

2003 Energy

Metering: The Eyes and Ears of O&M Part 2

Where Do I Start?

ENERGY 2003
O&M for Energy Efficiency
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Session 3: August 19, 2003

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The McGraw-Hill Companies

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E SOURCE Services

- Platts, a division of The McGraw Hill Cos.
- Membership based energy information company
- Unbiased research and analysis
- Serve all parts of energy market including utilities and top tier energy managers

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The E SOURCE Member "Network"

Over 400 organizations around the world

Electric & Gas Utilities

International Organizations

Consultants

Major Energy Users

Energy Service Companies

Government Agencies

Manufacturers

Research Institutions

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Selected E SOURCE Members

<u>Energy Service Providers</u>	<u>Major Energy Users</u>
Florida Power & Light	Air Force, Navy, Army, Coast Guard, FEMP
JEA	AT&T
ConEd	Ball Aerospace
Nicor	Boeing
We Energies	Johnson & Johnson
Exelon	Lockheed Martin
TXU	Nordstrom
NYSEG	Merck
PSE&G	Raytheon
Progress Energy	Texas Instruments
Orlando Utilities Commission	Grubb & Ellis
Southern Company	
Xcel Energy	

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What Large End Users Want: Energy Information Services

- "It is absolutely essential to obtain from the utility/ESP that I get my energy commodity from, an interval data product that I can use to verify bills"
- "Easier access to metering historical data and the ability to easily connect to the utility meter. I want on-line billing and historical data"
- "Web accessible energy data including interval data, load profiling capabilities, etc..."
 - I shouldn't have to pay for this for my large sites - i.e. over 300kw, data retrieved 1X/day is frequent enough"
- "Low cost access to Internet based on 15 or 30-minute demand profiles, using mv90 technology, interrogating meters once daily..."
 - Most of us don't need real time info...updated daily will be fine"

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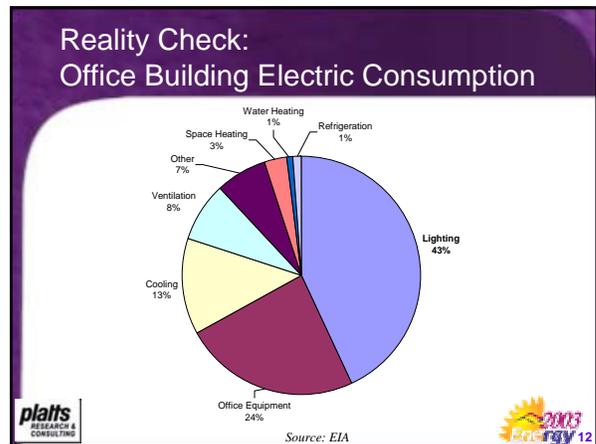
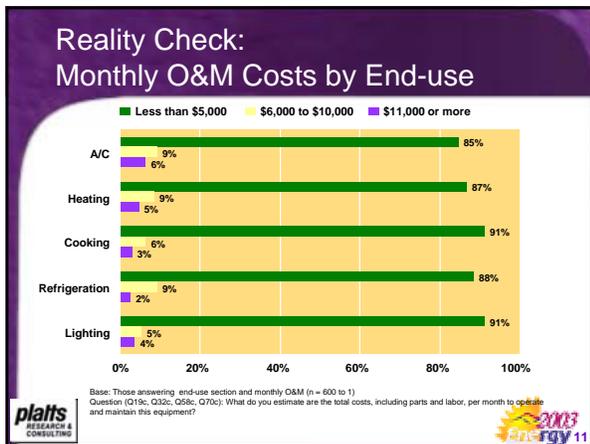
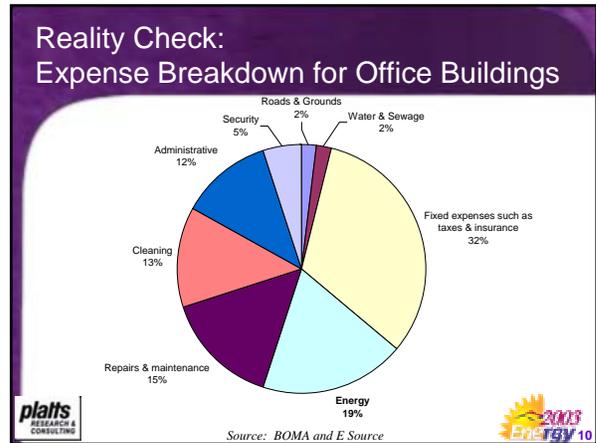
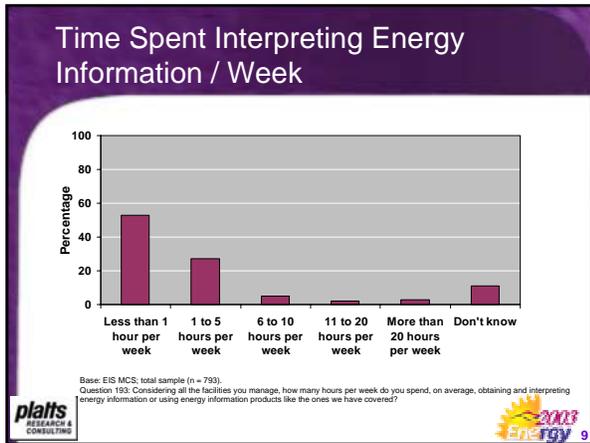
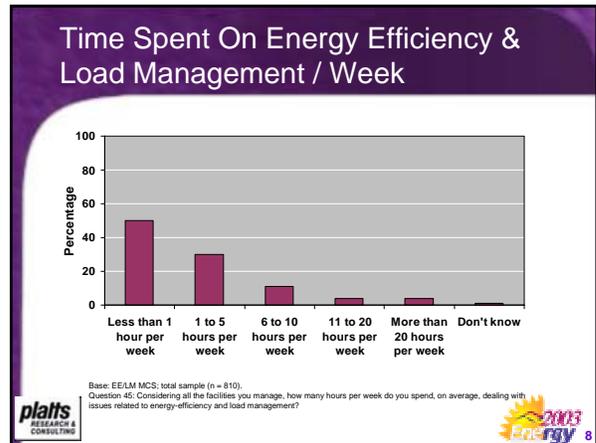
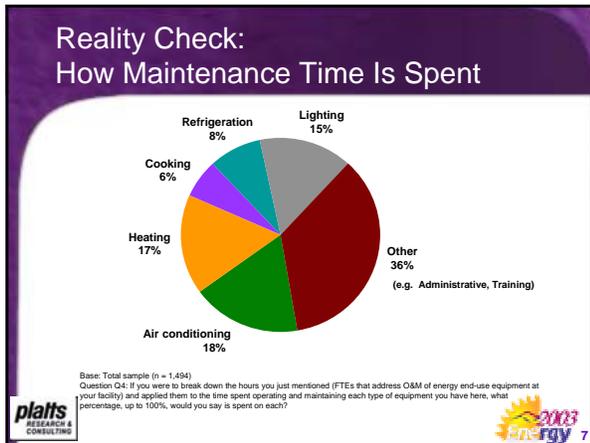
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Metering for Improved O&M Where Do I Start?

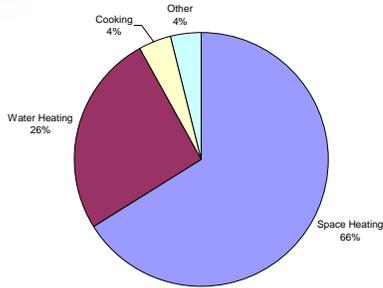
- Reality check
 - Resources, priorities, market
- Do I need it?
 - Will it be worth it to me? Will I see an ROI?
- Start simple
 - Build experience and capabilities
- Avoid drowning in information

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Reality Check: Office Building Gas Consumption



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Source: EIA

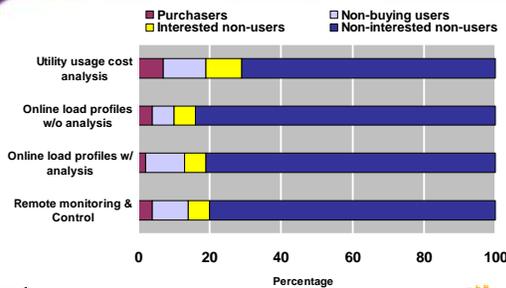


What's the Market Look Like For Energy Information Services?

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Segments

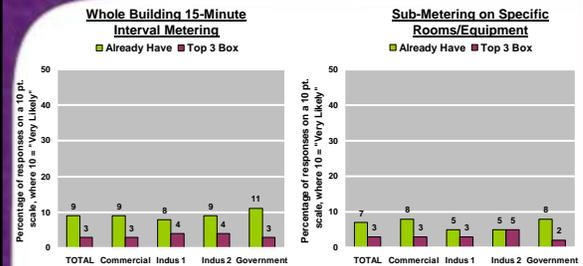


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Base: Total Sample (n=793)
Source: Estimating Markets for Energy Information Services, December 2002



Likelihood to Purchase Energy Information Services Within 2 Years

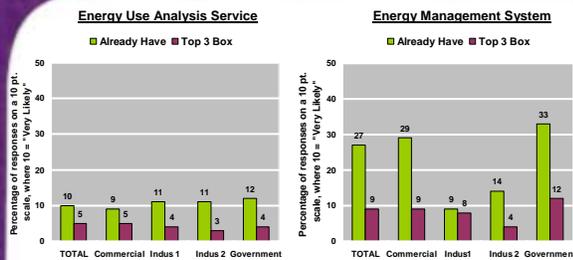


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Source: Total Sample; Question 7a to 7b
Q7a-d: How likely are you to purchase any of the following energy information services in the next two years? [Responses on a 10-point scale, where 10 = very likely and 1 = not at all likely.]



Likelihood to Purchase Energy Information Services Within 2 Years



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Source: Total Sample; Question 7c to 7d
Q7a-d: How likely are you to purchase any of the following energy information services in the next two years? [Responses on a 10-point scale, where 10 = very likely and 1 = not at all likely.]



Do I need it? Check Steps

- Building type and use
- Building size and location
- Own vs. lease space
- Occupancy rate will impact need
- Building energy intensity

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Know What Your Goals Are

- Energy cost savings; peak demand reductions
- Allocating energy costs to departments or tenants
- Monitor processes or equipment for energy management, predictive maintenance, or IAQ
- M&V for an energy management project
- Enable participation in RTP, load management, or Demand Response Program
- Distributed generation
- Energy procurement



Start Simple . . . Start Small

"If you're trying to build a program from the ground up, think success first, superstar later. . . What you don't want to do is try and hit a home run with some multimillion-dollar endeavor right off the bat. Initially focus on small projects that are easy to roll out and easy to measure and verify."

"Start with a pilot, implement it, measure it, and then publicize it."

"Success is contagious. It can be the single most important factor in terms of making your case again, later on down the road. The key to making the business case for energy efficiency for the long term is to build credibility in the short term."



Harry Kauffman, Corporate Energy Director, Johnson & Johnson



Unilever North America Home and Personal Care Division

- Used utility revenue metering data to build spreadsheets
- By letting individual facility managers see and compare data for all of the sites
 - Peer pressure was brought to bear on the results
 - Created a heightened awareness of actual energy use and the need to reduce costs
- Turned a fledgling energy program into a \$2 million annual budget for energy efficiency
 - Direct energy cost savings of 10%



Source: Jim Pease, Energy and Environmental Manager



Start Simple and Then Expand

- Utility bill analysis
 - Benchmark your facilities
- Whole building monitoring
 - Load profiles
- Submetering
 - Can be flexible by using temporary units
- Integration of energy and process controls
 - Monitoring and targeting
- Continuous commissioning



Issues to be Aware of

- Hidden costs of installation
- Differences between THE utility revenue meter and your EIS reports
 - Out of synch is but one problem
- Training and re-training
- Data overload



Reasons for Purchasing Metering: What Large End Users Told Us

- Compare energy costs across facilities
 - Identify high-cost locations
- Compare energy costs to market averages
- Find best utility rate plan
- Manage energy use
- Identify when peak energy demand is set
- Verify energy bills
- Reduce maintenance costs
- Reduce equipment downtime



Source: Estimating Markets for Energy Information Services, December 2002



Conclusions

- Start simple
- First determine how you will use information
- Many different technologies; customize an approach that fits your buildings, your circumstances and your culture
- Promote your successes



Thank You

For More Information Please Contact:

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