Southwest Gas Corporation

Proposed Demand Side Management Programs for Arizona
2006

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Who is Southwest Gas?

- One of the fastest growing natural gas distribution companies in the country
- Headquartered in Las Vegas
- Service territory includes parts of Arizona, California, and Nevada
- Serve over 1.7 million customers
- Nearly 940,000 customers in Arizona
Demand-side management (DSM) programs consist of the planning, implementing, and monitoring activities of utilities that are designed to encourage consumers to modify their level and pattern of energy usage.

Source: Energy Information Administration
Proposed DSM Programs

- Arizona Corporation Commission (ACC) approved Southwest’s request to spend $4,385 million annually for DSM programs
- SWG hosted a series of collaborative workshops to discuss and review proposed DSM programs
- Program plans filed June 26, 2006
- Awaiting approval from ACC
Proposed DSM Budget

- **$4.385 million represents approximately:**
  - 1.2% of margin
  - 0.5% of total revenue

- **Based on rate case test year:**
  - Bills and volumes
  - Currently effective gas cost
Proposed Residential Programs

- Low-Income Energy Conservation (LIEC)
- ENERGY STAR® Home
- Multi-Family New Construction
- Consumer Products
Proposed Non-Residential Programs

- Commercial Equipment
- Distributed Generation
- Technology Information Center
Low-Income Energy Conservation (LIEC)
Proposed Budget: $500,000/year
Estimated Participants: 300 households/year

- **Goal**: Improve the energy efficiency of low-income dwellings
- **Ongoing for qualified low-income customers**
- **Money-saving home improvements that reduce energy use**
  - Caulking, insulation, weatherstripping, ductwork repairs, set-back thermostats, windows, shade screens, HVAC replacements, etc.
LIEC
Continued

- Budget includes $50,000 for bill assistance
  - Reverts to weatherization if unused
- Administered by Arizona Energy Office
  - Local community agencies perform services
ENERGY STAR® Home Certification

Proposed Budget: $450,000/year
Estimated Participants: 4,000-5,000 homes/year

- **Goal:** Increase the number of newly constructed energy efficient homes

- **Services to homebuilders**
  - Plan review
  - Inspections and testing
  - Training and educational seminars

- **No direct incentives proposed**

- **Available throughout Southwest’s Arizona service areas**
Multifamily New Construction
Proposed Budget: $1.2 million/year
Estimated Participants: 2,000 units/year

- **Goal:** Increase the energy efficiency of multifamily dwellings
- **Apartment & condominium renters & owners**
  - An underserved population; often lower-income
- **ENERGY STAR guidelines**
  - Exceed existing codes
  - Duct sealing
  - Programmable thermostats
  - Compact fluorescent lighting
  - High efficiency water heaters
Multifamily New Construction
Continued

- Partner with low-income housing agencies

- Education
  - Consumers, builders, designers
Consumer Products

Proposed Budget: $800,000/year
Estimated Participants: 5,950 measures/year

- **Goal:** Increase awareness and purchase of more efficient appliances and equipment
- **Partner with home improvement stores, appliance manufacturers, and retailers**
  - Education, instruction
  - Point-of-purchase displays
  - Rebates
    - On purchases of selected energy-efficient products and materials
    - Clothes washers and dryers, water heaters, thermostats
Proposed Non-Residential Programs

- Commercial Equipment
- Distributed Generation
- Technology Information Center
Commercial Equipment

Proposed Budget: $1 million/year
Estimated Participants: Varies depending on measure

**Goal:** Increase utilization of high efficiency equipment in commercial applications

**Equipment**

- *Spray rinse valves – 5,000 (Year 1)*
  - Partnership with Arizona Dept. of Water Resources and Bureau of Reclamation
  - Higher efficiency becomes mandatory in 2008
  - Continuation may be considered beyond 2008
Commercial Equipment

Continued

- Equipment – continued
  - Water heaters – 111 to 140 units/year
  - Griddles – 65 to 79 units/year
  - Steamers – 101 to 121 units/year
  - Fryers – 101 to 121 units/year

- Rebates

- Education
  - SWG Food Service Center
  - Trade shows
  - Workshops
Distributed Generation

Proposed Budget: $400,000/year
Estimated Participants: One to four installations/year

- **Goal:** Increase the number of major distributed generation projects
- Small to large industrial customers and medium to large commercial customers
  - Higher efficiency
    - Reduced emissions
  - Water savings
  - Cost savings
  - Peak shaving
  - Power reliability
  - Risk management
Distributed Generation
Continued

- **Education**
  - Technology Information Center
  - Mailings
  - Seminars and workshops

- **Incentives**
  - Partnerships where feasible
Technology Information Center

Proposed Budget: $35,000/year
Estimated Participants: 200-300/year

- **Goal:** Increase commercial and industrial customers’ awareness and understanding of energy issues and high efficiency technologies

- **Technical information**
  - Energy-efficient technologies
  - Reducing energy usage
  - Lowering utility bills
  - Increasing awareness of environmental issues
  - Distributed generation
Technology Information Center
Continued

- **Media formats**
  - Electronic or faxed newsletter
  - Internet resource Website
  - “Ask an Expert” hotline
  - Electronic research library

- **Track customer interest**
  - Future topics and programs
# Estimated Program Energy Savings
## 2007-2009

<table>
<thead>
<tr>
<th>Program</th>
<th>KWH</th>
<th>KW</th>
<th>Therms</th>
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<tbody>
<tr>
<td></td>
<td>kilowatt-hours</td>
<td>kilowatts</td>
<td></td>
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<tr>
<td>LIEC</td>
<td>18,451,048</td>
<td>450</td>
<td>600,210</td>
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<tr>
<td>E* Home</td>
<td>1,119,125,040</td>
<td>9,768</td>
<td>27,165,600</td>
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<td>Multi-family</td>
<td>334,839,966</td>
<td>5,940</td>
<td>(3,859,200)</td>
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<td>Cons. Prods</td>
<td>265,199,006</td>
<td>21,960</td>
<td>569,250</td>
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<td>CommEquip</td>
<td>121,160,230</td>
<td>4,015</td>
<td>15,735,690</td>
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<td>Dist. Gen.</td>
<td>336,186,900</td>
<td>2,100</td>
<td>22,063,200</td>
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<tr>
<td>TechInfoCtr</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>2,194,962,190</strong></td>
<td><strong>44,233</strong></td>
<td><strong>62,274,750</strong></td>
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### Summary of Estimated Savings and Environmental Benefits

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
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<tr>
<td>kilowatt-hours</td>
<td>2.2 billion</td>
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<tr>
<td>kilowatts</td>
<td>42,200</td>
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<tr>
<td>Therms</td>
<td>62.2 million</td>
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<tr>
<td>Carbon dioxide</td>
<td>2.1 billion pounds</td>
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<td>Nitrous oxides</td>
<td>400,000 pounds</td>
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<tr>
<td>Sulfur dioxide</td>
<td>10,000 pounds</td>
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<tr>
<td>Water</td>
<td>2.7 billion gallons</td>
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Note: Figures are approximate
Costs/Benefits

- DSM costs recovered via a demand side management adjuster mechanism
  - Applies to all full-margin customers

- Weighted program cost-benefit ratio is 4.52
  - For every dollar invested in DSM, Arizona customers will realize $4.52 in total benefits
  - Environmental and societal benefits add even more value
Questions?