Habits, Adjustments, or Acquisitions: What Behaviors Will Minnesotans Change to Stay Above Average?

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BECC
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Site Visits
- Device inventory
- Metering (5-30 devices/home, 1 mo.)
- Household interview

Mailed Saturation Survey
- Computer & peripheral details
- TV & peripheral details
- Saturation for other plug-in devices

Telephone Survey
- Demographics
- Attitudes
- TV & Computer counts

Nested Sample
Three Levels of Data Collection

Have analyzed 3 of 4 rounds of site-visit data (38 homes)
Encourage habits
Provide feedback
Change settings
Technical aides

Device Inventory

Technical

Behavioral

Reaction to Various Behavioral Interventions
Day 1  (Fri, May 29)  Day 2   (Sat, May 30)  Day 3   (Sun, May 31)

Watts

Occupancy

Computer

Monitors

Hour of the day
For 34 metered desktop computers:

<table>
<thead>
<tr>
<th></th>
<th>% of desktops</th>
<th>Avg. Annual kWh used*</th>
<th>Est. Annual PM Savings (kWh)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long idle periods</td>
<td>35%</td>
<td>520</td>
<td>190</td>
</tr>
<tr>
<td>Left on 24/7</td>
<td>30%</td>
<td>650</td>
<td>400</td>
</tr>
<tr>
<td>On only when in use</td>
<td>20%</td>
<td>110</td>
<td>15</td>
</tr>
<tr>
<td>Not used much</td>
<td>15%</td>
<td>50</td>
<td>2</td>
</tr>
<tr>
<td>Overall</td>
<td>100%</td>
<td>410</td>
<td>190</td>
</tr>
</tbody>
</table>

*computer + monitor(s)    **30-minute off delay  
n=28

Preliminary data!
A funny thing happened when we asked to record power management settings...
A funny thing happened when we asked to record power management settings...

...people turned on power management!

Of 32 households asked about PM:

9 enabled power management during interview

4 already had PM enabled
2 indicated intent to enable later
3 would consider

2 PM does not apply
4 someone else’s computer or decision

8 not interested (6 claim to be diligent in turning off)

Preliminary data!
## Turning savings potential to savings

### 34 desktops - revisited

<table>
<thead>
<tr>
<th>Computer use category</th>
<th>Estimated avg. PM savings (kWh/yr)</th>
<th>Behavioral disposition of aggregate estimated PM savings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Enabled during interview</td>
</tr>
<tr>
<td>Long idle periods (35%)</td>
<td>190</td>
<td>72%</td>
</tr>
<tr>
<td>Left on 24/7 (30%)</td>
<td>400</td>
<td>25%</td>
</tr>
<tr>
<td>On only when in use (20%)</td>
<td>15</td>
<td>23%</td>
</tr>
<tr>
<td>Not used much (15%)</td>
<td>2</td>
<td>67%</td>
</tr>
<tr>
<td>Overall (100%)</td>
<td>190</td>
<td>41%</td>
</tr>
</tbody>
</table>

Preliminary data!
Estimated 1.65 million desktop computers in MN homes (0.8/household)

Two-thirds of desktops have a significant power-management savings opportunity (2-3% impact on HH electricity use)

Four of ten households immediately willing to implement PM

Potential aggregate savings:
- 130 million kWh/yr
- 0.2% of all electricity use in MN

Preliminary data!
Stay tuned!
(but don’t leave your computer on)

- www.ecw.org
  - Final study report available by mid-January 2010
    - computer power management and much more
  - Webinar scheduled for January 27, 2010

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