

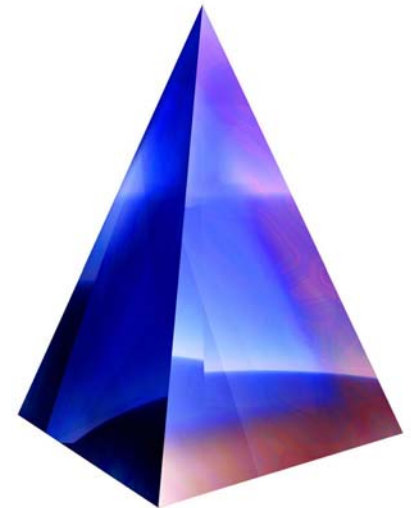


***The Potential For Implementing
Demand Response Programs
In Illinois***

Rick Voytas

***Manager, Corporate Analysis
Ameren Services***

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Objective: Discuss Possible Barriers

- Description of demand response products
- Ameren's prior demand response initiatives
- AmerenUE's residential time-of-use pilot
- Demand response barriers
 - Infrastructure
 - Institutional
 - Customer awareness
- Good News

Categories Of Demand Response Programs

Large C&I Customers

- Real-time pricing
- **Market-based I/C service with buy-through**
- **Traditional I/C service**
- Short-notice/emergency/I/C service

Small C&I Customers

- Critical peak pricing
- **Traditional TOU service**

Residential Customers

- **Critical peak pricing**
- **Traditional TOU service**
- **A/C cycling based on price signals or market conditions**

Ameren has a track record of providing a variety of demand response products to its customers.

Historical Levels Of Participation In Traditional Ameren Demand Response Tariffs

<u>Tariff Type</u>	<u>Participation Observations</u>
Residential Time-Of-Use	3000 customers
Residential A/C Cycling	Pilot limited to 3000 customers
Commercial Time-Of-Use	Entire commercial class
Interruptible	Less than 20 customers
Voluntary Curtailment	115 customers representing 220 MW

Historical participation levels have been low.

Observations On Historical Barriers To Participation

Residential Customers

- Magnitude of residential customers on TOU rate average monthly bill savings not known
- Mixed customer reaction to direct A/C control programs during extreme weather conditions

Commercial & Industrial Customers

- Aversion to participate in I/C programs except when production levels were down
- Desire for firm service at interruptible rates
- Lack of interest in two-part RTP

AmerenUE 2004-2005 Residential TOU Pilot

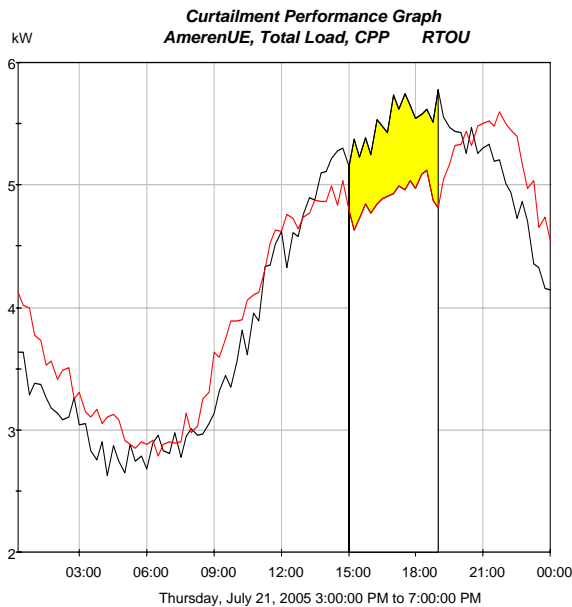
General Conclusions

- The CPP component of the TOU rate does motivate customers to reduce demand.
- Enabling Technology was key to receiving a stronger load response during CPP events.
- Customer did not display significant shift of load from on-peak to off-peak.

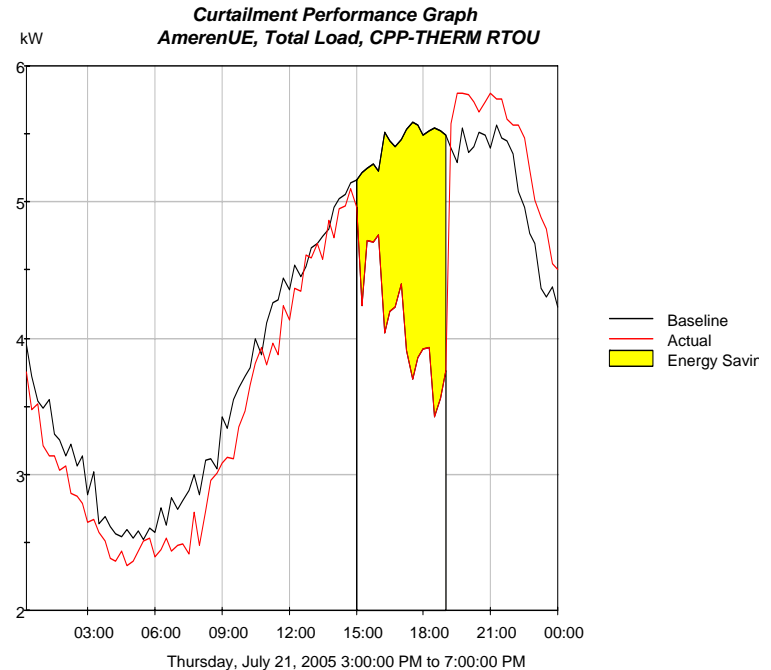
Typical Impact On CPP Event Day

CPP Event Day
July 21, 2005

True-Up: Two Hour Period 12pm to 2pm



CPP Event Day
July 21, 2005



**The “CPP Only” group reduced demand by 0.63 kW per participant.
The “CPP W/Smart Thermostat” group reduced demand by 1.36 kW.**

Recruitment Guidelines For Pilot Participants

- \$25 incentive for participation. An additional \$75 will be provided to participants for each six-month period of study.
- High summer usage residential customers targeted for participation (>1500 kwh)
- Main recruiting points:
 - Potential monthly bill savings
 - No change in behavior may result in higher monthly bills
 - No forms to complete. Simple yes or no and billing change is automatic
 - Participants can opt out at any time

Potential Barriers To Success

■ Infrastructure

- Smart thermostats programmed via web require technology savvy

■ Institutional

- Requires significant differential between on-peak/off-peak market prices
- The residential TOU rate alone does not appear to motivate customers to shift load from on-peak to off-peak

In general, customers want to “keep it simple”. Customers have expectations of meaningful bill savings which implies a significant price differential between on-peak and off-peak usage periods.

Potential Barriers To Success

■ Consumer awareness and understanding

- Rewards must be commensurate with efforts to change behavior
- Most behavioral changes had minimal impact on overall energy consumption and did not result in lower monthly bills
- Most are unwilling to dramatically change their home comfort level by turning up the A/C thermostat on any type of regular basis
- Smart thermostat: complicated, difficult to adjust
- Confusion about how to read monthly electric bills
- Little interest in participant Web site

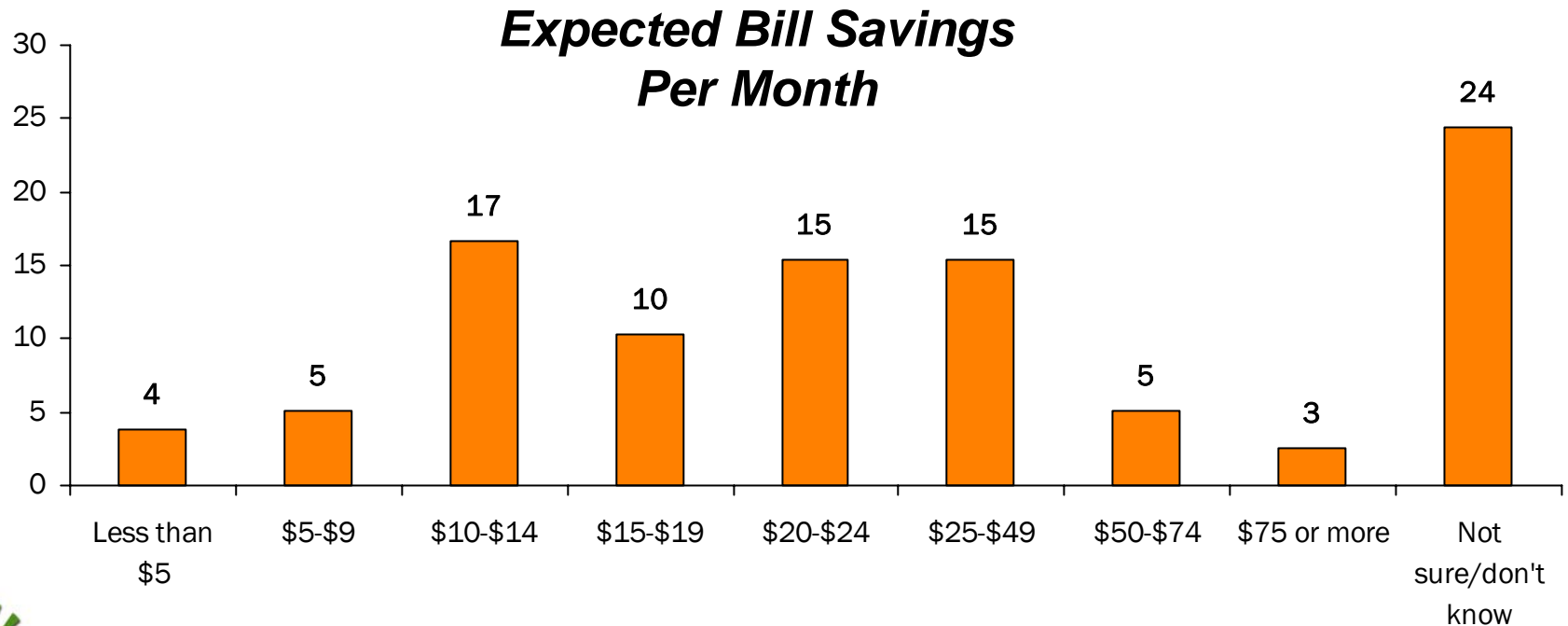
There is an inverse relationship between the complexity of the process and customer willingness to participate.

**** These conclusions are from post-2004 summer focus groups**

Potential Barriers To Success

■ Expected Savings

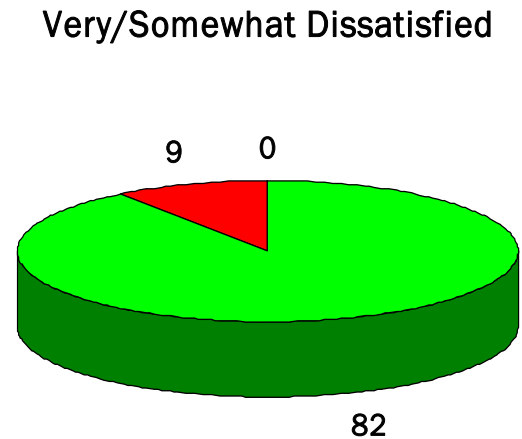
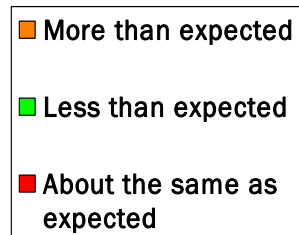
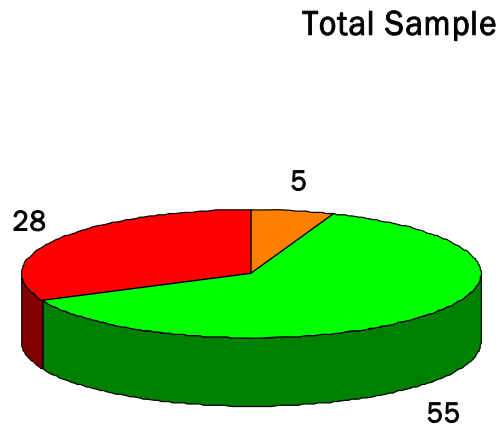
- Most respondents were not sure how much they had saved.
- But those who did have an idea were most likely to say they would save \$10 - \$49 per month.



Potential Barriers To Success

■ Expected vs. Actual Savings

- More than half said they saved less than they expected.
- Eight in ten of those who were very or somewhat dissatisfied saved less than they expected.



Summary and Conclusions

- Most participants appear to be reasonably satisfied with their participation in the program. Two thirds were very or somewhat satisfied. Those who received a Smart Thermostat were somewhat less satisfied with the program – 54% said they were very or somewhat satisfied.
- A surprising proportion are unaware of how much money their participation in the program saved them, either in absolute dollars or as a percentage of their bill. This lack of knowledge likely contributed to less satisfaction than if they had known.
- People who were dissatisfied saved less money than they expected. Clearly, the primary motivation is to save money, rather than more altruistic motivations.
- About a third said they had cut back on air conditioning during their participation. The average was three degrees. But more participants were likely to shift tasks like doing laundry or running the dishwasher.

THE GOOD NEWS!!

- The Residential TOU pilot showed promise in its ability to heighten awareness of energy consumption, and potentially change behavior:
 - Clearly focus group participants are more aware of and more sensitized to their energy consumption patterns today than they were prior to becoming involved in the test.
 - The resulting increased consciousness translated to some change in behavior for almost all of the focus group participants
 - The idea of being “in control” appealed to most participants

THE GOOD NEWS!!

Overall Satisfaction

- Almost two-thirds were satisfied with the TOU program.
- Those who had the Smart Thermostats were somewhat less satisfied.

