



NOW AVAILABLE FOR PURCHASE “Energy as a Managed Service 2010” Research Study



“Energy as a Managed Service 2010”

The report found that the concept of energy as a managed service is appealing to the great majority of North American homeowners. The majority of consumers surveyed said that they would consider purchasing energy as a managed service if it was available at a reasonable price. The research was conducted for CABA by POCO Labs, a management consultancy which specializes in strategic consulting.

The following organizations participated in this "Landmark CABA Research Project":



Sample of Findings: Reaction to EMS Concepts

All tested EMS components are considered very likeable

EMS System Components

Likeability Top 2 Box Scores

(7-point scale; 7=Like everything about it)



TABLE OF CONTENTS

Background & Objectives	3
Phase 3 Summary Approach	5
Demographic Profile of Respondents	6
Executive Summary	7
Conclusions & Recommendations	14
Detailed Findings	
Households & Energy Usage	17
Reaction to EMS Concepts	21
Purchase Considerations	26
Time of Use Pricing	31
Conservation & Energy Management Attitudes	35
EMS Market Segmentation	40
Appendix	55

Continental Automated Buildings Association (CABA)
Energy as a Managed Service
Phase 3: Quantitative Consumer Opportunity Assessment
United States Final Full Draft Report
January 12, 2011



Executive Summary

Reaction to EMS Concepts

As found in P2 research, the concept of Energy as a Managed Service (EMS) is **appealing to the great majority of homeowners.**

- 57% give the concept a **top-2 box score** for likeability, and 53% agree strongly that it's designed "for people just like me."
- If available at a reasonable price, **44% would probably or definitely get EMS.**
- These scores indicate a very high receptivity to EMS.
- The broad EMS concept is **significantly more likeable to current TOU customers** (top-two box score of 62% vs 55% among non-TOU customers).
 - It's likely that homeowners who pay Time of Use pricing have a better awareness of their energy usage because they see their peak and off-peak usage patterns in the monthly bill. **When homeowners know the differential between peak and off-peak prices and pay accordingly, the benefits of EMS are easy to see.**

Interest in using EMS is **equally high regardless of the size of potential price hikes** in energy.

- Respondents were presented with a future scenario in which energy prices were predicted to rise by either 10%, 20%, or 30% by 2013 (the rate of increase was randomly chosen for each).
- Likelihood to find EMS likeable and to get it was **consistently high for all three proposed futures.** That is, EMS is **very appealing** if prices increase only by 10% by 2013. This is a **strong indication** that homeowners have already reached **their limits for price increases** and will be ready to get on board once EMS products and services are widely available. There aren't hold-outs who are willing to absorb 20% and 30% price hikes before considering EMS.

EMS is **equally likeable** regardless of average residential electricity costs.

- States were divided into low, medium, and high electricity costs based on 2010 kWh per hour prices. Homeowners residing in low and medium cost states **like EMS just as much** as those who live in high cost states.

All regions in the U.S. like EMS equally.

Executive Summary

Reaction to EMS Concepts

Established by project sponsors as evaluated in P2 qualitative research, six components of an EMS system were presented for homeowners' consideration. **All are considered highly likeable**, with top-2 box scores ranging from 57% to 71%:

- Smart Thermostat (71%)
- Energy Manager Application (67%)
- Energy Audit (65%)
- Smart Plug (61%)
- Energy Manager Device (59%)
- Smart Appliance or Home System (57%)

Of these, **several are significantly more likeable** to homeowners who pay **Time of Use** pricing for their energy:

- EMS application
- EMS device; and
- a smart appliance or home system.

On an Energy Management application, homeowners expect the most useful data sampling rate will be **cost per day**, although per month and per hour data are also preferred by some.

The notion of getting aggregate data from **similar homes** as part of the EM app is **of moderate but not high** likeability. The idea got a **lukewarm reception** in P2 research as well.

Executive Summary

Purchase Considerations

In P2 research, consumers expressed that a natural conduit for EMS products and services would be their energy utility company. The P3 quantitative research bears this out.

- About half (53%) say they would “absolutely” or “most probably” consider getting EMS products and services from their **energy utility**. For appliance manufacturers and retail stores, expression of **strong consideration is much lower** (23% and 19% respectively).

While homeowners in P2 qualitative research said they’d want to “start small” with one or two EMS components, data from P3 respondents indicates that **there will be a market for larger EMS product/service bundles** as well.

- In fact, about one-quarter (27%) put together a bundle of 4-5 items, and another 28% made bundles of 6 or more EMS items.

Respondents showed the **greatest interest in putting together bundles that included HVAC**. They rightly assume that controlling aspects of HVAC will result in the **greatest impact** on their energy costs.

- The most popular items as part of a bundle (which always included the EMS application) are an EMS device (62%), a thermostat (61%), a smart plug (52%), air conditioning (40%), water heater (40%), and furnace (38%).

- Chosen least often** are a range or cooktop (11%) and an oven (11%).

Homeowners expect that EMS-ready appliances and home systems **will cost more** than standard ones.

- Just a handful (2% - 5%) say that the “smart” version won’t cost more .

- The premium for EMS capabilities varies from an extra \$51 (average) for a smart thermostat, to an extra \$223 (average) for a smart furnace; and for appliances - between \$107 and \$144 based on specific unit types.**

When buying a new appliance, homeowners want **an independent rating** for EMS return on investment.

- When asked to choose between similar/equivalent models of a new appliance purchase, 70% prefer the one that’s been tested and rated, compared to the unrated appliance that costs 10% less.

Executive Summary

Time of Use Pricing

In P2 research, homeowners said they want a better understanding of their energy use. Most aren't aware of how much energy they use and how much it costs, regardless of their involvement in paying the bill.

There is ample evidence in the P3 research that many **homeowners don't attend** to the details of their utilities.

- When asked if they had TOU pricing, **a very substantial 40% simply didn't know.**
- To a lesser degree, **26% of homeowners don't know** if their utility has installed a “smart meter.”
- About **one-third use Auto Pay** for electricity, gas, or both, making it easy for these homeowners to be **in the dark about their energy consumption.**

In the in-depth P2 interviews, homeowners said that EMS would definitely change their behaviors due to awareness and options to engage. **This expectation is evident in the P3 research too.**

- We used Time of Use pricing as the Energy Management Service in order to solicit assumptions about how behavior/energy usage might be affected.
 - Fully one-third (34%) of homeowners who **don't have TOU now expect to dramatically change their household habits with TOU**, while 43% would change their habits a “moderate” amount.

Have current TOU customers changed their habits since the introduction of Time of Use pricing? Yes, but slightly less than that predicted by future TOU customers.

- In TOU homes, 21% say they've changed their habits “a lot” or “a great deal,” while a comparable **44% say they've made “moderate” changes.**

Executive Summary

Time of Use Pricing

When TOU pricing goes into effect, many homeowners expect **considerable savings** .

- About one-quarter expect to save up to 10%. 37% predict saving between 11-20%, and 27% believe they'll save 21-30% on monthly energy costs. **It will be important to manage consumer expectations as TOU pricing is introduced in new locales.**

Some but not all current TOU customers seen savings as a result of TOU pricing.

- 37% say their bills are lower with TOU pricing, while **39% find they pay about the same amount as before**. One-quarter (24%) see **higher bills with TOU pricing; especially residents in Western states (34%)**.

Most frequently, homeowners say they will **shift use of the dishwasher, dryer and washing machine**, with TOU pricing.

About one-quarter (26%) predict they will shift their use of **the furnace most/all of the time**.

- Among current TOU customers, about one-third of dramatically changed their habits for using the dishwasher, dryer and washing machine. About one-third report shifting their furnace and AC usage most/all of the time.**

Executive Summary

Conservation & Energy Management Attitudes

The primary motivations for getting and using EMS are **money-related, not environmental**.

Homeowners want to **save money and better manage** the budget.

Among the other reasons tested to use EMS, the most popular is “**conserving natural resources.**” This idea is roughly twice as popular as “preserve our country’s natural areas and wildlife” and “to help reduce climate change.”

•Although “saving money” is the primary motivation for using EMS, the **homeowners who are most likely to get EMS are significantly more likely to engage in what might be considered environmentally conscious behaviors.**

•In the past five years, EMS adopters are **significantly more likely** than non-adopters to have:

- Replaced regular bulbs with CFLs, LEDs;
- Bought an energy-efficient appliance;
- Recycled or donated computer, cell phone;
- Installed a low-flow shower head or toilet; and
- Switched to reusable grocery bags.

Executive Summary

EMS Market Segmentation

Based upon attitudes about energy consumption, conservation, and climate change, self-reported conservation behaviors, and motivations for adopting EMS, the market consists of five unique segments:

- **Family First** (9%) – Moderate likelihood to get EMS;
- **Comfort and Convenience Seekers** (19%) – Low likelihood;
- **Active Conservationists** (19%) – Highest likelihood;
- **Climate Change Skeptics** (24%) – Low likelihood; and
- **Practical Conservationists** (29%) – Moderate likelihood.

All segments, first and foremost, are interested in EMS because they want to save money on their energy bills. But each segment differs in their secondary motivations for getting EMS.

- **Family First** want to improve their children's future, to be good stewards for religious reasons, and to strengthen security by reducing reliance on foreign oil. These are nearly as important as saving money.
- **Comfort and Convenience Seekers** want to save money and manage the budget better. These are twice as important as any other motivation.
- Besides saving money, **Active Conservationists** want to conserve natural resources and preserve natural areas
- Other than saving money and managing the budget, **Climate Change Skeptics** want to reduce dependence on foreign oil. This large segment (24%) has a lower likelihood to get EMS.
- **Practical Conservationists** want to conserve natural resources, improve their children's future, and preserve natural areas about equally (with saving money and budgeting being first and second motivations).

Conclusions & Recommendations

Reaction to EMS Concepts

Broadband households are **ready to adopt EMS now**, regardless of the size of future energy price increases.

Energy as a Managed Service **was very well received**, as were all EM components (smart thermostat, energy manager application, energy audit, smart plug, energy manager device, smart appliance or home system).

Purchase Considerations

Energy companies should **take the lead public role** in presenting EMS items for sale. Homeowners are far more inclined to buy EMS from their energy utility than from either appliance manufacturers or retail stores.

EMS bundles should include the most popular items: an EMS control device, a smart thermostat, a smart plug, and an energy audit.

Assume that **both the male and female** head of household will shop for and make decisions about EMS items.

Consider the marketing value of **an independent rating organization** for EMS devices. Tested and rated appliances will sell better than those without the rating sticker.

Conclusions & Recommendations

Time of Use Pricing

It will be important to **manage consumer expectations** as TOU pricing is introduced in new locales. Many homeowners will expect considerable savings by shifting their energy usage to off-peak times of day.

Three-quarters believe their energy costs will drop by more than 10%. At the same time, homeowners plan to change their habits a “moderate” amount (43%), or a lot/a great deal (34%).
Will their actual behavior match up with their expected cost savings?

Expect three appliances to be an “easy sell” for EMS: **dishwasher, washing machine, and dryer**. Homeowners are **very willing** to run these appliances during off-peak hours.

Conservation & Energy Management Attitudes

Two phrases neatly encapsulate homeowner thoughts about climate change and Energy as a Managed Service: **“Save money”, and “conservation.”** EMS should be marketed with these ideas in mind.

Saving money and better managing the budget are the top reasons homeowners cite for getting EMS, and their thoughts about reducing energy usage and environmental impact **favor the objective and frugal tone of “conservation.”**

Note that 45% of all **homeowners strongly identify with the idea** that “conserving energy now is an important investment in our future.”

Conclusions & Recommendations

EMS Market Segmentation

All segments are interested in EMS because **people want to save money and manage their budgets**, but the ordering of priorities after those two **varies by segment**.

Practical Conservationists (29%) want to conserve natural resources, improve their children's future, and preserve natural areas about equally.

Climate Change Skeptics (24%) think the best reason to get EMS is to improve our security with less dependence on foreign oil. But really, they just want to save money.

Comfort and Convenience Seekers (19%) are also motivated by savings. Other factors don't matter to them.

Active Conservationists (19%) want to conserve natural resources and preserve natural areas (and save money).

Family First (9%) want to improve their children's future, to be good stewards for religious reasons, and to strengthen security by reducing reliance on foreign oil (and save money).

A broad marketing campaign for EMS adoption should **stress saving money and a frugal "conservation" mindset**, to appeal to all segments.

Order Now: Member Price: \$4,500/Non-Member Price: \$5,500 US

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