



PePS
PROMOTING AN
energy-efficient
PUBLIC SECTOR

PEPS Energy Savings Tool

(version 2.0)

Introduction

Click below to jump to:

[Summary Table](#)

[Summary Graphics](#)

[Input Data \(Elec. prices & Emissions\)](#)

Language **English**

Purpose:

The PEPS Energy Savings Tool is designed to help government agencies and other buyers estimate energy and cost savings from buying energy-efficient equipment.

The tool estimates savings for some of the energy-efficient products often found in government offices:

- computer monitors
- personal computers (PCs)
- printers
- copiers
- fax machines
- compact fluorescent (CFL) lighting
- linear fluorescent lamps and ballasts

Click below to jump to product pages:

[Monitors Page](#)

[PCs Page](#)

[Printers Page](#)

[Copiers Page](#)

[Faxes Page](#)

[CFLs Page](#)

[Linear Fluorescents Page](#)

Other types of equipment may be added in the future.

The spreadsheet was designed to provide a general estimate of energy savings, cost savings, and avoided pollution.

Where a more detailed financial or engineering analysis is required, other methods should be used.

How to Use This Tool:

Each worksheet uses a simple color scheme to distinguish 3 types of data:

Yellow: Default values which the user may change as needed

Orange: Required user-defined values; please enter your input

Green: Calculated results (based on default values and user-defined values)

All monetary values are shown in US\$.

For each product, savings are estimated both for a single unit and for all the units purchased through a multi-year program.

a) The "Unit Savings" page shows annual energy use and annual energy cost for a conventional product and an energy-efficient product.

Review the default values in the yellow "input data" section of the page, then insert your own values, if these are different. The page also show annual savings, in both energy and operating costs.

[NOTE: Default values for the conventional product represent a new "base-case" purchase (not energy-efficient), rather than the performance of the typical existing unit to be replaced.]

If you know (or can estimate) the purchase price of an efficient and a conventional product, this page also calculates cost-effectiveness indicators: simple payback time, lifetime energy cost savings (discounted), and net present value.

b) The "Program Savings" page shows the number of units purchased each year, annual energy and cost savings, and avoided emissions for each year.

Cost savings and pollution savings are based on values entered in the last worksheet page: "Input Data:

Electricity Prices and Emissions."

If you can estimate the number of units to be purchased each year, enter these directly in the orange column of the "Calculated Results" table. Otherwise, estimate your annual purchases by entering values in the orange cells of the "Input Data" section (at the top of this page).

There are 2 sets of savings numbers for each year.

The first one shows annual savings for that single year of purchases.

The second set of numbers is the savings in that year for all purchases made to date.

(In other words, Year 1 includes savings from a single year of purchases; Year 2 includes savings from purchases made in both Year 1 and Year 2, etc.)

Each product worksheet uses input data for electricity prices and powerplant emissions factors as shown on the last page of this spreadsheet.

If you know your electricity prices and emissions factors (reduction in pollutants for each kWh saved) enter these values. Otherwise, look up the suggested values for your country in Table 2, or use the existing default values (defaults are based on US electricity prices and emissions factors)

Summary Pages:

The next two pages in this spreadsheet show summary results for all products, in a

[Summary Table and graphics.](#)

Additional Resources:

Examples of other savings calculators, with somewhat different default-assumptions, can be found on-line at:

http://www.energystar.gov/index.cfm?c=bulk_purchasing.bus_purchasing (click on the savings calculator in Column 2)

http://www.eere.energy.gov/femp/technologies/eep_eccalculators.cfm

<http://www.iclei.org/co2/index.htm> (for participants in the ICLEI Cities for Climate Protection Campaign)

User Feedback:

We will continue to refine the PEPS Energy Savings Tool based on feedback from users.

Please send your comments and suggestions to:

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Acknowledgments:

The initial version of the PEPS Energy Savings Tool was developed by Ms. Jun Tian, a graduate student working at the Lawrence Berkeley National Laboratory office in Washington, DC

Credit for much of the conceptual work and all the design and programming is due Ms. Tian; any errors arising from subsequent