive spread-sheet	Enables states to forecast business-as-usual emissions through 2020	State assumptions relating to future growth and consumption patterns	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	Helps identify potential community benefits resulting from energy efficiency upgrades and renewable energy opportunities.	- Community and building characteristics. - Building energy consumption. - Energy costs. - Emissions data.	- 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	- Calculates the amount of equipment that can be purchased using anticipated savings. - Compares costs of financing and waiting for cash.	- Facility size. - Energy costs and savings target - Financing rate and term. % savings to be committed to upgrades.	- 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