



# Consortium for Energy Efficiency

*Group Discussion:  
Areas for Expanding Program  
Collaboration with EPA*

January 15, 2008

# Background for Discussion



- ENERGY STAR developments that create new opportunities
- Next steps for delivering whole-building performance with ENERGY STAR
- Best practices for providing standardized energy use information to customers

# ENERGY STAR Developments



- Portfolio Manager Enhancements
  - Released Retail and Wastewater Treatment Plants ratings – Oct. 1, 2007
  - Reviewing and updating rating models – Office update complete with others to follow in 2008
  - Developing new models for Data Centers and Water Distribution
  - New E-grid emissions factors, updated weather normalization, multi-building label application, master accounts for associations and large users
- Automated Benchmarking
  - Launched in 2005 to enable energy service companies to integrate energy software tools with EPA systems to automate rating process
  - Buildings benchmarked grew by nearly 600 percent from 2006 to 2007 for a total of 32,000
  - 14 companies successfully marketing the service to customers
  - Utility-based data transfer and benchmarking demonstrated in CA

# ENERGY STAR Developments

- cont'd



- Addressing rapid increase in data center energy use 61 billion kWh in 2006 (1.5% of US electricity)
  - Projected to be 100 billion kWh by 2011
  - Work with industry to determine relevant energy performance metrics
  - Collect industry data to beta test performance rating
- EPA and CEE Wastewater Treatment Pilots
  - CEE utility members work with their municipal wastewater customers to benchmark the energy performance
  - Current participating utilities include ComEd, NYSERDA, BPA, Wisconsin Focus on Energy, NGRID
- Local Government and the ENERGY STAR 10 % Challenge:
  - Cities and county activities create new opportunities for program sponsor participation

# Next Steps in Delivering Whole-Building Energy Performance



- Evolving to whole-building performance program delivery with ENERGY STAR
  - More and more utilities offering retrocommissioning programs and other programs that promote comprehensive approaches, most incorporate the EPA rating
  - PG&E, SCE, etc.
- Technology does not equal performance<sup>1</sup>
  - 60% fan systems oversized by 60%
  - Chillers oversized 50% to 200%
  - Improper installation and poor maintenance
  - EMS installed in 56% of CBECS bottom 25% performing buildings versus only 23% in top 25% performing buildings
- ENERGY STAR moving towards promotion of a whole building performance program design.

1. Source: EPA Fan Study & Chillers - Lawrence Berkeley National Laboratory

# Whole-Building Performance Program Design



- Moving towards a Building Performance with ENERGY STAR program design
  - Complement and enhance, proven prescriptive incentive strategies with sector-based education on benchmarking and whole building improvement approach
  - Use custom rebates to encourage multiple-measures
  - Provide additional incentives to reward comprehensive whole-building upgrades
  - Support continuous tracking of energy performance
- Next steps to pilot whole building performance program design

# Best Practices for Standardized Information



- National Action Plan working towards recommendations to improve availability of data to enable more widespread building benchmarking
- Reinforce and expand upon related standards
  - North American Energy Standards Board offers model business practices for electronic billing data<sup>1</sup>.
- Assist industry in responding to emerging mandates
  - State of California legislation AB 1103 requires utilities to provide specific data for commercial building benchmarking using US EPA system
  - Other states considering similar approach

1. NAESB, Joint Retail Electric and Retail Gas Quadrants Business Practices Subcommittees, "Recommendation for R05016 Customer Billing and Payment Notification via Uniform Electronic Transactions," January 31, 2007.

# Discussion



- Recent ENERGY STAR developments
  - Which areas provided greatest opportunity for expanded collaboration?
- Delivering building performance with ENERGY STAR
  - How can we pilot program designs that more completely and directly link to ENERGY STAR?
  - What steps need to be taken to enable such pilots?
- Providing customers with more standardized data
  - What are your practices today?
  - What are the key considerations in defining best practices?