DOE BUILDINGS PERFORMANCE DATABASE
FUELING INVESTMENT IN ENERGY EFFICIENCY

Air Handler Retrofit—Commercial Building

The DOE Buildings Performance Database is a decision-support platform comprised of a database and data analysis tools that enables engineering and financial practitioners to evaluate energy efficiency products and services in commercial and residential buildings.

The scenario described below highlight the Database's ability to evaluate a commercial energy efficiency project. It is based on the commercial building data currently contained in the database and will demonstrate the capabilities of the energy performance tool. As additional building performance data is added to the Database, additional scenarios will be developed to assist users in making informed investment decisions in energy efficiency projects.

Commercial Cooling Efficiency Retrofit

Select the following input parameters to generate an energy usage forecast analysis on a commercial air handler retrofit.

Classification Screen Selection

Energy Usage Forecast | Financial Risk Management Analysis

Location Screen Selection

Select an Item

- Zone: 1A (272)
- Zone: 2A (450)
- Zone: 3B (437)
- Zone: 4A (1474)
- Zone: 5B (198)

Building Information Selection

Square Footage

Facility Type	Multi-select All *Office* Types
Square Footage (Sq. Ft.)	Min. 90,000 Max 300,000
Cooling Fuel Type	Electricity
Cooling System Type	Chiller

Retrofits Page Selection

Air Handling

Retrofit Type	Air Handling
Pre-Retrofit Characteristics	CAV
Post-Retrofit Characteristics	VAV

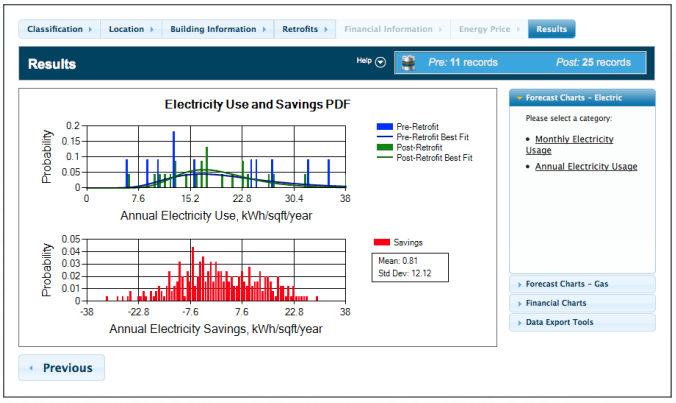
Results

After selecting the designated inputs, the Results tab displays a series of helpful charts based on your search parameters and building specifications. Here we examine the Annual Electricity Usage results.

Energy Savings—Annual Electricity Usage

The charts below represent the annual electricity savings for the air handling retrofit. The top chart shows the probability distribution of the energy consumption for the pre-retrofit consumption (blue line) and post-retrofit consumption (green line). The bottom chart shows the net savings—a convolution of the pre- and post-consumption graphs. If there were more data points in the Database that comprise this retrofit scenario the graphs would be smoother.

Energy Savings—Annual Electricity Usage



For more information visit: http://www.commercialbuildings.energy.gov/bpd.html

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