

Energy Efficiency:

A Valuable Customer Service and
Cost-Effective Resource for SRP



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Southwest Energy Efficiency Project (SWEEP)

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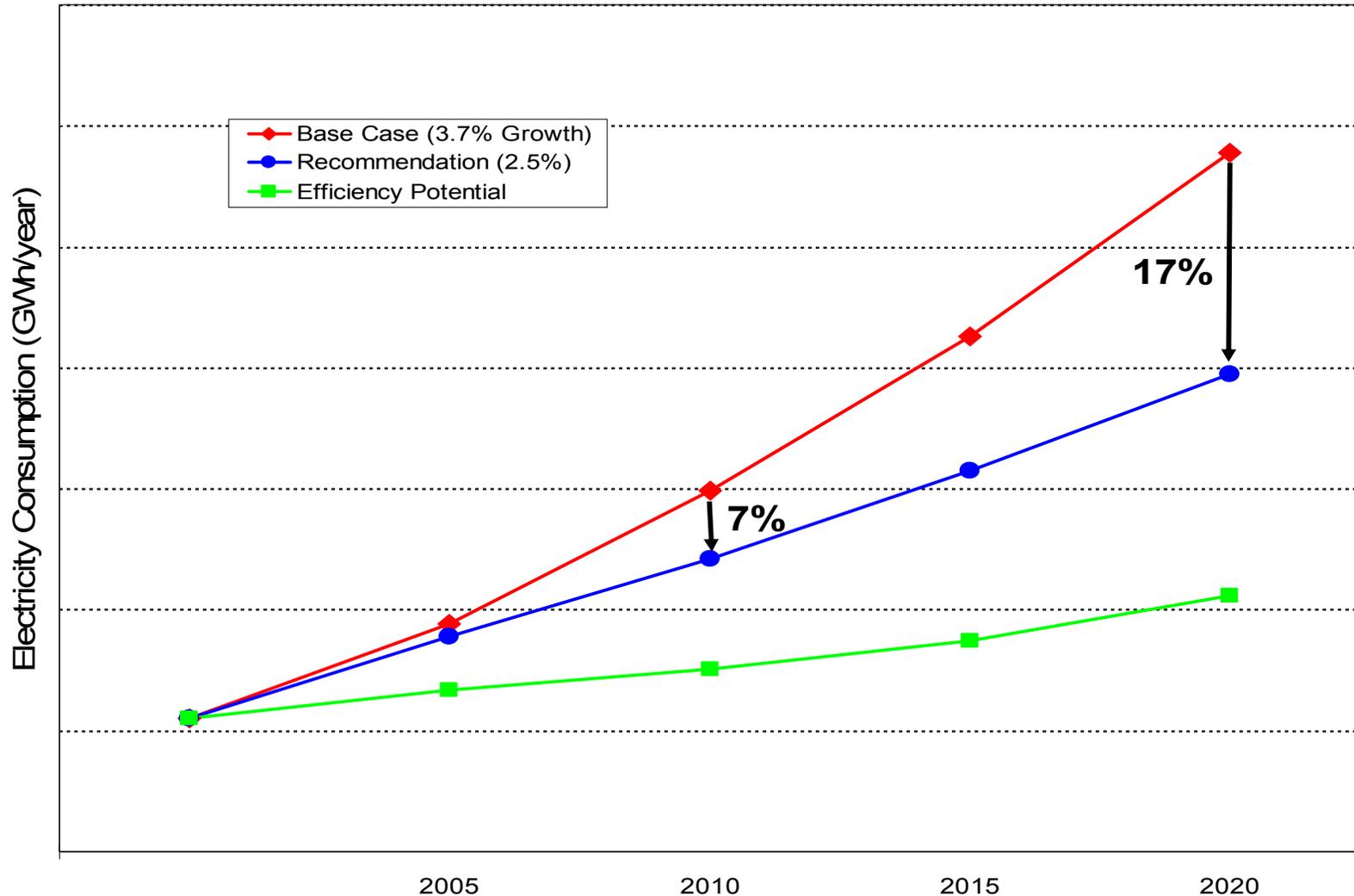
SRP is at a Crossroad

- ❑ 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

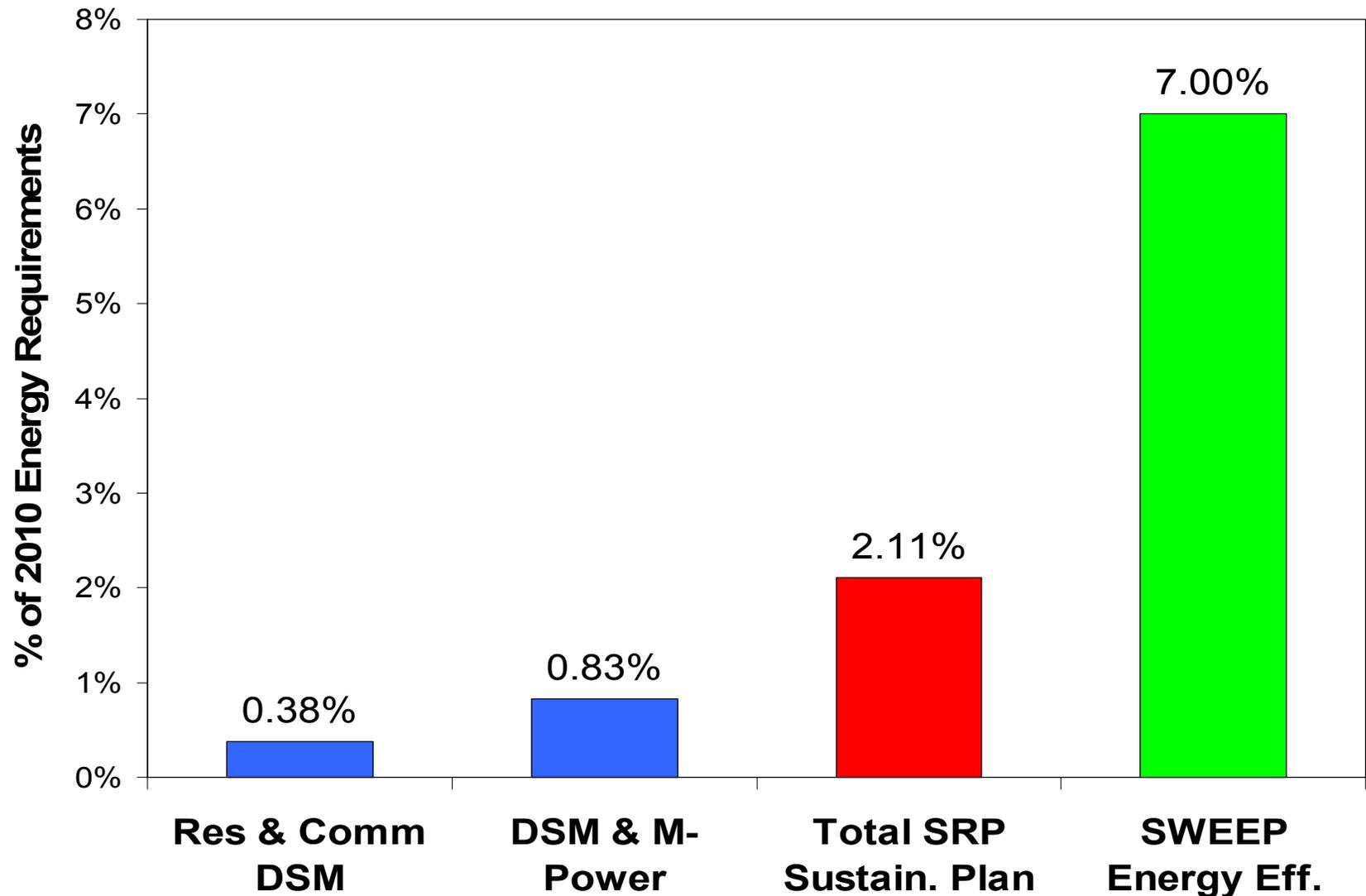
Energy Efficiency Programs

- ❑ 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

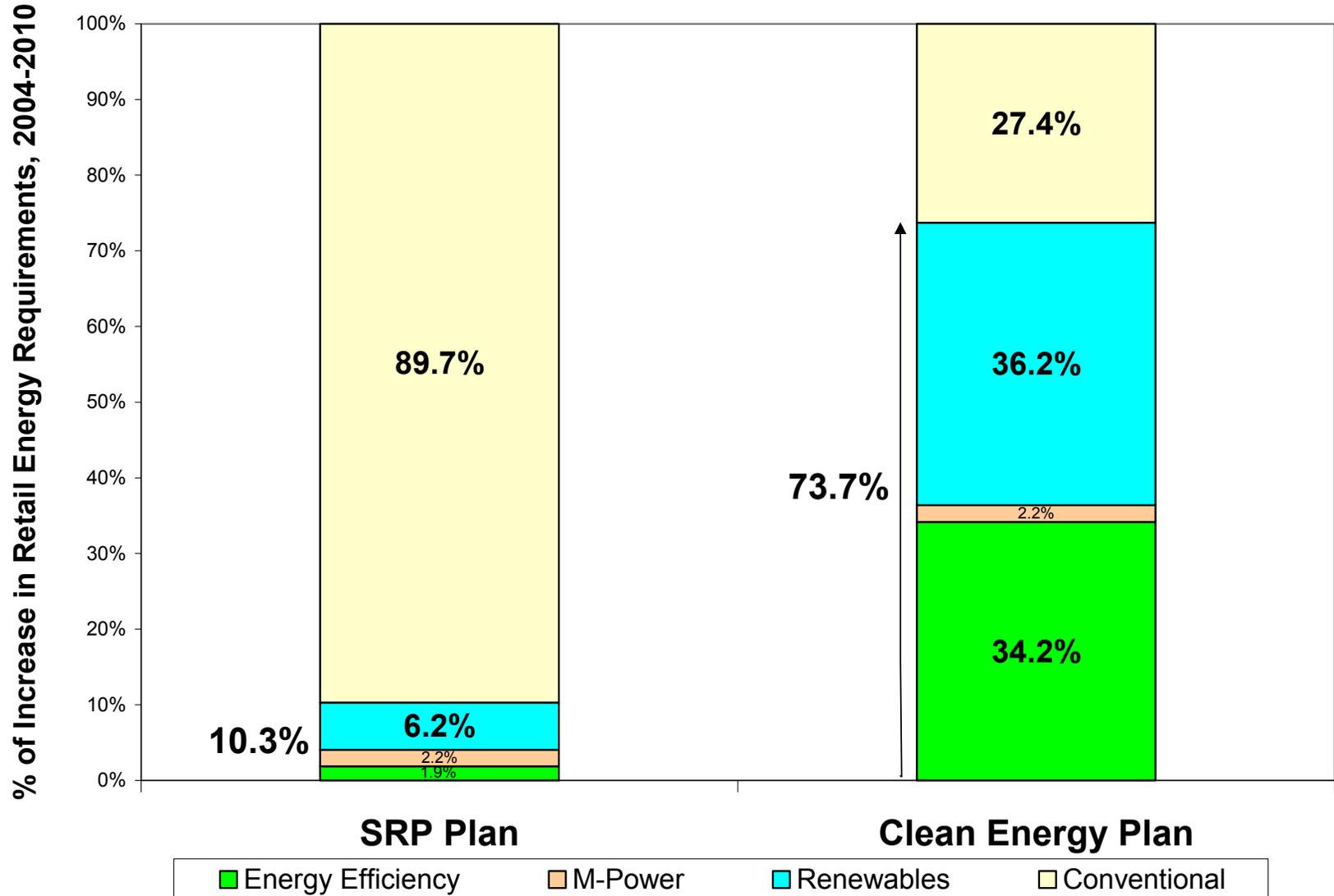
Sustainable Portfolio Principles

- ❑ 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



...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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