BERT ENERGY SAVINGS

TYPES OF SAVINGS ESTIMATES AND CALCULATION METHODS

TYPES OF SAVINGS ESTIMATES:

PRELIMINARY SAVINGS SHEET

Initially, a Preliminary Savings estimate is generated to help customers determine whether to proceed with Bert. It's an educated guess about potential energy savings using Bert's exclusive data.

The model calculates the expected number of devices for the most common plug loads by device type and building, using building occupancy hours and standby load data from similar projects and buildings.

AC Units, Electric Hot Water Heaters, Exhaust Fans or Air Handling Units are not included in preliminary estimates because there's no correlation between building type or building size and the number of these devices in a given location. Some projects have lots of devices while other projects have none.

To run an estimate, Bert needs the following data: Building Type, Building Size and Building kWh Rate.

INVESTMENT GRADE AUDIT

Next, Bert performs an Investment Grade Audit which includes a detailed physical inventory of all plug and hardwired loads. Data is presented using the same format as the preliminary estimate, but the actual IGA device counts are used for savings calculations.

In addition, IGA savings estimates often use customer- or ESCO-supplied building occupancy hours to further increase accuracy.

POST-INSTALLATION SAVINGS SHEET

After the Bert hardware is installed, the savings model is re-run using "as-built" quantities, finalized schedules and actual standby loads for each category of device.

Actual kWh and $ savings can be compared to previous estimates. Savings can be analyzed by project, device type and building.

CALCULATION METHODS:

STANDBY LOADS

Bert calculates potential savings using an average hourly standby load. Bert does not assume that any devices will be left in active mode overnight. Actual energy savings for devices such as TVs and AC units that are frequently left in active mode will be significantly larger than Bert's estimate.

BUILDING OCCUPANCY HOURS

Savings are based on the annual number of hours devices will be powered off after Bert is installed. Since daytime usage remains uncontrolled, weekday kWh plays no role in savings estimates. Savings are based solely on Overnight Load reductions.

For most buildings, devices go from being powered on 8,760 hours annually to being powered on roughly 3,000 hours each year, a decrease of 5,760 hours..

DEVICES PER BUILDING

Bert uses proprietary device density factors to predict the expected number of common plug load devices on Preliminary Savings Sheets. The model considers both the type of building and the building size when generating an estimate.

The number of Medium Printers, Large Printer/Copiers, Vending Machines, Coffeemakers and Beverage Dispensers is calculated for all building types, while Projectors and Charging Carts are only included in estimates for educational buildings.

KWH RATE

Higher kWh rates obviously yield shorter paybacks. However, Bert still makes sense in low kWh locations when installed on devices with relatively high standby loads.

Because the IGA captures all devices, Bert can provide specific recommendations about which devices should be controlled to achieve the desired payback period.

Meet BERT Your energy control freak.