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EcoView[®] **Energy Management System**

EcoView Energy Management System



What is it?

- Energy Management Systems (EMS) reduce energy usage and save money by improving the efficiency of a facilities highest-energy-demand equipment, typically:
 - Heating/Ventilation/Air Conditioning (HVAC)
 - Indoor/Outdoor Lighting and Signage
 - Walk-In Refrigerators/Freezers
- Siemens EcoView is an EMS designed specifically to meet the energy management needs of small retail and commercial facilities.
- It is easy to use, quick to install and provides rapid return on investment – typically less than 24 months.

Designed specifically for small retail and commercial businesses

EcoView is designed for:

- Restaurants
- Medical offices
- Retail shops

EcoView is best suited for:

- Facilities of approximately 10,000 ft²
- 6 or less RTUs

A sample of current EcoView customers:



Total systems approach to energy management

EcoView provides complete energy management control for retail and light commercial businesses:

- Software and hardware system components
- Offers interface and control capability via EcoView Web and on-site touchscreen
- Addresses HVAC, lighting and electric metering
- Provides relevant diagnostics and analytics

Fully featured

Features		Benefits
Wireless	✓	Easy installation
Quick installation: 8 hours for core HVAC components & setup*	✓	Less intrusion in customer site, Less expensive installation
Inexpensive	✓	Rapid ROI
Remote monitoring of multiple sites	✓	Visibility across entire enterprise
Real-time energy dashboard supported by actual metered usage	✓	Instantaneous feedback of facility's operating conditions
Alerts	✓	Notification when sites reach energy or set point thresholds; alarms when temperatures or conditions reach pre-set limits

Key Benefits:

Save money, save time



- Reduces energy costs: typical savings range 5 – 15%, often more
 - Allows for energy monitoring, management and control from anywhere, customers can always know what's happening with their building's energy usage
 - Real time feedback via energy meter dial allows for timely notification of energy consumption
- Automates energy savings
 - Owners and managers have a difficult time managing energy consumption manually
 - Most owners can't ride the thermostat or monitor lighting 24/7 while focusing on the core of their business - service
 - Most owners Lack professional facilities management staff or other staff focused on energy
 - Remote alarming and notification an absolute must for mission critical equipment such as refrigeration units

Keep ahead of regulation

- Stay ahead of the regulatory curve:
 - Many local and municipal energy regulations changing due to supply and demand concerns
 - Energy management systems may qualify for local government or utility incentives to assist supply side issues
- Good for the environment
 - Less energy consumption = less carbon emissions

Easy to install and easy to use software and hardware

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EcoView's Key Components

- Touchscreen
- Thermostat
- 8DO Module
- Multi-phase Meter
- EcoView Web
- Mobile Applications



Touchscreen: local interface and control hub

Touchscreen



Full-color, 7-inch, tactile display device serves as

- Master controller
- Internet gateway

Power over Ethernet (POE)

- Provides both power and data
- Provides a simple and robust field installation

Sample Control Screens:

Equipment Temps



Historical Data



Lighting Control



Climate Control



Peripheral components monitor and manage HVAC, lighting and other energy loads

Thermostat



- Wireless - control is accomplished by a Zigbee 802.15.4 link back to the EcoView Touchscreen
- Digital
- Designed for use in retail to avoid ladders and wire pulls in customer space
- Will control the majority of HVAC systems including heat pump and standard gas / electric systems

8DO Module



- Wireless - control is accomplished by a Zigbee 802.15.4 link back to the EcoView Touchscreen.
- Eight channel, pilot duty relay controller
- Each channel can switch 3 amps at up to 24 Vac or 30 Vdc for pilot duty service (pass through)

Multi-phase Meter



- Wireless - control is accomplished by a Zigbee 802.15.4 link back to the EcoView Touchscreen.
- Electricity metering component of the system
- Capable of measuring three-phase four-wire 240V wire within 3% accuracy
- Ability to interface to third-party water and gas meters via two pulse inputs

Remotely monitor and control HVAC and lighting for multiple locations

EcoView Web

A single, centralized, interface provides real-time data and reports for temperatures and settings

Users can log in remotely from anywhere

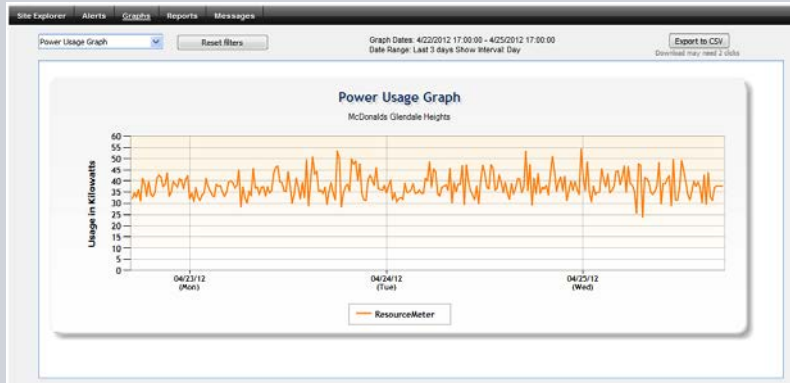
to:

- Modify schedules
- Adjust set points
- Set lighting control schedules
- Monitor performance

The screenshot displays the EcoView Web interface. At the top left is the EcoView logo, a circular gauge with 'LOW', 'MODERATE', and 'HIGH' energy usage levels. The title 'EcoView Web' is centered, and 'Welcome, Customer' is on the right. Below the title are navigation tabs: 'Site Explorer', 'Alerts', 'Graphs', 'Reports', and 'Messages'. A sidebar on the left lists various store numbers, with 'Store # 14836' highlighted in red. The main content area shows a table of settings for 'John's General Store' across multiple locations. Each row includes an icon, a 'PowerMeter' value, a 'Thermostats' dropdown, and an 'Additional Devices' dropdown. For example, one row shows 'PowerMeter = 64.82', '78° Manager's Office', and 'Exterior Signs = Off'. A 'Misc' sidebar on the right shows details for 'John's General Store', including address, contact info, and phone number. At the bottom, there are 'Refresh All' and 'Remove All' buttons, and a 'Return to Start Page' link.

Key EcoView Web analytic and diagnostic tools

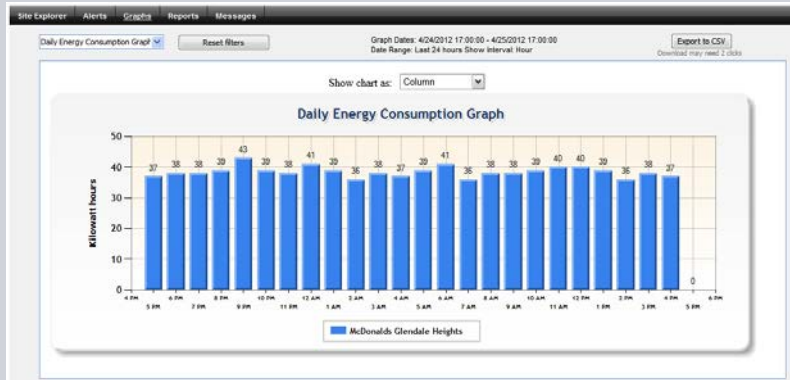
Power Usage Graph



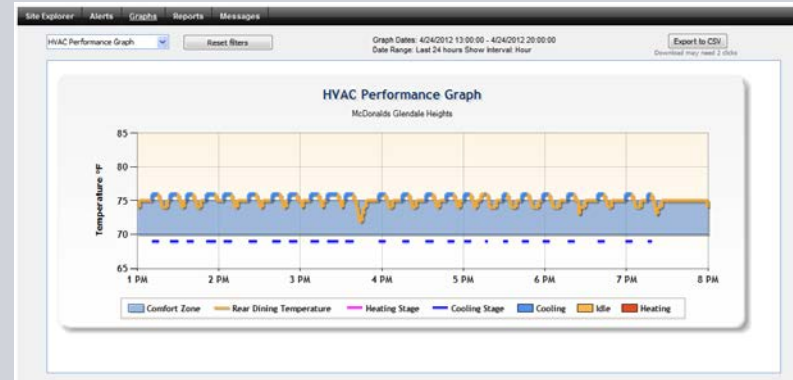
Operating State Runtime



Daily Energy Consumption



HVAC Performance



Control from anywhere

Remote, Wireless Convenience

Wireless connectivity via our iPhone / iPad App allows for remote monitoring, managing and control of energy consumption for one or multiple locations.

