

Advanced AMR

INNOVATIVE WIRELESS SOLUTIONS

TO MONITOR, MEASURE, AND

CONTROL ENERGY USAGE



The Complete Energy Management Solution

The Energy Management Future

Utilities, ESCO'S, Municipalities, Energy Co-Operatives, schools and universities, seek cost effective solutions to monitor and collect energy usage information on a real time basis and develop strategies for reducing energy costs.

Advanced AMR – The Total Solution

Advanced AMR Technologies (AAT) provides real-time energy monitoring, management, and control services on a single unified platform for electricity, water and gas services. The AAT multi-purpose platform is used for the following applications:

- Automated Meter Reading (AMR)
- Energy Management
- Utility Services

Advanced AMRs' wireless network supports multiple types of monitoring devices in one integrated system providing significantly higher value than traditional AMR offerings. Advanced AMR solutions can be implemented at significantly lower cost because:

- Wireless Monitors are the Network
- No Additional Communications Infrastructure Costs Required
- Operator Owned Means No Communication Fees
- Actionable Data is Delivered in Real Time 15 minute Intervals



providing responsive customer service. *Advanced AMR provides:*

- Accurate and Reliable Meter Reads
- Real Time Reporting
- 15 Minute Interval Data
- “Under the Glass” Models
- “Next to the Glass” Models

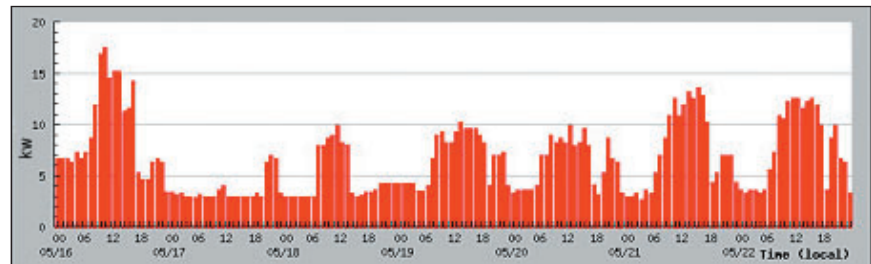
Demand Response Real time energy usage data can monitor energy usage during periods of peak demands and allow immediate action to reduce consumption and costs.

- Conduct “What-if” billing analysis to analyze energy usage patterns and compare pricing programs.

Sub-Metering/Aggregate Demand Improve energy management and cost allocation with unit level energy metering in multi-tenant buildings or office parks.

AMR PLUS

Advanced AMR provides the most cost effective solution for AMR with the additional functionality of outage management, on demand reads, and remote connect/disconnect capabilities. Knowing the status of each and every meter in your system reduces service and maintenance costs while



Real Time Energy Data

Advanced AMR

Advanced AMR benefits include:

- Individually, or collectively, monitor meter data for specific apartment units, company departments, shopping centers, corporate and university campuses.
- Provide more accurate information on actual energy consumption for customer sub-metering billing.
- Provide real time data for the resale of energy by aggregators or landlords.

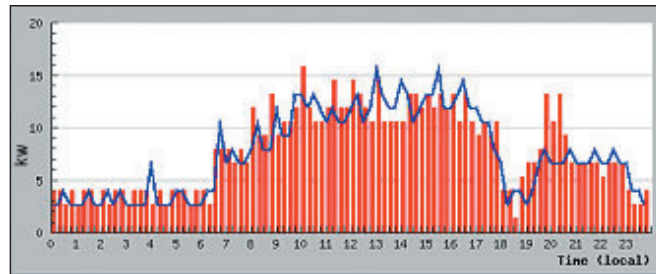
Electricity used:	Cost of electricity
No Fault	
Meter: 00010011	
Total usage: 10326.5500	
Peak demand: 548.64 Peak	
Date: 1090518300	
	Delivery services
	Customer Read charge (on 548.64 Peak KW) \$ 5.53
	Distribution Demand Charges from 0 Peak no charge (on 548.64 KW) \$ 0.00
	Distribution Energy Charges
	from 0 KW 0.032500 = 2500 KWH \$ 88.25
	from 2500 KW 0.032400 = 7500 KWH \$ 93.00
	from 10000 KW 0.005760 = 326.58 KWH \$ 1.89
	Transmission 0.033590 = 10326.58 KWH \$ 326.28
	Transmission 0.007370 = 10326.58 KWH \$ 74.12
	Renewable energy 0.003000 = 10326.58 KWH \$ 30.33
	Energy conservation 0.003100 = 10326.58 KWH \$ 32.02
	Delivery Services total \$ 639.42
	Supplier Services
	Generation 0.032000 = 10326.58 KWH \$ 361.50
	charge Total Supplier Services \$ 381.58
	TOTAL \$ 998.92
	<small>Charges are subject to 1.18% interest after 25 days</small>

Online Billing and Analysis

The energy usage data can be exported to most popular billing programs. With Advanced AMR it's not just AMR...but AMR Plus.

Energy Management

Advanced AMR enhances load management and demand response programs by providing real time data to take control of rising energy usage and costs. Real time data can be used to respond quickly to reduce energy usage during periods of peak demand or peak prices. Two-way



Comparing two different daily reads from the same meter

wireless communication means remotely monitored devices can be turned on/off to reduce loads and reduce costs...when it counts.

The Energy Management capabilities include:

- Analyzing incoming load management data to lower peak demand and reduce energy costs.
- Providing real-time controls to curtail energy consumption.
- Offering customers more choice in purchasing energy use programs.
- Providing remote move in/out reads for multi-tenant facilities.
- Remotely turning on/off equipment such as irrigation pumps, HVAC units, sewer pumps, etc. during periods of peak demands.
- Providing accurate, reliable, proof of curtailment and settlement data.

Utility Services

Advanced AMR offers innovative tools for Utilities to remotely monitor substations and equipment in the field, reducing field service calls and

improving customer service when power is interrupted.

SCADA Lite

Remotely monitor and control facilities for electricity generation, transmission, and distribution:

- Monitor Power Quality
- Low Cost Communications to Substations
- Monitor Multiple Alarm Conditions

Measurement and Verification (M & V)

Use real time data to measure and verify energy usage without the cost of data loggers.

- Real time energy usage data at 15-minute intervals
- More descriptive information than provided by traditional alternatives.

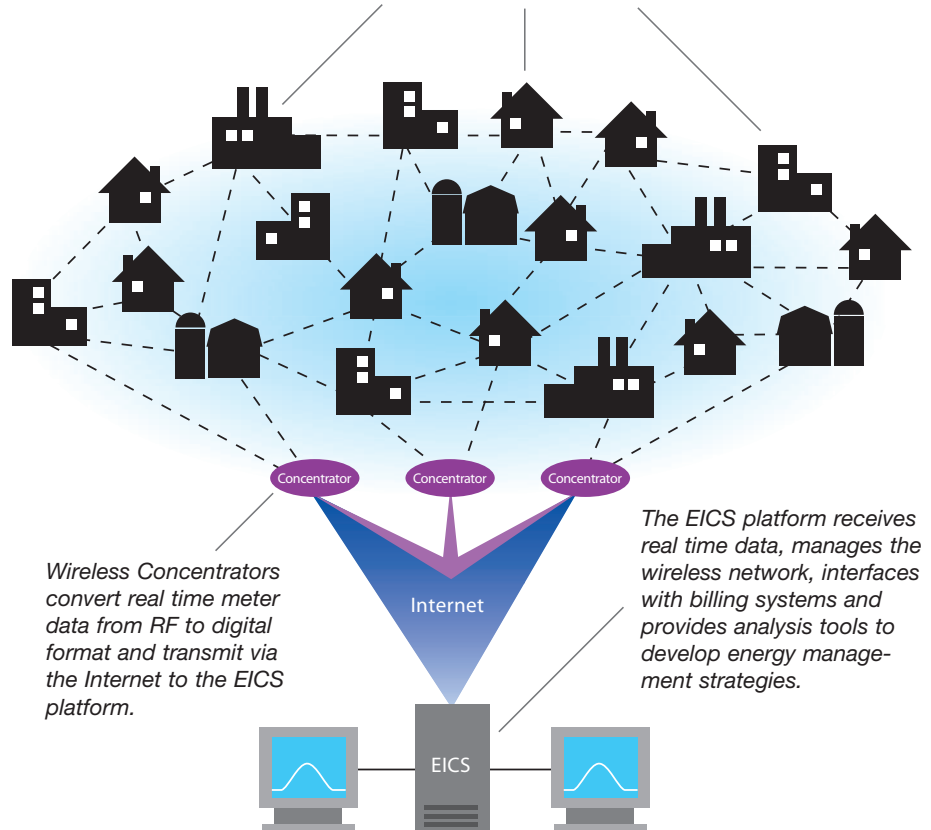
Advanced AMR's innovative wireless technology provides energy monitoring, management, and control capabilities that offer the information and control you need to reduce costs, optimize energy usage and improve customer relations. Start today and benefit from the value of real time energy monitoring and control.

Advanced AMR Technologies (AAT) is a division of Massachusetts-based AES Corporation. In the early 1990s, responding to a U.S. Government request to develop a wireless communications network that worked in remote and often hostile parts of the world, AES Corporation created and patented AES-IntelliNet™. It is a long range, two-way, wireless mesh network that requires no dedicated radio towers, phone or cellular services.

In 2000, AES Corporation introduced Advanced AMR to meet the needs of the Energy Management industry with AES-IntelliNet™-based energy monitoring, reporting, and control products. AES Corporation products are deployed in hundreds of thousands of installations in over 130 countries around the world.

The diagram to the right illustrates the innovative AES-IntelliNet wireless technology.

Wireless Remote Monitors read meter data at 15 minute intervals and forward the data via hopping through other monitors to Wireless Concentrators.



Wireless Concentrators convert real time meter data from RF to digital format and transmit via the Internet to the EICS platform.

The EICS platform receives real time data, manages the wireless network, interfaces with billing systems and provides analysis tools to develop energy management strategies.



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