

# Calculators to Help Measure Sustainable Purchasing Outcomes

In collaboration with UN Environment and the Sustainable Purchasing Leadership Council (SPLC), Industrial Economics, Inc. (IEc) researched calculators that can assist organizations in quantifying the benefits (or outcomes) of sustainable purchasing activities. The table on the next page contains 39 existing calculators that allow users to enter their own data and calculate environmental and economic benefits, and provides a link to the calculator, and information on the product/service category and environmental and economic benefits addressed by the calculator. These calculators cover a range of product categories and benefits, as shown in the table.

While these calculators are useful in analyzing benefits, users should be careful in their analyses, and understand that using these calculators often require adjunct analyses to produce meaningful estimates. Users should understand the following:

- It is important to pay attention to the unit of analysis that each calculator requires; often, the user needs to make assumptions on the differences between a sustainable product and a conventional product.
- While a few calculators define sustainable products as those that comport with specific standards (e.g., the EPEAT calculator), most do not. When users are interested in understanding the benefits of specific standards and ecolabels, but available calculators are not standard-specific, users need to analyze whether the definition of sustainable product used by the calculator meets the definition used by the standard, and adjust their analyses accordingly.
- Each calculator addresses different product categories and benefit types, and each uses different underlying methodologies to calculate impact. Therefore, users should be careful when aggregating benefits across calculators.
- Some calculators are out of date and therefore may not be as accurate as when they were first developed.
- There are gaps in the landscape of calculators available, most notably in measuring social benefits, and benefits to economic and community development. There are also gaps in the product categories that these calculators address.

The sustainable purchasing community would benefit from efforts to update and expand the range of calculators, as they are very useful tools in expressing the results being achieved by sustainable purchasing programs and the delivery of sustainable products. If you know of other relevant calculators, please send us an email and we will add to the list and continue to update this summary.



IEc is a consulting firm jointly owned by its Principals, and trusted by a wide range of clients in government, business, and not-for-profit organizations. Our team of 130 people brings together sustainability program expertise and a 30-year history of public policy analysis, economic analysis, and measurement and evaluation experience to help our clients deliver on sustainable strategy development, implementation, measurement, and communications.

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## SUSTAINABLE PURCHASING BENEFITS CALCULATORS

TOOL NAME	ORGANIZATION	ENVIRONMENTAL BENEFITS ESTIMATED	ECONOMIC BENEFITS ESTIMATED	PRODUCT/ SERVICE CATEGORY
<a href="#">Building for Environmental and Economic Sustainability (BEES) Software</a>	NIST Engineering Laboratory	greenhouse gas emissions reduction, improves water quality, promotes efficient use of materials, improves air quality, maintains biodiversity, improves water efficiency, improves human health, improves air quality, decreased ecological toxicity	cost savings	Building & Construction
<a href="#">Buy Smart</a>	Green ProcurA, European Commission	--	cost savings	Appliances, Electricity/Energy, Electronics, Lighting, Multiple, Transportation
<a href="#">Campus Carbon Calculator (CarbonMAP)</a>	Clean Air Cool Planet	greenhouse gas emissions reduction	--	Multiple
<a href="#">Carbon Counter</a>	MIT Trancik Lab	greenhouse gas emissions reduction	cost savings	Cars
<a href="#">Carbon Footprint Calculator</a>	Hewlett Packard (HP)	greenhouse gas emissions reduction	cost savings	Electronics
<a href="#">Carbon savings calculator</a>	GPP 2020, European Commission	greenhouse gas emissions reduction	--	Electricity/Energy, Lighting, Transportation
<a href="#">Carbon savings calculator for ICT-Office equipment</a>	GPP 2020, European Commission	greenhouse gas emissions reduction	cost savings	Electronics
<a href="#">Carbon Value Analysis Tool (CVAT)</a>	World Resources Institute	greenhouse gas emissions reduction	--	Multiple
<a href="#">Catalan Government's GHG emissions calculator</a>	Catalan Government, Catalan Office for Climate Change	greenhouse gas emissions reduction	--	Multiple

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<a href="#">Clean Fleet LCC tool</a>	Clean Fleets consortium, c/o ICLEI	greenhouse gas emissions reduction	cost savings	Transportation
<a href="#">Conversionator</a>	National Recycling Coalition	Calculates outcomes of recycling paper (number of trees saved), Aluminum cans (energy saved), Glass bottles (energy saved), Plastic (fibres)	--	Paper, Aluminum cans, Glass, Plastic.
<a href="#">Electronics Environmental Benefits Calculator (EEBC) (EPEAT Calculator)</a>	U.S. EPA	promotes efficient use of materials, greenhouse gas emissions reduction, reduces hazardous substances, reduces waste generation, improves air quality, improves water quality	cost savings	Electronics
<a href="#">ENERGY STAR calculators</a>	U.S. EPA and DOE	greenhouse gas emissions, improves water efficiency	cost savings	Appliances, Building & Construction, Electronics, Lighting
<a href="#">ENERGY STAR - HVAC calculators</a>	U.S. EPA and DOE	greenhouse gas emissions	cost savings	Appliances
<a href="#">EnviroCalc</a>	Massachusetts Environmentally Preferable Products (EPP) Procurement Program	greenhouse gas emissions reduction, promotes efficient use of materials, reduces waste generation	cost savings	Multiple
<a href="#">Federal Automotive Statistical Tool (FAST)</a>	U.S. DOE	--	cost savings	Transportation
<a href="#">Flex Fuel Cost Calculator</a>	U.S. DOE	greenhouse gas emissions reduction	cost savings	Transportation
<a href="#">Food Waste Management Cost Calculator</a>	U.S. EPA and Industrial Economics	decreased ecological toxicity, improves air quality, reduces hazardous substances, reduces waste generation	cost savings	Food

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<a href="#">Footprint Manager, Footprint Expert, Value Chain Manager</a>	Carbon Trust	greenhouse gas emissions reduction	cost savings	Multiple
<a href="#">Fuel Savings Calculator</a>	U.S. EPA, Office of Transportation and Air Quality	--	cost savings	Transportation
<a href="#">Green Cleaning Pollution Prevention Calculator</a>	Responsible Purchasing Network	reduces hazardous substances	--	Cleaning Products/Services
<a href="#">Harvard Life Cycle Costing policy and calculator</a>	Harvard University	greenhouse gas emissions reduction	cost savings	Building & Construction
<a href="#">Household Carbon Footprint Calculator</a>	U.S. EPA	greenhouse gas emissions reduction	cost savings	Multiple
<a href="#">Hybrid calculator</a>	Responsible Purchasing Network	greenhouse gas emissions reduction	cost savings	Transportation
<a href="#">Impact Predictor</a>	Impact Measurement Ltd.	--	regional economic development, revenue growth	Multiple
<a href="#">LCC-CO2 tool</a>	ICLEI	greenhouse gas emissions reduction, improves water efficiency, improves air quality	cost savings	Multiple
<a href="#">Life Cycle Cost Tool</a>	Swedish Environmental Management Council	--	cost savings	Multiple
<a href="#">LM3 Online (local economic impact)</a>	Impact Measurement Ltd.	--	regional economic development, revenue growth	Multiple
<a href="#">Measuring Environmental Benefits Calculator (MEBCalc)</a>	Sound Resource Management	greenhouse gas emissions reduction, improves human health, improves water quality, decreased ecological toxicity	--	Waste

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<a href="#">My Plug-in Hybrid Calculator</a>	U.S. EPA, Office of Transportation and Air Quality	--	cost savings	Transportation
<a href="#">Natural Gas Fleet Savings Calculator</a>	Drive Natural Gas Initiative	--	cost savings	Transportation
<a href="#">Paper Calculator</a>	Environmental Paper Network	reduces hazardous substances, greenhouse gas emissions reduction, improves air quality, improves water efficiency, promotes efficient use of materials, reduces waste generation	--	Paper Products
<a href="#">Recycled Content (ReCon) Tool</a>	U.S. EPA	greenhouse gas emissions reduction	--	Multiple
<a href="#">Street Lighting Tool</a>	Super-efficient Equipment and Appliance Deployment (SEAD)	--	cost savings	Lighting
<a href="#">Sustainable Vehicle Procurement Toolkit</a>	PASS (Procurement and Sustainable Supply)	greenhouse gas emissions reduction	cost savings	Transportation
<a href="#">Greenhealth Cost of Ownership Calculator</a>	Practice Greenhealth	--	cost savings	Multiple
<a href="#">Total Cost of Ownership Calculator Tool for Electronics</a>	U.S. EPA	--	cost savings	Electronics
<a href="#">Trip Calculator</a>	U.S. EPA, Office of Transportation and Air Quality	--	cost savings	Transportation
<a href="#">WARM model</a>	U.S. EPA	greenhouse gas emissions, reduced waste generation	--	Waste