

Energy Efficiency and Arizona's Energy Future



Jeff Schlegel

Southwest Energy Efficiency Project (SWEEP)

AZ RISE, University of Arizona Workshop

April 23, 2010



Southwest Energy Efficiency Project (SWEEP)

- ❑ Public interest initiative promoting greater energy efficiency in AZ and southwest states
- ❑ Founded in 2001
- ❑ Board of Directors includes utility, state government, national laboratory, and private sector representatives
- ❑ Funding provided by the Energy Foundation, Hewlett Foundation, EMEF Foundation, Sea Change Foundation, U.S. Department of Energy, and the U.S. Environmental Protection Agency

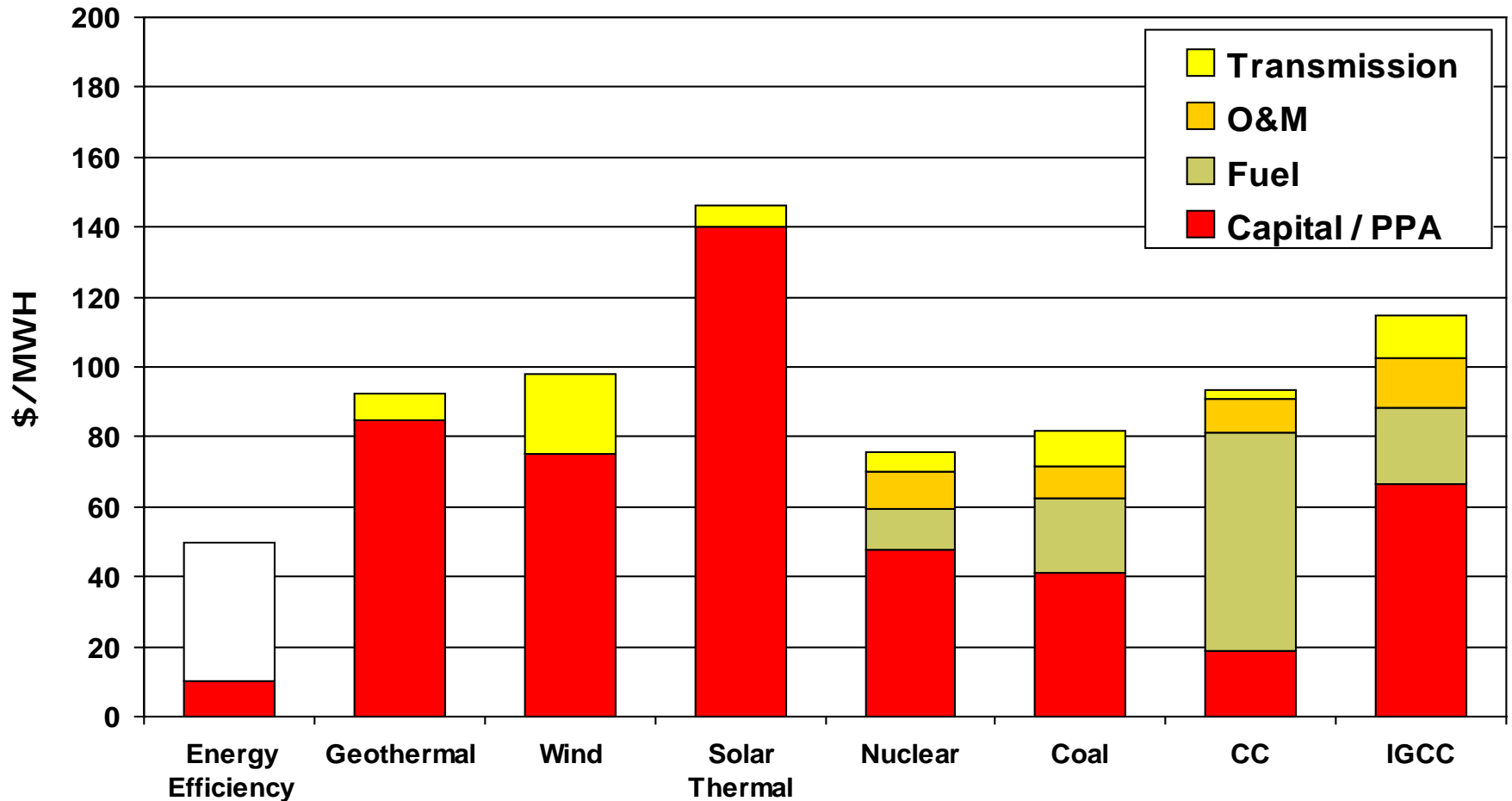
www.swenergy.org

Energy Efficiency...

- ❑ Is the lowest cost energy resource – only 2 to 3 cents per kWh saved
- ❑ Can reduce customers' energy bills by 10% to 50%
- ❑ Would create over 12,000 new jobs in Arizona by 2025
- ❑ Would keep more of the energy economy in Arizona (currently, \$9.9 billion of the \$14.5 billion that Arizona businesses and consumers spend on energy leaves the state each year)
- ❑ Is a direct and “no regrets” way to reduce air pollution and greenhouse gas emissions

Delivered Cost of New Resources

Lifetime Levelized w/2007 In Service Date

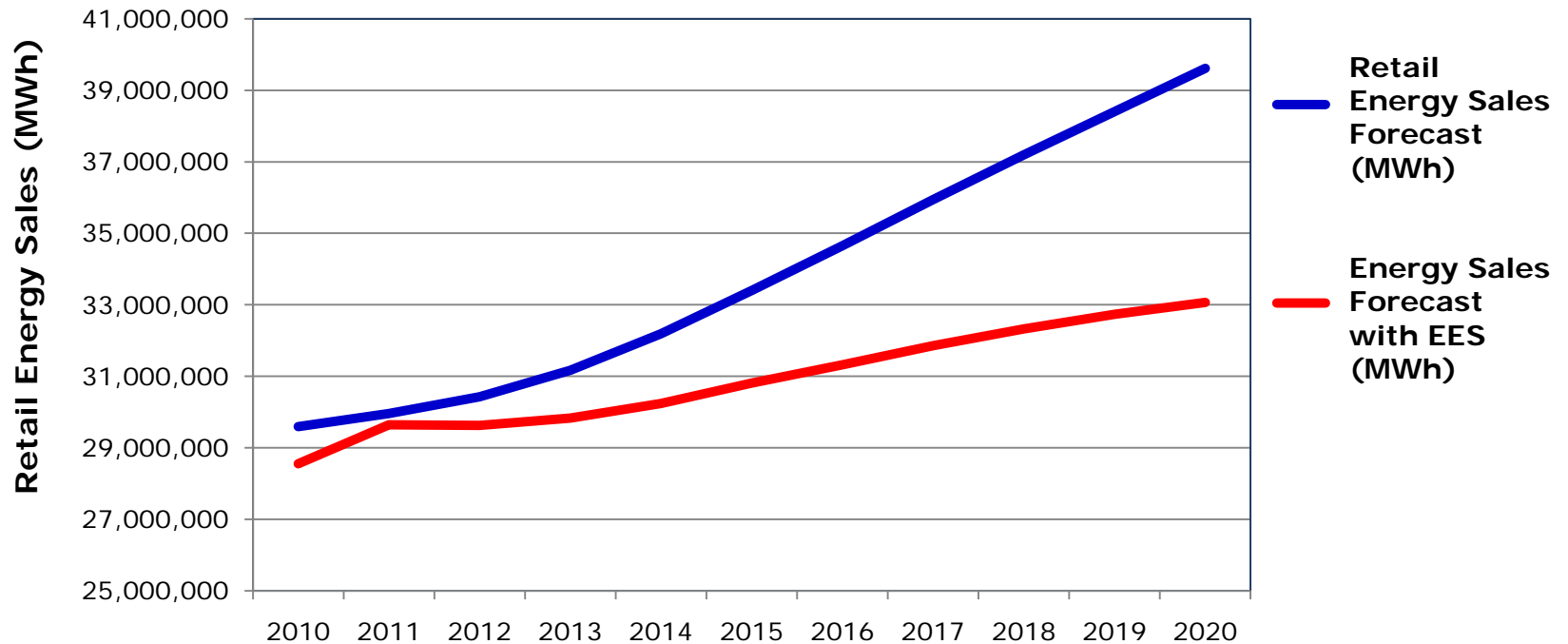


SWEEP Recommendations

- ❑ Design and implement cost-effective energy efficiency programs in the utility sector
- ❑ **Adopt energy efficiency goals (an Energy Efficiency Standard, EES) and funding mechanisms to support utility sector energy efficiency programs**
- ❑ Upgrade building codes, support code implementation
- ❑ Adopt appliance/equipment standards
- ❑ Promote highly efficient new buildings (zero-net energy) and beyond-code building standards
- ❑ Adopt “best practices” in public sector energy management to lead by example
- ❑ Adopt utility rate, pricing, and market reforms
- ❑ Incorporate EE in air pollution control and climate strategies
- ❑ Create jobs and achieve economic benefits

Energy Efficiency Standard: 22% Savings by 2020

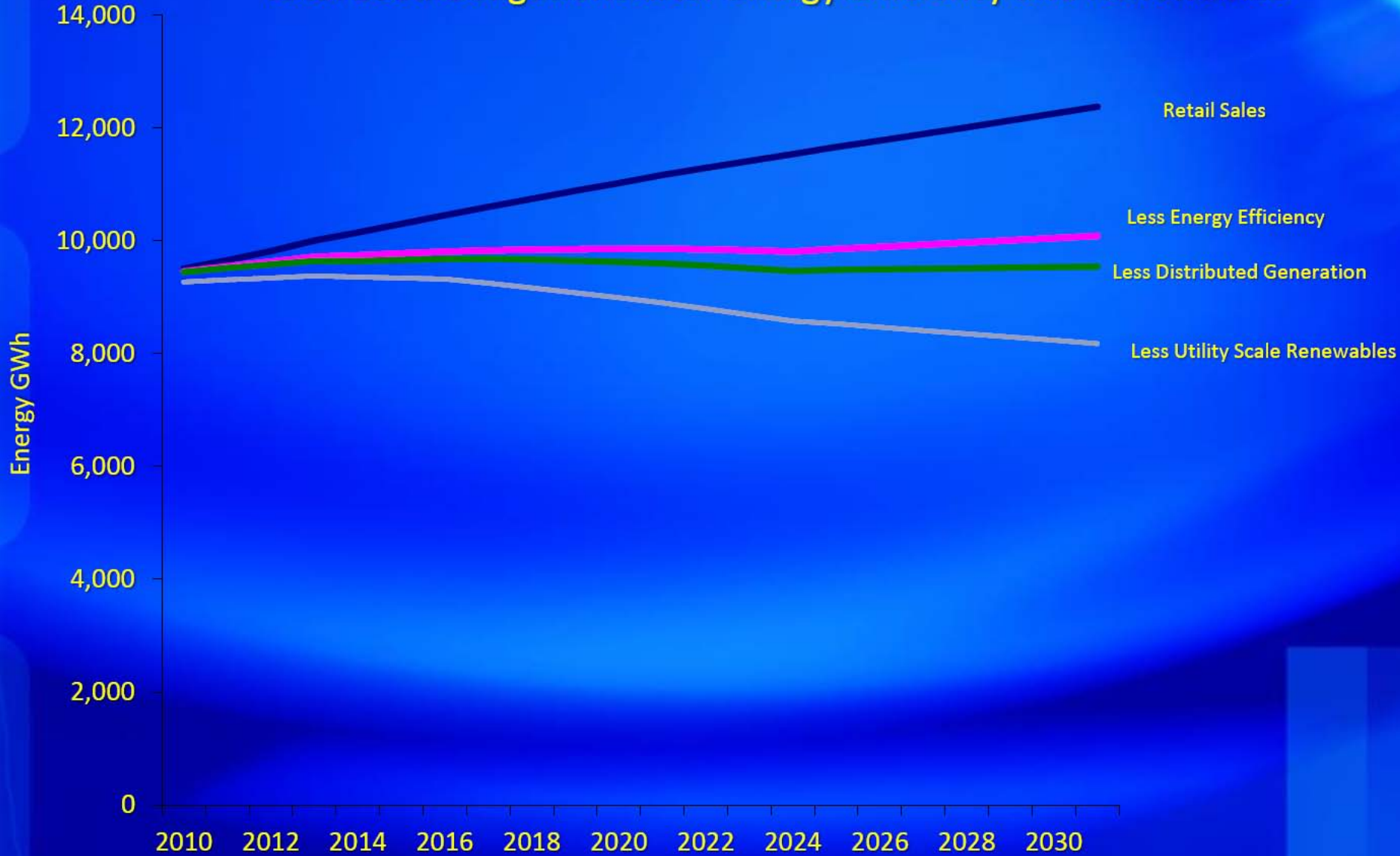
Energy Efficiency Standard (EES): 22% by 2020 APS Example



Growth in energy sales reduced from 2.8% to 1.1% per year₆

TEP Load Obligations, GWh

Total Load Obligations after Energy Efficiency and Renewables



SWEEP: EE should bend the line down; reduce total load by 2020

Deeper and Broader Savings

- **Deeper:** Capture all the cost-effective opportunities and maximize energy cost savings for each customer
- **Broader:** Reach more customers
- **To achieve the EE standard of 22% by 2020:**
 - Each customer needs to *save more energy* (20% to 50% energy savings or more, rather than 5-10% savings)
 - EE programs need to *reach more customers*
 - Energy savings *must exceed 2% of retail sales*

Now and Later – Energy Efficiency

- ▶ Quick ramp in 2009 and 2010
- ▶ Changes are necessary
- ▶ More is required



Strategies for Success

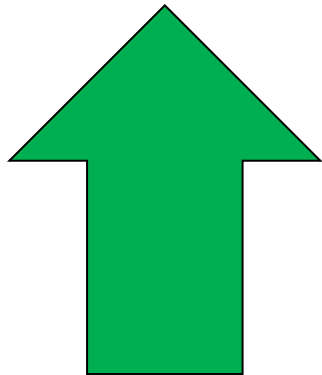
- ❑ Convenient, easy to do, and attractive (easy to say “yes” to deeper savings)
- ❑ Comprehensive, capture all opportunities
- ❑ Meaningful to customers
- ❑ Motivate action
- ❑ Targeted to customer needs and beliefs
- ❑ Leverage other drivers of behavior
- ❑ Evaluate, continuous improvement
- ❑ Effective at providing the benefits
- ❑ Deliver on the promise, credibility

Energy Efficiency Financing

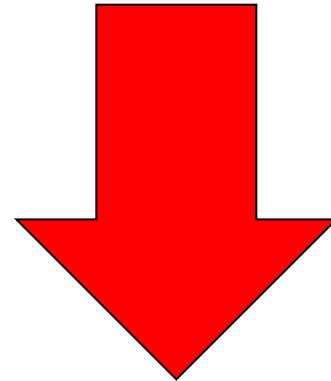
- ❑ Financing can help customers to do more, so that they can save more (deeper)
- ❑ Financing can assist more customers to participate in the programs (broader reach)
- ❑ Convenient for customers, attractive terms
- ❑ Integrated with program delivery
- ❑ Two paths in parallel
 - ❑ Nearer-term to get started, banks/credit unions
 - ❑ Long term, statewide or joint loan fund

Conflicting Incentives

Customers:
increase energy
savings , lower
energy bills



Utilities: revenues
reduced, fixed costs
not fully recovered,
earnings reduced



Regulatory Treatment to Align Utility Incentives

1. Ensure recovery of prudent program costs (timely cost recovery)
2. Address the financial disincentives (unrecovered fixed costs)
3. Provide a positive financial incentive (performance incentive)

The Commission has approved the first and third treatments; consideration and action are needed on the second

Other Energy Policies, Other Conflicts

Building Energy Codes		
Appliance Standards		
Education and Marketing		
State/Local Gov't Efforts		
Federal Energy Policies		
EE Job Creation		
Distributed Renewables		

SWEEP:

Dedicated to More Efficient Energy Use in the Southwest

Resources available online at:

www.swenergy.org

Jeff Schlegel, Arizona Representative, SWEEP

520/797-4392

schlegelj@aol.com