



DEVICE & ENERGY MANAGEMENT PLATFORM



- **SBE Founded in 2014; HQ in PA**
- **Originator of Smart Plug Management – Multiple Patents**
- **Distributed Sales, Installation, and Support Teams (U.S.)**
- **350+ Enterprise / Agency Installations**
- **Over 130,000 BERTS in 2000 buildings**
- **Commercial & Industrial Focus**
- **Turnkey Solutions**
- **Customer-centric Product Roadmap**

Company Overview



BERT™ provides the market leading solution for enterprise-level control of plugged-in devices in commercial and institutional buildings.

- Enhances control, reduces energy use, increases efficiency, and saves money for the customer.

BERT controls “Everything Else” in the building outside of major loads like HVAC.

- This represents over 45% of the electricity load in institutional and commercial buildings.

BERT serves educational institutions, government, commercial and institutional property owners and operators.



The plugged in market comprises over 45% of the electricity load in commercial and institutional buildings.

The Small Device Load Problem

BAS systems have become standard in most commercial and industrial buildings, providing meaningful control of power loads within buildings.

However, they are focused on HVAC and other high load equipment, and they don't manage smaller loads that comprise almost half of commercial energy usage.

Small load devices typically consume energy 24/7, even though commercial buildings are unoccupied 60-70% of the time.

This leaves a significant market opening for systems that control small loads day and night.



**Commercial buildings
are unoccupied
60-70% of the time.**

Plug Load Control: A Compelling Energy Efficiency Solution

Significant energy savings potential: Plug loads account approximately 40% of total electrical consumption in commercial buildings.¹

- **Growing importance:** As buildings become more energy-efficient in other areas, plug loads are becoming an increasingly significant portion of overall energy use, expected to increase from 40% to 49% of whole-building energy usage by 2040.¹
- **Efficiency opportunity:** 40% of plug load energy consumption can be reduced through effective management strategies.
- **Additional value opportunity:** Plug load management can support high-value demand response programs.
- **Cost-effective implementation:** Plug load management can be deployed quickly and easily, offering short payback periods and immediate energy savings.

¹ DOE/NREL



Plug loads account approximately 40% of total electrical consumption in commercial buildings.¹

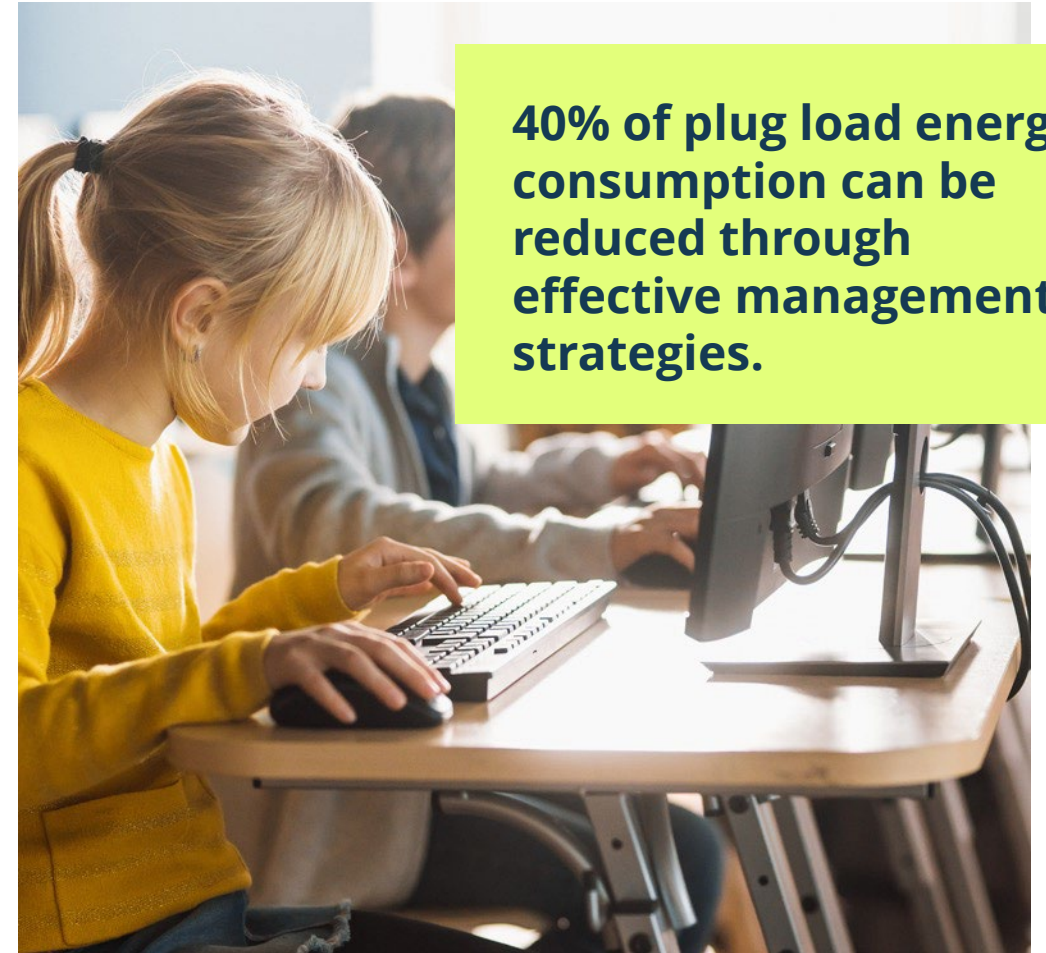
Plug Load Control: A Compelling Energy Efficiency Solution

Versatility and scalability of plug load management:

- Can be applied to a wide range of devices.
- Can be scaled from individual workstations to entire buildings, making it adaptable to various commercial environments.
- Significant savings achievable by controlling both energy hungry devices and lower consumption devices in high volume.

Complementary or Stand-alone: Plug load management can be integrated with existing building automation and energy management systems without requiring expensive renovations or stand alone where these systems do not exist or are outdated.

Legislative Environment: Plug load is being prescribed in new construction in many jurisdictions, as well as when major electrical upgrades are being conducted.



40% of plug load energy consumption can be reduced through effective management strategies.

Compelling Results for Customers

Annual
Savings



280 kWh

Average Annual
kWh Energy
Savings
per Device

Energy
Reduction



30-50%

Reduction in
Energy
Consumption

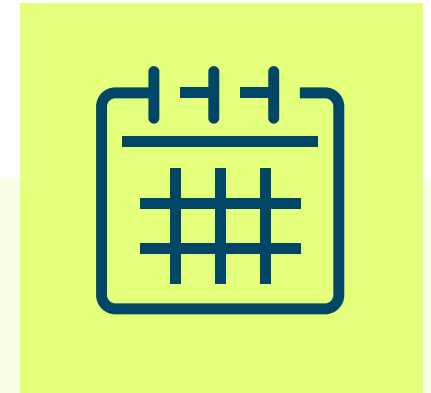
Patents



10

Issued Patents
Protecting
Proprietary Suite of
Offerings

Months for
Payback



6-36

Average Number of
Months to Payback
for Customer



BERT Energy Saving Solution

BERT's Solution

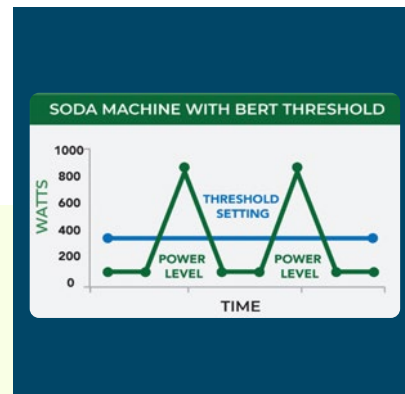


BERT provides enterprise level control of plugged-in devices while monitoring and verifying energy usage, threshold and temperature, and other building data, providing a simple, efficient means to drive energy savings and enabling compliance with regulatory and code requirements.

Hardware



Software



Service



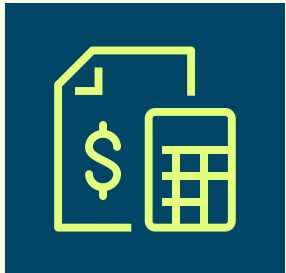
Result

30-50%
Energy
Reduction



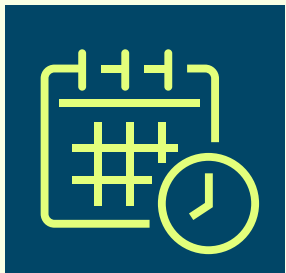
Measurement

Real-time energy usage data and historical power usage by minute, hour, day, month, year and/or user-defined time-period.



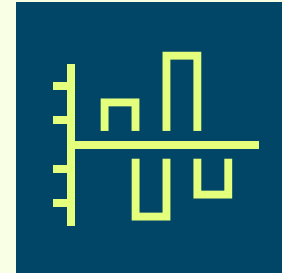
Analysis

Comprehensive reporting system analyzes energy consumption for schedule optimization and savings verification.



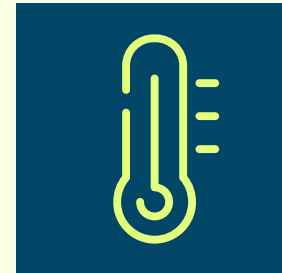
Control

Scheduling logic for mass remote control allowing each building and/or device to have a unique schedule based on building occupancy hours.



Threshold

Protects sensitive equipment such as compressors and projectors from turning off before completing their shutdown cycle.



Temperature

Real-time temperature monitoring and control using high and low set points.

BERT Hardware – Smart Plug Series



Plug-in measurement and control for individual 110V/15A devices.



BERT 110 X

Enhanced
WPA2-Personal
802.11 b/g/n
2.4/5 GHz

Devices Typically Controlled by BERT.



Window AC
Units



Smartboards



Vending
Machines



Printers &
Copiers



Water
Dispensers



Coffee
Makers



Charging
Carts



Projectors

BERT Hardware – Inline Series



Hardwired measurement and control for larger loads at the device, partial or circuit level.

Devices Typically Controlled by BERT.



BERT 120 I
Load Capacity
120V/20A

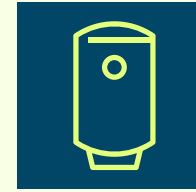
BERT 240 I
Load Capacity
220V/20A

BERT 277 I
Load Capacity
277V/20A



BERT 240 I
Load Capacity
250V/20A

BERT 120 IR
Load Capacity
120V/20A



Hot Water
Heaters



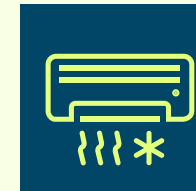
Air
Conditioners



Exhaust
Fans



Refrigeration
Equipment



PTAC Units



Indoor &
Outdoor
Lighting

BERT Integration



**BERT
Supports
RESTful
Service and
BACnet/IP**



BERT DEVICES

Building
Data



Device
Management



BERT CONNECT

Building
Data



Device
Management



BAS UI

Discover BERTs
Stores Building Data for BAS
Translates BAS Commands for BERTs

Extending the Reach of the BAS

Add Load
Shedding of
Smaller Loads

Control
Distributed
AC and AHU
units

Temperature
Data from
any Location

Historic Integration Partners

JCI
Metasys

Schneider
EcoStruxure

Tridium
JACE

Trane
Tracer

The ideal BERT target profile:

- Many plug load devices (500+ devices)
- Existing Wi-Fi network
- Relatively short occupancy hours (< 84 hours/ week)
- A single long-term tenant



Education

- Devices on only during operating hours
- 500+ devices
- Up to 50% energy savings



Office

- Devices on only during office hours
- 300+ devices
- Up to 50% energy savings



Public Assembly

- Devices on only for events
- 200+ devices
- Up to 30% energy savings



BERTBrain.com

Best Energy Reduction Technologies

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