



# EcoCentral Virtual Engineer

Robust Cloud-Based Monitoring & Control to Maximize Efficiency



## The EcoSmart Energy Management Command Center

EcoCentral Virtual Engineer offers a wealth of convenient features, including granular EcoSmart device control, cloud-based data backup, and the ability to process raw data into 25 usable, actionable reports.

Room-by-room data collected by EcoSmart's in-room intelligent energy management technology enables EcoCentral Virtual Engineer to:

- Identify HVAC units that may be malfunctioning, allowing engineering resources to be deployed selectively and proactively while ensuring continuity of comfort.
- Display unit-by-unit/aggregated energy savings reports and track progress toward a defined savings goal.
- Facilitate logical demand-response capability by automatically balancing the load across a specified number of units.
- Communicate with Property Management Systems and Building Management Systems to integrate data points from the complete building infrastructure.
- Create reports to outline EcoSmart system Performance Metrics, track unusual occupancy statistics, and catalog units that have declined in efficiency.

## Do I Need a Virtual Engineer?

EcoCentral Virtual Engineer provides solutions to many common problems.

**I need to dispatch maintenance personnel more effectively.** Virtual Engineer utilizes data from EcoSmart to create room-by-room reports listing HVAC units with unusual runtimes, rooms with high humidity, and more--allowing you to send maintenance staff into rooms more efficiently.

**I have to prove that energy efficiency investments deliver returns.** Virtual Engineer uses real-time energy consumption data from HVAC units, outlets, and lights to generate real time useful, shareable savings reports.

**I need to prevent unscheduled emergency repairs.** Using customized alerts, Virtual Engineer will inform you when HVAC systems are not functioning optimally, allowing you to plan for proactive repairs.

**I have no onsite engineer, or my engineers have too many tasks to accomplish.** For any property without a full engineering staff, Virtual Engineer provides a unique and necessary engineering asset. For properties with highly-skilled engineers, Virtual Engineer helps manage time and priorities.

**I want to utilize information from my current third-party platforms.** Virtual Engineer integrates with Workflow Order Systems to generate work orders and track repairs, and Property Management Systems to detect when rooms are unsold and adjust thermostat settings to allow for deeper energy savings (typically 8% additional energy savings). The data can also integrate with other Building Automation Systems that utilize BACnet communications.



## Telkonet's Efficient Networked Infrastructure

EcoCentral Virtual Engineer functions as a distinct yet integral part of the overall EcoSmart energy management network. The EcoSmart technology deployed in each room is generating considerable amounts of data about the status and performance of each controlled space. This data comes to life through EcoCentral Virtual Engineer:

Intelligent thermostats, occupancy sensors, door and window contacts, switches and outlets form a network to communicate information between rooms, floors, and buildings. Each device functions as a wireless repeater, enabling the thermostats to communicate with each other and aggregate data to a single EcoCommander server, the core of an EcoSmart network. This wireless "mesh" creates a robust, reliable, and self-healing network accessible from EcoCentral Virtual Engineer:



## Proactive Monitoring, Real-Time Control, and Actionable Reports

### Evaluate Equipment Performance

#### *Monitor Capability of In-Room Equipment*

EcoCentral Virtual Engineer assists facility staff in identifying HVAC units that may be malfunctioning; allowing engineering resources to proactively respond to the issue. Often the problem can be fixed without having to physically send a staff member to a room, ensuring continuity of comfort and a positive experience for the occupant.

#### *Enable Standard and Custom Alerts & Emails*

System Status and System Alerts enable facility managers to monitor HVAC issues proactively as well as maintain, repair, and replace necessary components, such as batteries for wireless devices.

### Monitor Total Energy Savings

#### *Watch Progress Toward a Savings Goal with 'EcoCentral Savings Reports'*

EcoCentral Virtual Engineer tracks room-by-room energy savings and stores detailed data about a property's HVAC equipment and energy usage patterns to calculate actual energy savings. Use information from detailed statistics and graphs to qualify for "green" certification, secure rebates from a local utility, or prove a property has achieved brand sustainability standards.

### Facilitate Intelligent Load-Shed Actions

#### *Automated Demand-Response Capability*

Design and pre-load profiles to pre-define how thermostats, outlets, and lights will respond to a Demand-Response request. Schedule "events" in EcoCentral Virtual Engineer and devices will switch to Demand-Response profiles at the appropriate time.

#### *Logical Profile Shifting*

Specify the number of units to run concurrently, and EcoCentral Virtual Engineer will keep load at a constant level. Alternatively, specify the necessary kWh reduction and let EcoCentral determine how to best set back thermostats.

### Control Buildings, Zones, Rooms, or Individual Devices in Real Time

#### *Virtual Thermostats, Light Switches, and Outlets Simplify Control*

Change HVAC settings room by room with the touch of a button on the virtual thermostat.

### Visualize Property Data Points with "Floor Planner"

#### *Illustrate Room-by-Room Variance from Average Runtimes*

View energy savings by floor and savings by side of building. Identify room-by-room variance from average cooling and heating runtimes to determine which rooms do not function as well as others. A high runtime may be isolated to a single room due to a potentially malfunctioning HVAC unit, prompting a maintenance check.

For more information contact a Telkonet representative today. Visit [www.telkonet.com](http://www.telkonet.com) or call 888.703.9398.