

# Cost Effective Energy Management... finally!



- Save Money
- Manage Your Assets
- Control your HVAC

Manufactured by:



**UtilEcon Services, LLC**  
Energy Monitoring Solutions



# Have you ever:



Been unpleasantly surprised by your monthly energy bill - and wondered where the dollars were going?



Discovered lights or equipment left on after business hours – or equipment consistently turned on before it needs to be?



Had heating and cooling systems operating at the same time – or fought with staff over HVAC settings?



Experienced equipment failure without warning - with a resulting out-of-pocket loss or reduction in productivity?



Been unable to pinpoint why some facilities use a lot more energy than the average – while others use lots less?



Looked at energy management systems – but found that they were complex, didn't fit your budget, and had a very long payback?

Courtesy of:

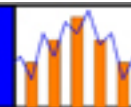
 **PowerhouseDynamics**

**Utilecon Services, LLC**  
**Energy Monitoring Solutions**



# Small Commercial Profile

- Single Physical Building
- Multiple Locations or Chains
- One Service Entrance
- Multiple Electric Panels
- Cooling, Lighting & Refrigeration Loads
- Peak Demand: 50 KW to 1 MW
- Electric Bill: \$1K to \$ 25K per Month
- Examples: Restaurants, Hotels, Grocery Stores, Home Centers, Clinics



# Small Commercial Metering Strategy

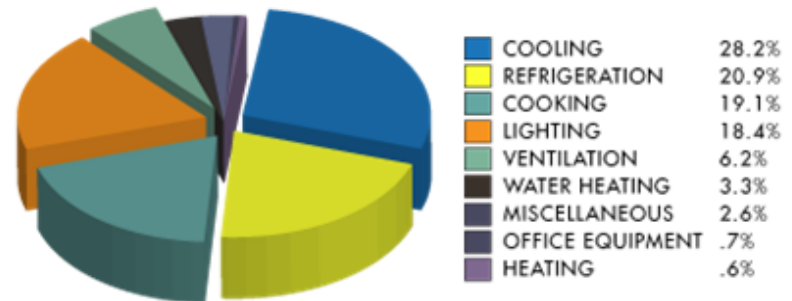
- Track energy at the circuit level
  - 1, 2 or 3-phase power
- Compare usage between facilities
  - Cooling, refrigeration, lighting, cooking, etc.
- Compare costs
  - Square footage
  - Operational hour
- Receive alerts for anomalous conditions
- Exercise control over major loads

# eMonitor c-Series

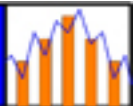
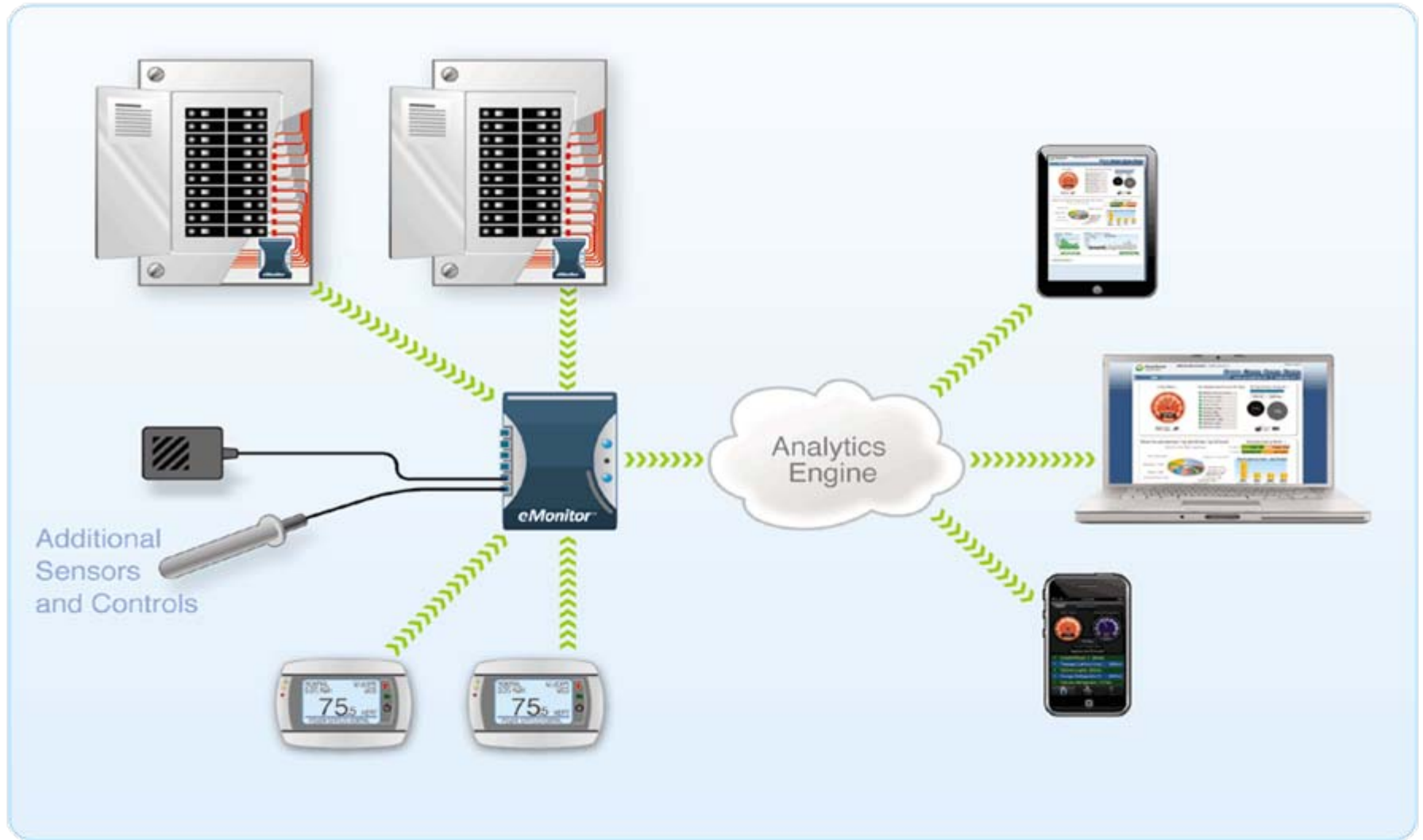
- **Monitors ALL** electricity consumption
- **Controls HVAC** - the largest energy cost
- **Proactively alerts** – on cost and equipment performance
- **Pinpoints** major cost contributors with granular information
- **Benchmarks** facilities – down to the equipment level
- **Moves** energy from uncontrollable to *controllable*
- **Delivers rapid ROI**



RESTAURANT INDUSTRY BENCHMARK DATA



# Centralized, Wireless Tracking and Control



# Cost-effective energy management...finally



CFO View

Locations	City	State	Cost	Cost/Sq. Ft.	Totals
Wisconsin			\$1,847	\$0.12	
1/2 Street Store	Chetek	WI	\$393	\$0.28	
100th Ave Store	Cadott	WI	\$10	\$0.00	
Boundary Road Store	Hudson	WI	\$19	\$0.14	
Galahad Road Store	Hudson	WI	\$155	\$0.09	
Lakeview Store	Hubertus	WI	\$85	\$0.03	
Office	Eau Claire	WI	\$716	\$0.24	
Store	Eau Claire	WI	\$298	\$0.33	
Willow Brook Rd Store	De Pere	WI			



Manager's View

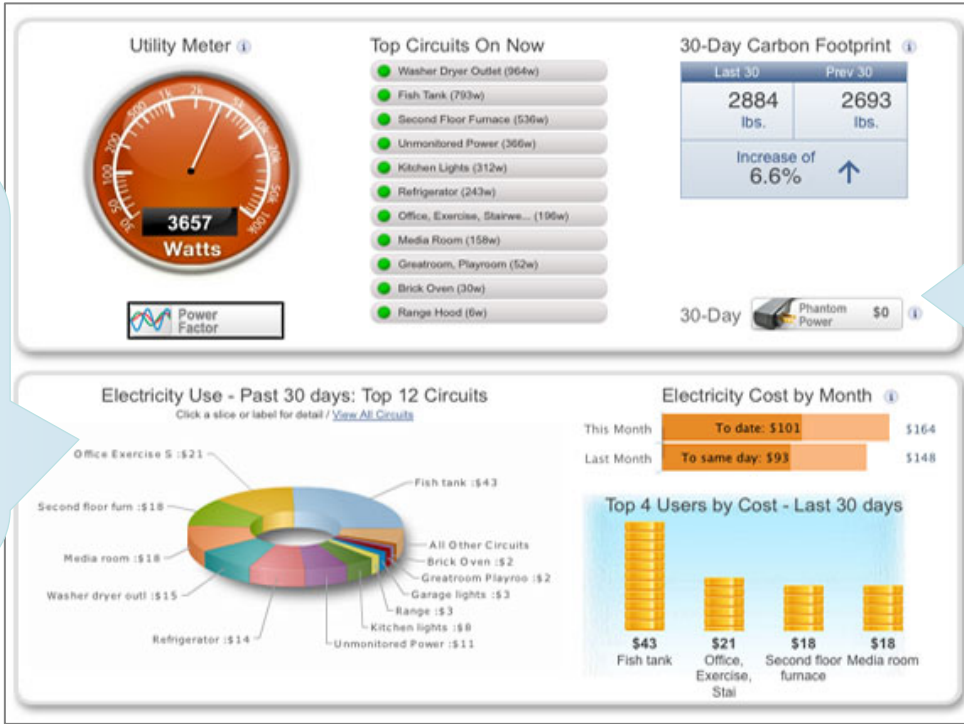


# Monitor

Determine where energy \$ are going

Identify power factor problem areas

Determine contributors to demand charges



Identify what is on – and when

Project monthly costs - daily

Track carbon footprint

Benchmark to find top performers - and laggards

Pinpoint most effective equipment configurations

**Results - Past 30 Days**

	Locations ▲	City	State	Cost	Cost/Sq. Ft.	Cost/Oper. Hr.	
<b>By Region</b>	+ Wisconsin			\$1,847	\$0.12	\$5.51	
<b>By Group</b>	1/2 Street Store	Chetek	WI	\$393	\$0.28	\$9.15	View
<b>By Building</b>	100th Ave Store	Cadott	WI	\$10	\$0.00	\$0.25	View
	Boundary Road Store	Hudson	WI	\$19	\$0.01	\$0.45	View
	Galahad Road Store	Hudson	WI	\$155	\$0.14	\$3.87	View
	Lakeview Store	Hubertus	WI	\$170	\$0.09	\$3.96	View
	Office	Eau Claire	WI	\$86	\$0.03	\$2.01	View
	Store	Eau Claire	WI	\$716	\$0.24	\$16.64	View
	Willow Brook Rd Store	De Pere	WI	\$298	\$0.33	\$7.44	View



# Add Control...

Control costs during non-business hours

Quickly spot heating & cooling systems on at the same time

Identify equipment not operating properly – or starting to use more energy

**Cost Alerts**

**Safety Alerts**

- Notify us when any circuit is getting close to 95% its rated capacity. This warning could potentially help you avoid a short circuit or damage to electronics. [Choose Circuits](#)
- Notify us when a particular circuit or piece of equipment seems to have been on for an extended period. Select this alert, for example, to see if your stove or lights have been left on or if something is causing a pump to keep running. [View Voltage Detail](#)
- Notify us if it looks like a refrigerator or freezer door was left open. You don't want your food to spoil.
- Notify us if the voltage level goes outside the expected range. Low voltage can cause circuit overloads; high voltage can damage electronics.

**Usage Alerts**

- Notify us weekly of changes in our energy use. An easy way to keep track of trends.
- Notify us if energy use during non-business hours averages more than 25% of the average during business hours. This suggests more things are on than need to be. [Choose Circuits](#)
- Notify us when a particular circuit is drawing little or no power for an extended period. Select this alert, for example, to check on medical equipment or computers you would like to keep on, or to make sure your furnace is running. [Choose Circuits](#)
- Notify us when one of the selected piece(s) of equipment uses at least 15% more energy than it did before. This may be an indication of a problem. [Choose Circuits](#)
- Notify us when our use per load for the selected piece(s) of equipment has increased by at least 15%. Find out when your dishwasher, washer, or dryer is using more energy per load than before. [Choose Circuits](#)

**Performance Alerts**

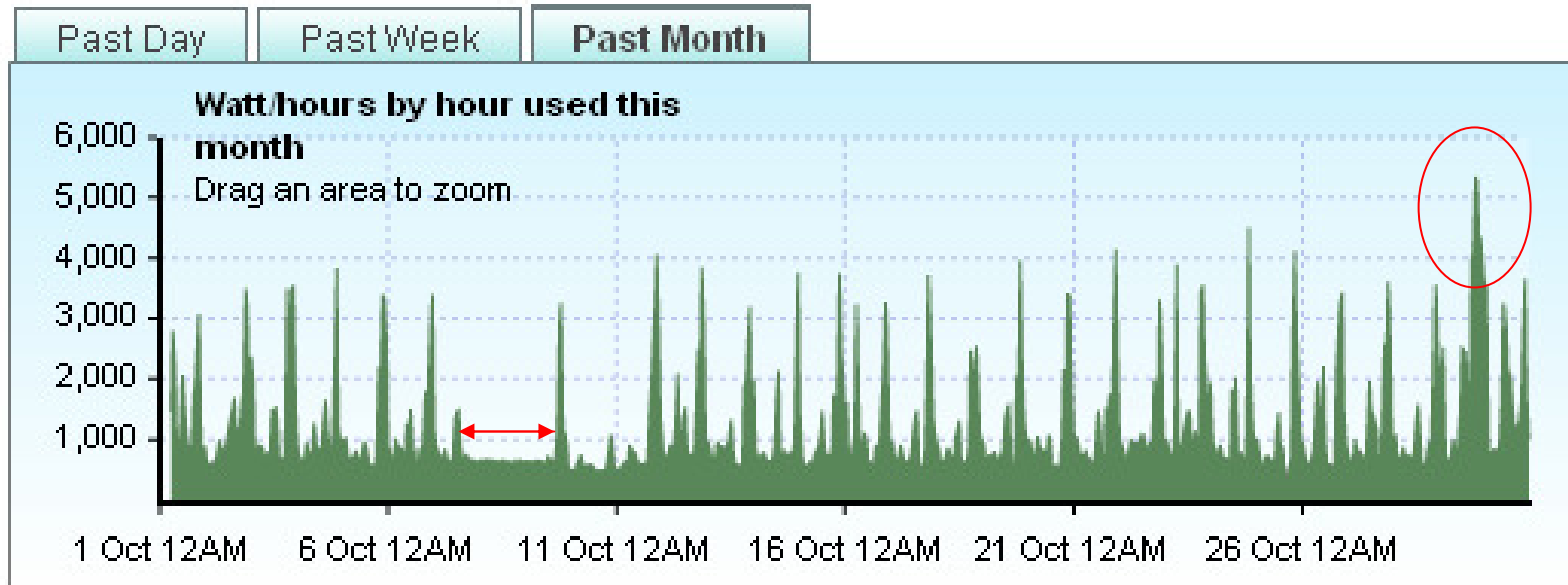


Remotely control multiple thermostats from a central location

Ensure settings are correct – up to 12 time periods/day

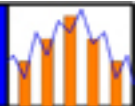
Leverage historical data to develop control strategies

# Analyze Monthly Power Profile

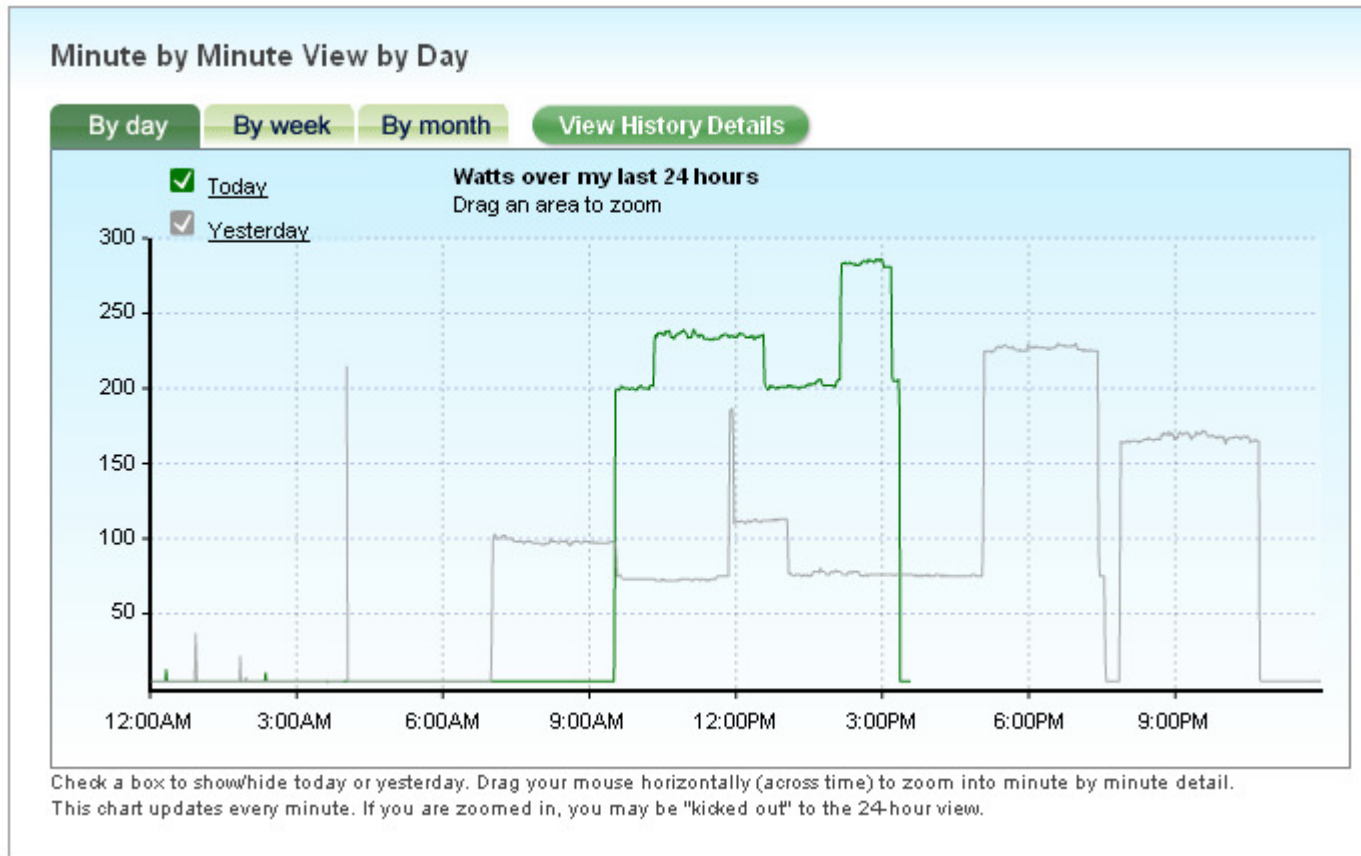


Start with monthly profile

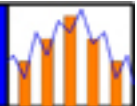
- Then weekly, then daily
- Investigate unusual patterns



# Circuit Level Analysis



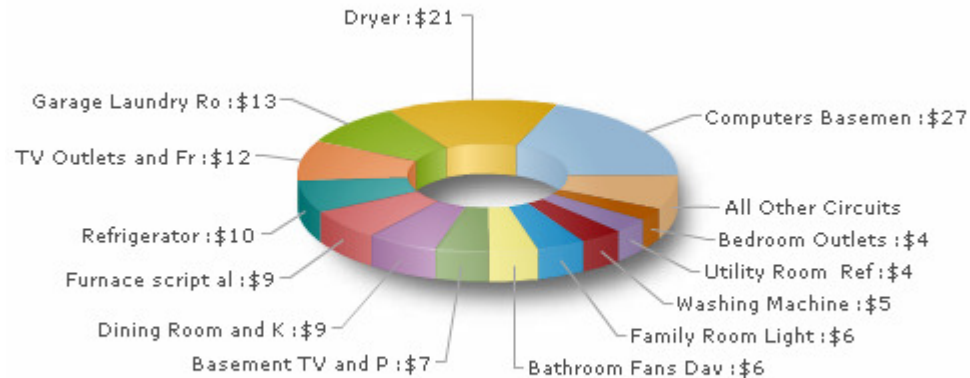
- Investigate circuits minute by minute



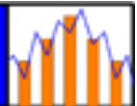
# Evaluate Cost by Circuit

Where I've used electricity in the past 30 days: Top 12 Circuits

[Click a slice or label for detail](#) / [View All Circuits](#)



- Apply 80/20 rule (80% power in 20% circuits)
- Compare costs between facilities
- Benchmark top performer



# UtilEcon Services, LLC

- Located just outside Nashville, TN
- 20 years of energy consulting experience
  - Utility bill auditing
  - Energy monitoring systems
  - Authorized dealer for eMonitor
- Authored [www.home-energy-metering.com](http://www.home-energy-metering.com)
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  - [howardholmes@utilecon.com](mailto:howardholmes@utilecon.com)
  - 615-449-7999
- “You cannot improve what you do not measure!”