The Smart Grid is Coming: Why Hourly Pricing is Key

David Becker
Director of Dynamic Pricing
Our Mission

We promote smarter energy use for all.
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We give people the resources they need to make informed energy choices.
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We ensure the benefits of energy efficiency reach those who need them most.
Smart Meter – Customer Perceptions

“ComEd begins smart meter installations in Westchester”

“Smart meter, dumb idea?”

“Security Pros Question Deployment of Smart Meters”

SmartMeters.com: “Sex, Lies and Smart Meters - The Truth Is Out There”
Smart Meters Enable Smart Rates

• Illinois default rate: Fixed/flat rate
  • Low-use households subsidize high-use households capacity charges
• Illinois residential customer pays ~$3/month for smart meters

<table>
<thead>
<tr>
<th>What Customers are <em>Told</em></th>
<th>What Customers <em>Hear</em></th>
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<tbody>
<tr>
<td>• Access to a website to view electricity usage</td>
<td>• Utility/Government wants to control my usage</td>
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<tr>
<td>• Fewer estimated bills</td>
<td>• My electricity bill is going up</td>
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<td>• Quicker response time to outages</td>
<td>• RF waves cause health problems</td>
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<tr>
<td>• Coming Soon: Dynamic Rates – PTR and Hourly</td>
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• Smart meters need smart rates to deliver **immediate consumer benefits** (savings) from the smart grid
Hourly Pricing in Illinois
3rd Party Administrator – Our Role

- Customer service support – dedicated call center
- Marketing and outreach
- Education and enrollment
- On-line bill comparison tool to show customers how they perform
- High price alerts and notifications to prepare customers for higher prices
- On-going customer communication to help existing customers maintain and improve savings
Hourly Pricing in Illinois

  - 13,500 households
  - PTD: $9.4 million saved (26%)
  - Day-ahead hourly pricing

- **Power Smart Pricing (2007-present)**
  - 13,500 households
  - PTD: $9.4 million saved (26%)
  - Day-ahead hourly pricing

- **ComEd RRTP (2007-present)**
  - 9,500 households
  - PTD: $13.7 million saved (28%)
  - Real-time hourly pricing
Low-Income Success

24% - 26% Average Electric Supply Savings

27% - 31% Average Electric Supply Savings
Annual Environmental Benefits

**Power Smart Pricing**
- **Reduction in Within-day Load Variance**: 25%
- **Annual Conservation Savings (MWH)**: 0
- **CO₂ Benefits**: $11,458
- **SO₂ & NOₓ Benefits**: $63,000

**ComEd RRTP**
- **Reduction in Within-day Load Variance**: 12%
- **Annual Conservation Savings (MWH)**: 5,000
- **CO₂ Benefits**: $117,396
- **SO₂ & NOₓ Benefits**: $111,211

What If Hourly Pricing Was the Default Rate?
Hourly Pricing as the Default Rate – Study #1

- Included ComEd customers with 12 months of reported usage between June 1, 2010 and May 31, 2011
- No awareness of hourly rates
- Sample size: 83,891 customers
- Total Savings $8.6 Million

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<th>Less than 300 kWh/month</th>
<th>Greater than 300 kWh/month</th>
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<tr>
<td>Number of Customers</td>
<td>18,329 (22%)</td>
<td>65,562 (78%)</td>
</tr>
<tr>
<td>Median Dollar Savings</td>
<td>($29)</td>
<td>$87</td>
</tr>
<tr>
<td>Median % Savings</td>
<td>-18%</td>
<td>15%</td>
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Hourly Pricing as the Default Rate – Study #2

- Included ComEd customers with 12 months of reported usage between December 1, 2011 and November 30, 2012
- No awareness of hourly rates
- Sample size: 97,938 customers
- Total savings: $15 million
Creating Engaged and Satisfied Customers

- Utilities want more engaged and satisfied customers

- Hourly customers are:
  - More willing to adopt new technologies
    - 33% of ComEd RRTP participants are enrolled in A/C Cycling demand response program – compared with 1.8% of all ComEd customers
  - More educated about electricity markets (peak and off-peak)
  - More engaged with their electricity service and usage
  - Really, really satisfied!
    - 98% Satisfaction with dedicated call center for Power Smart Pricing
    - 91% report the program is “Quick and Easy”
    - 88% Overall Satisfaction with ComEd RRTP program
Hourly Pricing: Gateway to Transactive Energy?

“A device at home that has a video interface showing the hourly prices, and the trend of the prices would let us be more **proactive in reducing our energy use.**” – 2013 ComEd RRTP Customer Survey

“Better real time access to energy usage. Software developers could build systems that **access cost and household usage data in real time** and make intelligent choices about what devices to turn on and off in my house.” – 2013 Ameren IL PSP Customer Survey
Smart Rates Need Smart Meters

Illinois Smart Meter Deployment Schedule

- ComEd: 4 million smart meters by 2021
- Ameren Illinois: 660k smart meters by 2019
Questions? -- Stay in Touch

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