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Southwest Energy Efficiency Project (SWEP)
Presentation to the Salt River Project Board
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SRP is at a Crossroad

- SRP forecasts that electricity demand will grow 3.9% per year on average in 2004-2010
- 2.0% to 2.5% load growth in nation as a whole
- SRP will need 26% more resources by 2010 (1,300 MW), and 80% more by 2020 (4,200 MW)
- How will SRP meet the needs of its customers in the future? Which resources will be employed?
- Wisely, SRP is looking at sustainable resources

SWEEP Recommendation: Increase energy efficiency as a valuable customer service and as a cost-effective sustainable resource
Benefits of Energy Efficiency

- Customers: lower total costs, other direct benefits
- Electric sector and natural gas benefits:
  - Avoided investment in power plants and T&D
  - Reduced fuel, operating, and purchased power costs
  - Reduced natural gas prices
- Reliability: increased diversity, increase in distributed resources, and reduced risk of power outages
- Prices: reduced price volatility, moderated price spikes
- Macroeconomic benefits: more jobs, higher incomes
- Environmental benefits:
  - Reduced water consumption
  - Reduced air pollution and carbon emissions
Energy Efficiency Should Provide 7% of Total Resources in 2010, 17% in 2020
SWEEP Recommendation for SRP

- Conduct a broad range of *cost-effective* energy efficiency programs, with opportunities for all customers to increase their energy efficiency and benefit from participation
- Reduce load growth by about 1/3 (from 3.9% to 2.7% in 2004-2010; 3.7% to 2.5% in 2004-2020)
- Avoid over 2,000 MW of new power capacity by 2020
- Save consumers and businesses $1.9 billion (net benefits, or benefits net of costs) by 2020
- Total cost of 2-3 cents per lifetime kWh saved (SRP utility program cost is less than 2 cents per kWh)
- Provide funding at the level necessary to achieve goals: ~1.5 mills ($.0015/kWh), about $38-$43 million/year
- Self-direction for the largest industrial customers (eg, mines)
- Support appliance and product efficiency standards
- Support building codes and code implementation
Energy Efficiency Programs

- Commercial and industrial (C&I) construction – new construction and equipment replacement
- C&I existing buildings (lighting, HVAC systems, motors/drives, operations and maintenance)
- Small businesses (on-the-bill financing)
- Local governments and schools
- Industrial processes; pumping systems
- Residential new construction (increase efforts)
- Residential existing buildings (HVAC/cooling)
- Residential appliances, lighting, and windows
- Low/moderate/fixed income
- National and regional partnerships (EnergyStar)
- Support building codes and appliance standards
- Energy efficiency, distributed resources, and demand response for T&D constraints
Sustainable Portfolio Principles

- SWEEP appreciates that sustainable resources are being considered at SRP
- Concern: sustainable resources appear to be set off to the side, and do not appear to be considered core resources at SRP
- Example: resource planning (principles 4 & 5) treats sustainable resources in a separate process, in their own small bucket, off to the side
- Solution: energy efficiency and other sustainable resources should be core resources at SRP, and resource planning should be integrated to include all resources, or, at a minimum, sustainable resources should be compared to other resources
This Conceptual Difference Leads to Different Goals: SRP Goals vs. SWEEP

<table>
<thead>
<tr>
<th>Category</th>
<th>% of 2010 Energy Requirements</th>
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</thead>
<tbody>
<tr>
<td>Res &amp; Comm DSM</td>
<td>0.38%</td>
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<tr>
<td>DSM &amp; M-Power</td>
<td>0.83%</td>
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<tr>
<td>Total SRP Sustain. Plan</td>
<td>2.11%</td>
</tr>
<tr>
<td>SWEEP Energy Eff.</td>
<td>7.00%</td>
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</tbody>
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...and to Different Resource Plans:
SWEEP EE Equals 1/3 of Load Growth
Additional Comments on SP Principles

- “Reduce the use of fossil fuels” and “expand environmentally sensitive options” are good starts – but additions below would be valuable
- Focus on customer value and system value
- Reduce total costs for customers (commitment to cost-effective and least-cost resources)
- Emphasize the direct relationship to SRP’s “Pricing Philosophy” principles: gradualism, cost relation, customer choice, equity, and sufficiency
  - Increase the application of these principles to SP plan
  - Energy efficiency is very consistent with these pricing principles and would help SRP achieve them
- Consider and quantify societal benefits and costs
Principles, Goals, and Funding

- The Sustainable Portfolio principles lead to low goals and low SBC funding
- Revise the principles → consider energy efficiency and other sustainable resources as core resources → increase the goals → increase SBC funding
- Current $.0013/kWh SBC funds many other things
- The SRP-proposed SBC funding increase of $.0003/kWh (from $.0013 to $.0016) is insufficient to capture cost-effective energy efficiency and other sustainable resources
- Increase the base SBC funding to $.0015/kWh for energy efficiency alone, plus the funding for other DSM and sustainable resources, and consider an SBC adjustment mechanism for flexible funding above the increased base funding
Conclusions

- **Energy efficiency should be a core function of SRP**
  - Valuable customer service, desired by customers
  - Cost-effective, clean, sustainable resource

- Energy efficiency provides benefits to customers, the electric system, the economy, and the environment

- Increasing energy efficiency is much more cost-effective than expanding supply and the infrastructure to support plants – about 2 to 3 cents per lifetime kWh (delivered)

- Achieve 7% of total energy resources needed to meet retail load in 2010 from energy efficiency, and 17% in 2020

- Reduce load growth from 3.7% to 2.5% in 2004-2020

- SRP should implement or expand policies and programs to accelerate energy efficiency – and other sustainable resources
SWEEP:  
*Dedicated to More Efficient Energy Use in the Southwest*

Resources available online at:
www.swenergy.org

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