

# IOU Energy Efficiency Programs Collaborative

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October 3, 2018

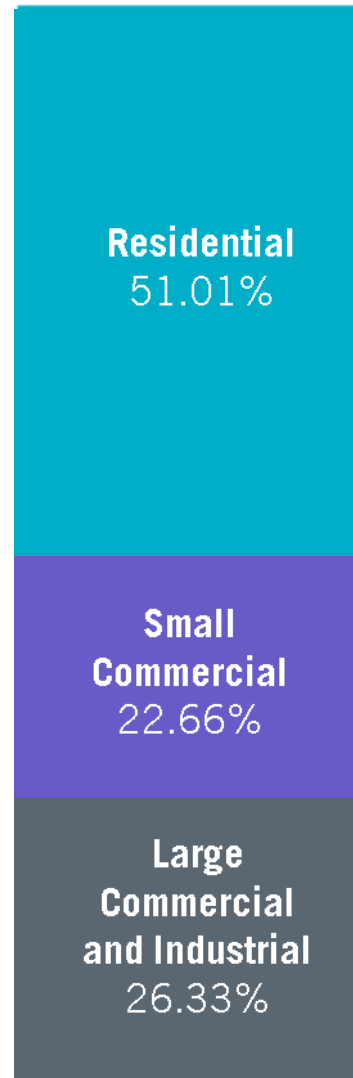
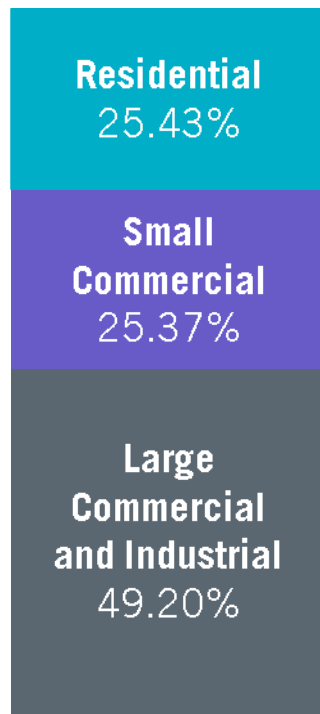
Energy Efficiency Implementation Project Meeting

# SPEER

**Our purpose** is to advance the understanding and adoption of energy efficiency as a low-cost energy resource, and to design, implement, coordinate, and support regional projects to promote high energy performance and clean distributed energy in the built environment.

# Winter Weather Impacts on Load by Customer Type

Thursday, Nov. 16, 2017  
7:15 a.m.  
ERCOT Load: 36,795 MW  
Temperature in Dallas: 63°



← Wednesday, Jan. 17, 2018  
7:15 a.m.  
ERCOT Load: 65,904 MW  
Temperature in Dallas: 15°

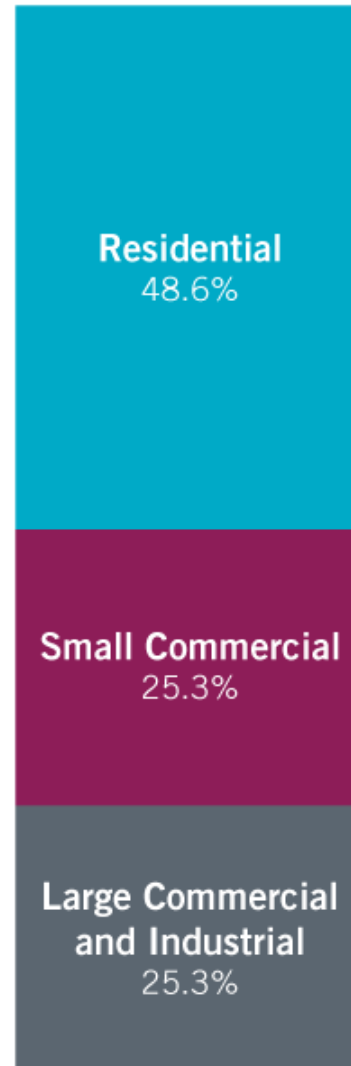
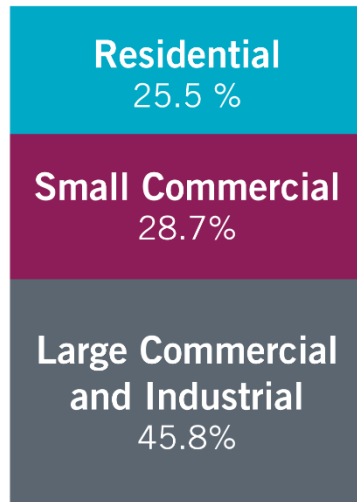


**>29,000 MW of weather-sensitive load -- 44% of peak**

- Customer class breakdown is for competitive choice areas; percentages are extrapolated for municipals and co-ops to achieve region-wide estimate
- Large C&I are IDR Meter Required (>700kW)
- Hourly integrated demand values

# Summer Weather Impacts on Load by Customer Type

Thursday, March 24, 2016  
5:00 p.m.  
ERCOT Load: 33,597 MW  
Temperature in Dallas: 62°



← Thursday, Aug. 11, 2016  
5:00 p.m.  
ERCOT Load: 71,093 MW  
Temperature in Dallas: 106°



*>37,000 MW of weather-sensitive load -- 53% of peak*

- Customer class breakdown is for competitive choice areas; percentages are extrapolated for municipals and co-ops to achieve region-wide estimate
- Large C&I are IDR Meter Required (>700kW)
- Hourly integrated demand values

# Benefit - Built Environment For Customers

- Comfortable
- Affordable
- Durable
- Controllable/manageable
- Clean energy – zero emissions

# Benefit - Energy Market

- Reduce Peak Demand
- Grid reliability to support growing population
- Lower Peak Demand affects customer pricing – individually and collectively
- Reduce infrastructure cost – T&D
- Lowest Cost – Cleanest Resource

# Programs Incent

- Low energy cost – good time to invest
- Low energy cost – longer ROI for customer
- Programs provide information to support good behavior/purchasing choices
- Incentives support local businesses and reach the smaller customers
- Provides low income opportunities

# Achievements

Average of \$120 million spent per year by all IOU's in Texas

- Saving the equivalent of around \$400 million each year in future energy and capacity costs
- 400 MW of peak demand savings per year
- 500,000 MWh of total energy savings per year (0.24% of sales)

With the states new building codes/standards – focus on existing buildings.

EPRI study comparison with other States/Utilities?



# States Targeting 100% of 2018 Economic Potential Through Utility Programs

- Arizona
- Connecticut
- Hawaii
- Illinois
- Iowa
- Maine
- Massachusetts
- Michigan
- Minnesota
- Ohio
- Oregon
- Rhode Island
- Vermont
- Washington

# Bottom 10 Performing States

## Estimated Percent of Economic Potential Captured

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| <b>State</b> | <b>Percent</b> |
|--------------|----------------|
| Texas        | 22%            |
| Wyoming      | 20%            |
| North Dakota | 19%            |
| Florida      | 17%            |
| Delaware     | 16%            |
| Kansas       | 11%            |
| Alabama      | 10%            |
| Virginia     | 8%             |
| Louisiana    | 8%             |
| Alaska       | 4%             |

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# Texas IOU Energy Efficiency Collaborative

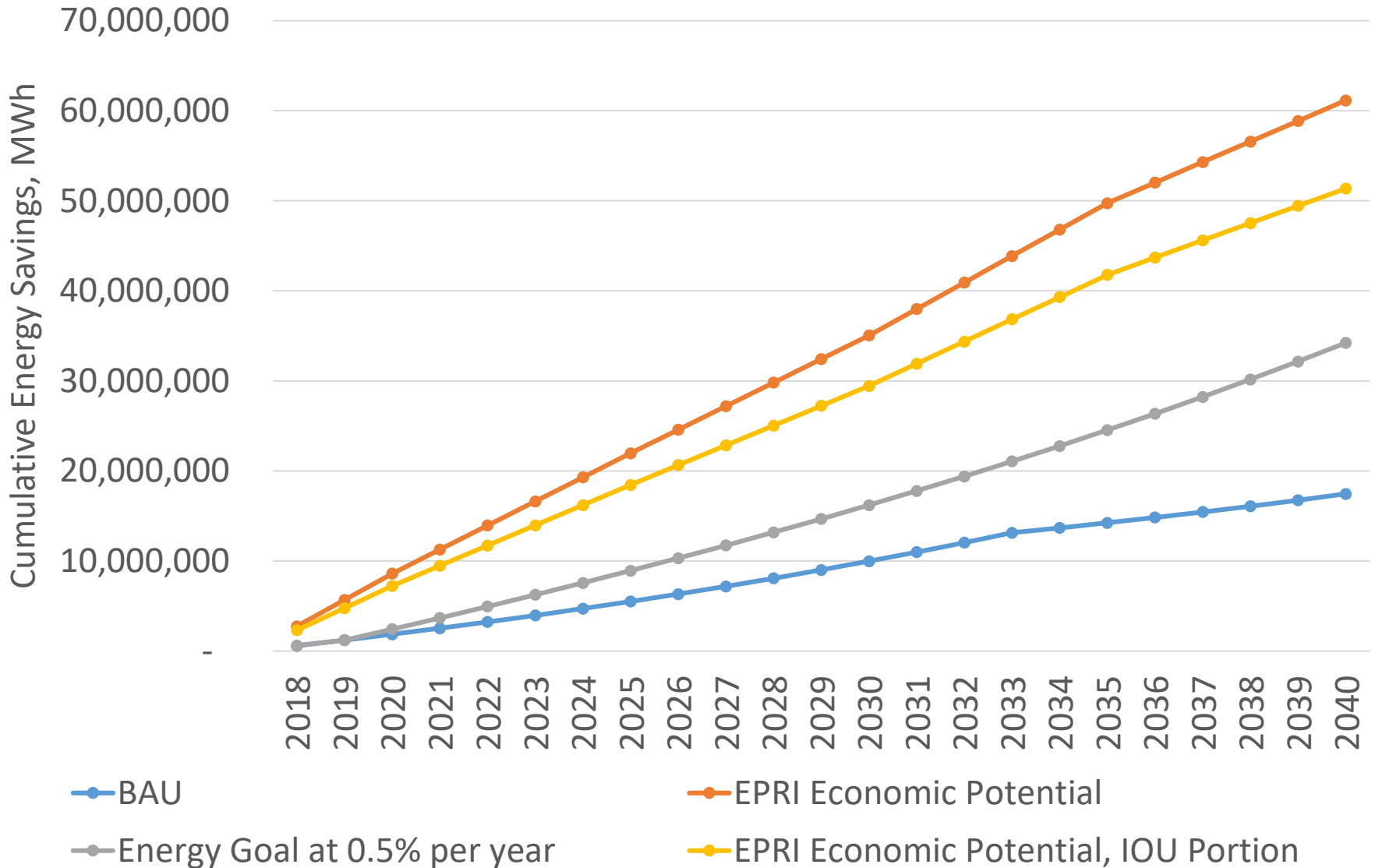
## Participating Organizations

- Air Conditioning Contractors of America
- Alliance for Retail Markets
- CenterPoint Energy
- CLEAResult
- Direct Energy
- EnerChoice
- Energy Foundation
- Environmental Defense Fund
- Frontier Energy
- Good Company Associates
- Houston Advanced Research Center
- Lime Energy
- Oncor
- Public Citizen
- Sierra Club
- Tetra Tech
- Texas Advanced Energy Business Alliance
- Texas Office of Public Utility Counsel
- TexEnergy

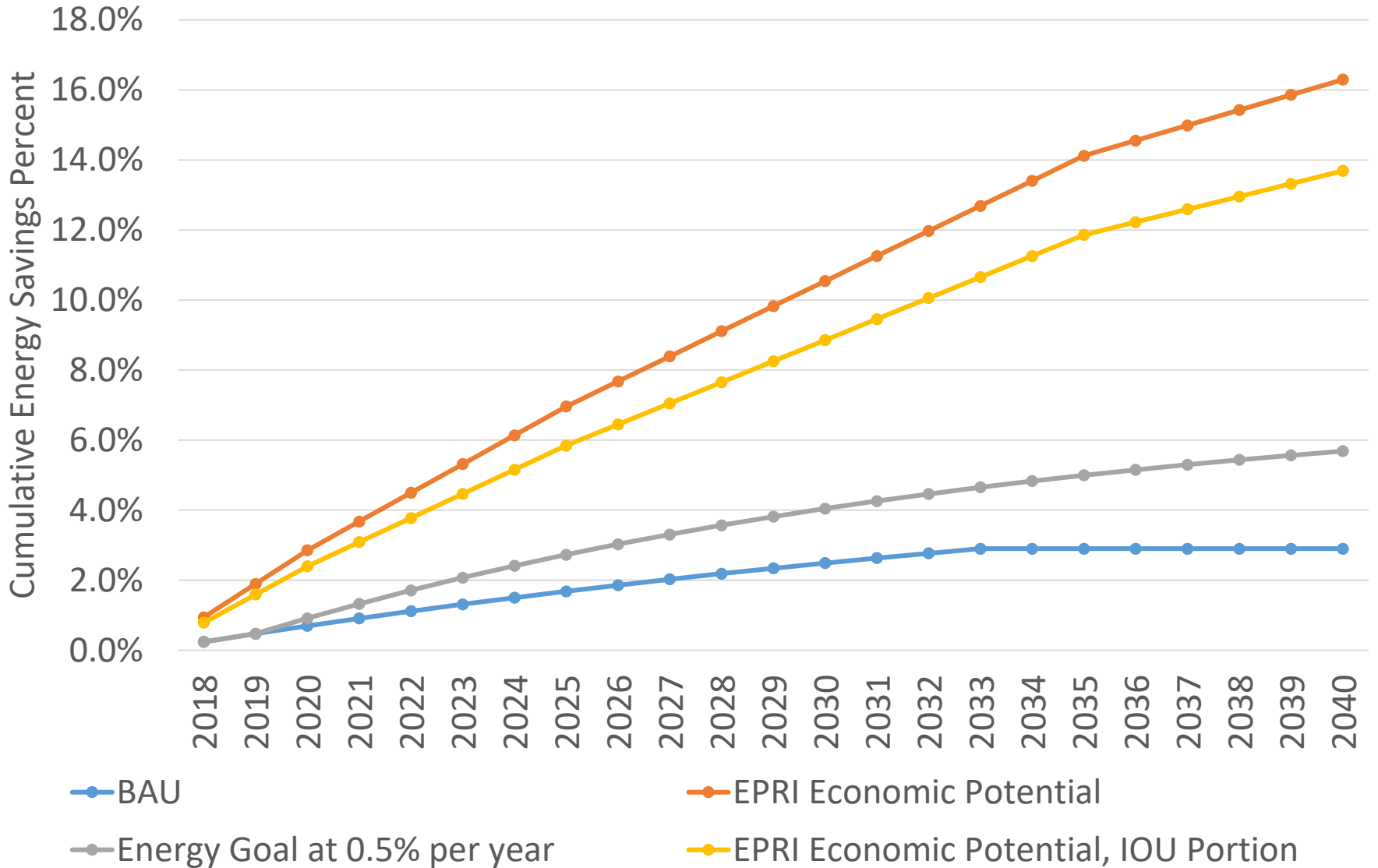
# Discussion to Identify What is Possible

- Stand-alone energy goal separate from the demand goal
  - No changes to the demand goal
- Modify energy goal to be a percent of annual sales
  - Average savings across IOUs is currently 0.24%
  - Suggest reasonably achievable energy goal of 0.5% of annual energy sales

# Cumulative MWh Savings Scenarios, using a 2017 baseline Texas Residential and Commercial Markets



# Cumulative Percent of Sales Scenarios, using a 2017 baseline Texas Residential and Commercial Markets



# Current Avoided Costs

Are there other elements that need to be included in Avoided Cost?

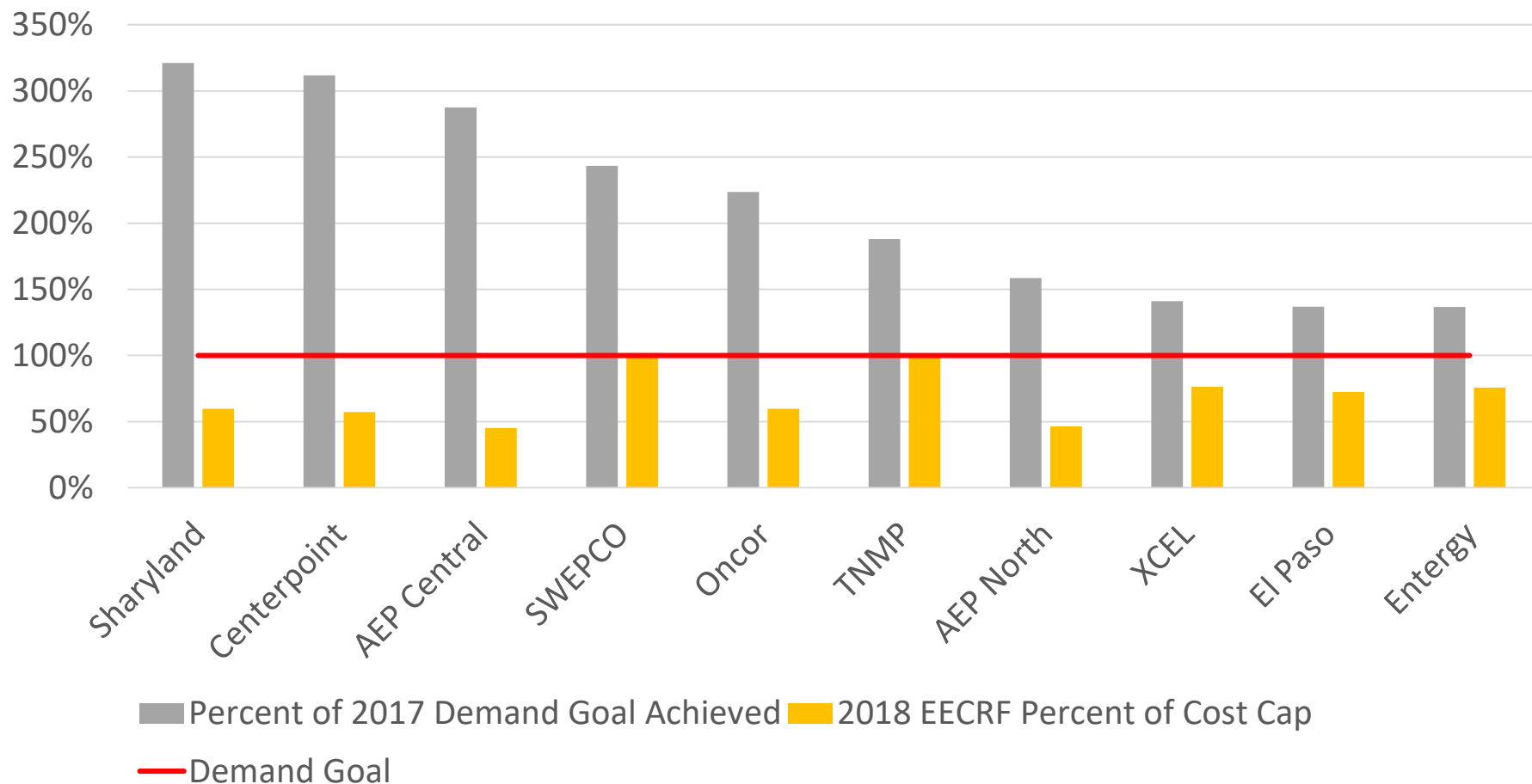
- Avoided Cost of Capacity = \$80/kW in 2018

Based overnight cost of a new conventional or an advanced combustion turbine

- Avoided Cost of Energy = \$0.03757/kWh in 2018

Based on the load-weighted average price of energy for summer and winter in all four load zones in the state.

## Demand savings compared to spending, by utility





# Collaborative Discussion

What would it take to increase the energy goal?

Administrative changes

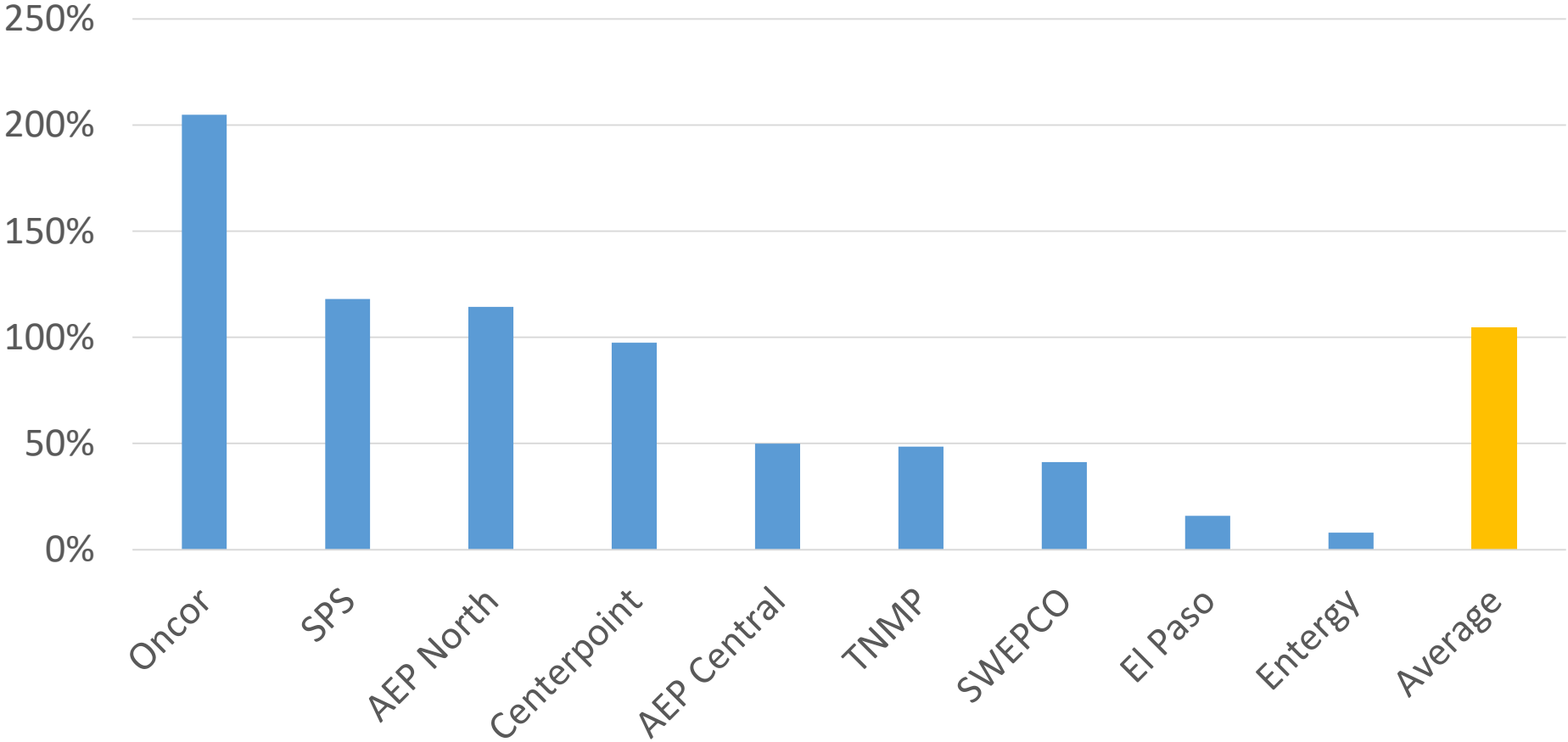
Program changes

Increased Participation – REPs and ESCOs

Cost/Cost-effectiveness changes

Can it be done through Rule?

# Percent difference a 0.5% energy goal would be from energy savings achieved in 2017, by utility



# Timing

|                           | <b>Current</b>         | <b>Discussed</b>  |
|---------------------------|------------------------|---|
| <b>EEIP</b>               | Annual                 | 3 per year  |
| <b>Plans</b>              | Annual                 | 3-year – allow period of “open enrollment” for new programs |
| <b>Goal</b>               | Annual                 | Aligned with Plan   |
| <b>Avoided Cost</b>       | Annual - 60 days ahead | Rolling 5-year avg. - established year ahead                |
| <b>Cost-effectiveness</b> | 1-year                 | 3-year to allow for ramp up of new programs                 |

# Costs and Cost Caps

How much EE costs as percent of bill?

The average Texas resident:

\$0.10 per kilowatt-hour average cost

1,171 kWh per month average consumption

\$128.50 average monthly electric bill

or \$1,542 annually.

EE cost is about 1% at cap. IOUs are currently spending less than the cap. (Oklahoma Utilities get lost contribution to fixed costs and incentive so, cost cap is equal to \$2.40 per customer per month.)

# Other Considerations

- Would current bonus be aligned with new goals to keep the utilities whole?
- Rural adder of 15% - not effective.
- Develop tiered values for peak measures?
- Could some measures be compensated for both summer and winter peak reduction?

# Added Flexibility in Programs

- Consider cost-effectiveness based on portfolio, rather than per program.
- Allow REPs to pass through incentives to increase customer retention and enable area-wide marketing.
- Hire third party to provide consumer marketing without conflict of interest?

# Achieve Increased Participation

- IOU consistent programs that allow multi-service area participation? Eliminate marketing costs
- Work with REPs to create simple, customer access to programs
- Tiered or increased incentives
- Financing programs or on-bill repayment

# Low-income and Hard-to-reach Differences

Current requirement is 10% of program spending (\$)  
And 5% of demand savings (kW) required.

## Program Cost-effectiveness:

- LI: Federal NEAT tool threshold is based on customer cost effectiveness.
  - HTR: incentives based on UCT like other programs
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- Adjust income thresholds
  - Address cost effectiveness limitations



# Demand Response Programs

How much DR is the market delivering?

- Summer Peak – added load 37,000MW
- ERCOT Programs include 2,242 ERS and Responsive Reserves
- REPs – using price responsive DR, which are contributing on 4CP days with TOU, Peak Rates, Block and Index Pricing

IOU Load Management provides incentives to achieve 282 MW - Not called for summer peak since 2011

# Research Potential

Request for Information (RFI) for new programs and technologies

- Provide aggregated data for multifamily to encourage targeted programs that address split incentive
- New programs to utilize Data Access by 3<sup>rd</sup> parties
- New programs to reach off-peak customers (schools and churches)
- REP specific program design

# Contact

Next SPEER IOU Collaborative meeting scheduled for Oct. 18 from 1-4pm in Austin.

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