Energy Efficiency
Update

Jim Wontor
Manager, DSM Programs
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Profile: Arizona Public Service

- Largest electric utility in Arizona
- 1.1 million customers
- Peak demand of 7,500 MW
- Annual sales of 29,000 GWH
- Annual sales growth rate of 4.5% - 4 times higher than national average
- 2.5 billion in annual revenue
- 1% of annual revenue spend on Energy Efficiency ($25 M)
Energy Efficiency Portfolio Timeline

- **July 2005**: Portfolio Plan Filed with ACC 4 Residential & 6 Non-Residential Programs
- **Aug. 2005**: ACC Approval of 1 Residential Program: Consumer Products (CFLs)
- **Feb. 2006**: ACC Interim Approval of Non-Residential Programs Required additional update filing in 13 months
• April 2006  ACC Approval of Remaining 3 Residential Program
• Mar. 2007  13-Month Filing Updating Non-Residential Programs -- Decision still pending --
• Aug. 2007  ACC Approval Expedited Filing Adds $3.5 million to Non-Residential Program Budget
• Dec. 2007  Filing to increase Portfolio expenditures and expand program measures
Current DSM Programs

Energy Efficiency

- Residential
  - New Construction
  - Existing Homes HVAC
  - Consumer Products
  - Low Income

- Non-Residential
  - Large Existing Facilities
  - New Construction
  - Small Businesses
  - Schools
  - Building Operator Training
  - Energy Information Services

Demand Response

- C&I Program (planned)
Non-Residential Programs

- **Existing Facilities** — Promote the installation of prescriptive and custom high efficiency technologies including: lighting, HVAC equipment, motors, and refrigeration.

- **New Construction** — Includes three components: design assistance, custom efficiency and prescriptive measures.

- **Small Business** — Provides prescriptive incentives for energy-efficiency improvements in lighting, HVAC, motors and refrigeration.
Non-Residential Programs (cont.)

- Schools - Provide assistance for reducing energy use in school buildings; includes financial incentives to schools to assist with cost of energy-efficiency upgrades.

- Building Operating Training — Training for building operators and facility maintenance technicians on energy-efficient building operations and maintenance practices.

- Energy Information Services — Web-based energy information tool that provides near real-time feedback on energy consumption and load profiles to customers.
Incentives by Business Type
Program to Date

Incentives Reserved & Paid by Business Type:
September 30, 2007

- College/University: 21.4%
- Grocery: 16.9%
- Hotel/Motel: 7.4%
- K-12 School: 10.1%
- Medical: 5.0%
- Miscellaneous: 4.3%
- Office: 1.6%
- Other Industrial: 1.4%
- Process Industrial: 1.1%
- Restaurant: 1.1%
- Retail: 0.6%
- Warehouse: 0.4%
- Process Industrial: 0.2%
Non-Residential Program Estimated Benefits

- Lifetime estimated savings nearly $35 million
- Lifetime MWh saved 550,000

Environmental

- Water 130 mil Gal
- Sox 2,400 Lbs
- Nox 95,000 Lbs
- CO2 500 Mil Lbs

Equivalent to: Total energy use of 140 grocery stores and removing 38,000 cars from our roads.
Residential Programs

- **Consumer Products** – Promotes Energy Star approved lighting and discount prices for CFL’s in retail stores; up-stream buy-down with manufacturers.

- **New Construction** – Promotes high-efficiency construction practices for new homes. Energy Star requirements save 20% energy use vs IECC standard.

- **Existing Homes HVAC** – Improves the performance of residential heating and air-conditions systems with high-efficiency equipment; includes incentives based on SEER/EER levels; includes additional incentive for Quality Installation.
Residential Programs (cont)

- Home Performance with Energy Star – Diagnostic system testing and repair of energy inefficient HVAC equipment in homes.

Residential Program Estimated Benefits

- Lifetime estimated savings nearly $105 million
- Lifetime MWh saved 1,200,000

Environmental

- Water 300 Mil Gal
- Sox 5,200 Lbs
- Nox 208,000 Lbs
- CO2 1,100 Mil Lbs

- Equates to enough energy to power more than 87,000 homes in a year and save emission reduction from 83,000 cars per year.
# Total Portfolio Results through June 07

<table>
<thead>
<tr>
<th>DSM Program</th>
<th>Capacity Savings MW</th>
<th>Lifetime MWh Savings</th>
<th>Program Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Income</td>
<td>0.2</td>
<td>31,000</td>
<td>$ 1.9</td>
</tr>
<tr>
<td>Res Existing Homes HVAC</td>
<td>4.3</td>
<td>158,000</td>
<td>$ 2.4</td>
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<tr>
<td>Res New Home Construction</td>
<td>0.6</td>
<td>30,000</td>
<td>$ 1.2</td>
</tr>
<tr>
<td>Consumer Products</td>
<td>27.5</td>
<td>994,000</td>
<td>$ 4.0</td>
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<tr>
<td><strong>Totals for Residential</strong></td>
<td><strong>32.7</strong></td>
<td><strong>1,213,000</strong></td>
<td><strong>$ 9.6</strong></td>
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<tr>
<td>Non-Residential</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Large Existing Facilities</td>
<td>4.4</td>
<td>454,000</td>
<td>$ 3.8</td>
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<tr>
<td>Large Non Res New Const</td>
<td>0.5</td>
<td>41,000</td>
<td>$ 1.5</td>
</tr>
<tr>
<td>Small Business</td>
<td>0.3</td>
<td>21,000</td>
<td>$ 1.2</td>
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<tr>
<td>Bldg Operator Training</td>
<td>0.1</td>
<td>8,000</td>
<td>$ 0.1</td>
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<tr>
<td>Energy Information Svcs</td>
<td>0.0</td>
<td>-</td>
<td>$ 0.1</td>
</tr>
<tr>
<td>Schools</td>
<td>0.2</td>
<td>23,000</td>
<td>$ 0.4</td>
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<tr>
<td><strong>Total for Non-Residential</strong></td>
<td><strong>5.5</strong></td>
<td><strong>547,000</strong></td>
<td><strong>$ 7.0</strong></td>
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<tr>
<td><strong>Subtotal</strong></td>
<td><strong>38.2</strong></td>
<td><strong>1,759,428</strong></td>
<td><strong>$ 16.6</strong></td>
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<tr>
<td>Measurement, Evaluation &amp; Research</td>
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<td>$ 1.4</td>
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<td>Performance Incentive</td>
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<td></td>
<td>$ 2.6</td>
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<td><strong>TOTAL</strong></td>
<td><strong>38.2</strong></td>
<td><strong>1,760,000</strong></td>
<td><strong>$ 20.6</strong></td>
</tr>
</tbody>
</table>
Raising Program Awareness …

Recognition:

- Partner of the Year Award for Excellence in CFL Program Delivery
  - 2007 EPA/DOE Energy Star Partner of the Year award
- Exemplary Program Award 2007 CFL Program
  - 2007 American Council for an Energy Efficient Economy (ACEEE)
- E Source Resource Guide on CFLs
  - CFL Program selected as a utility success story to be featured in the E Source Resource Guide
Raising Program Awareness ...

Promotions:

- TV Appearances – Horizon Show, Channel 12
- TV Ads – during Prime Time, Baseball, Football
- Radio Ads – KTAR, KYOT, KSLX, KOOL
- Print Ads – Arizona Republic, Business Journal
- Bill Inserts & Newsletters
- Event Participation (Tradeshows, Change A Light, Training Classes etc.)
Upcoming Program Enhancements
December 2007 Filing

New Measures

- Residential
  - Clothes Washers
  - Pool Pump Timers
  - High Efficiency Pool Motors
  - Energy Star for Manufactured Homes
  - Energy Star Plus Homes (50% better than IECC)
  - Window upgrades to Low E

- Non-Residential
  - Pump Testing & Repair
  - Direct Install for Schools
  - Custom Measures and Studies for Small Businesses
Program Enhancements (cont.)

New Features

- Raise C/I per Customer incentive cap
- Allow 3rd party financing for C/I measures
- Remove cap on training incentives
- Allocate $ to Low Income Multi Family Housing Projects and to Special Projects
Incentive to Invest in Energy Efficiency ???

- **Current:** Performance Incentive of 10% of Net Benefits
  - Capped at 10% of spending

- **Issues:**
  - Recovery of costs lagged one year
  - Performance Incentive not sufficient to cover lost margin on sales
  - Spending cap reached before Net Benefits cap
  - No earnings on EE investment provides disincentive to increase investment
Incentive to Invest in Energy Efficiency

Possible Solutions:

- Forward looking DSM Adjustor Mechanism
- Removal of cap on spending – just based on Net Benefits alone
- Increased Performance Incentive %
- Earnings bonus on EE investment
Summary

- We’ve come a long way baby!
- Net benefits are substantial
- Seeking regulatory approval to enhance programs
- Increased EE investment will require removal of financial disincentive
- Cooperation required to make EE work for CUSTOMERS and all interested parties