

RECONCILIATION BETWEEN GCA, EUMMOT AND THE REP PRESENTATIONS

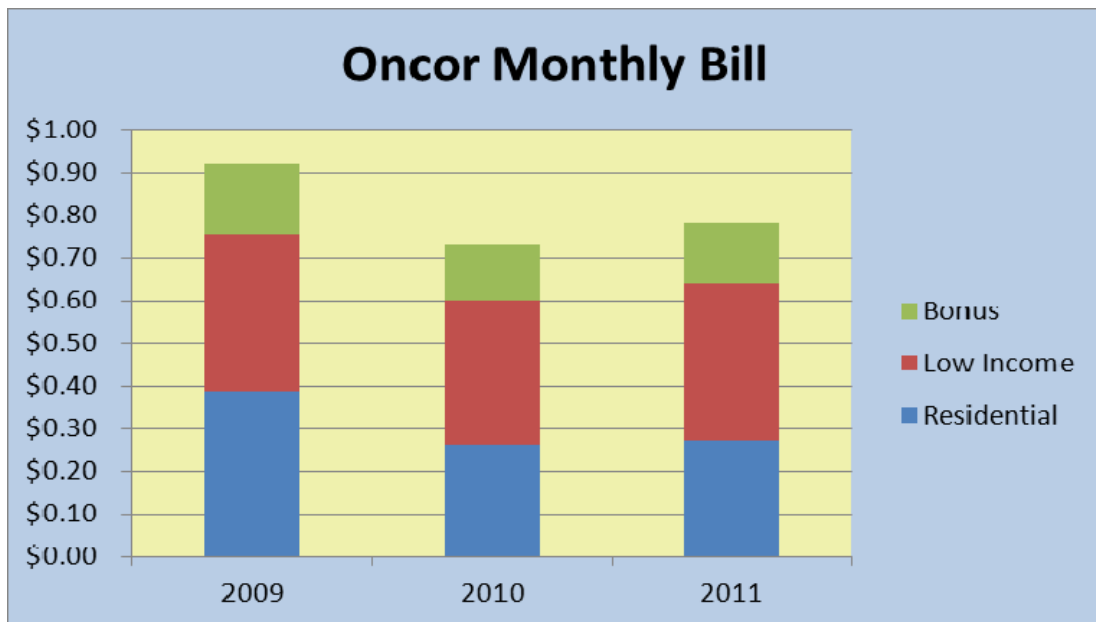
At the energy efficiency hearing on June 30, Chairman Smitherman asked for an explanation of the discrepancy between the GCA numbers and those presented by Jay Zarnikau for EUMMOT. A third set of numbers was also presented by Vicki Oswalt of TXU Retail.

We have examined the numbers presented by the three parties and identified the reasons for the discrepancies, and have expanded on our analysis of ratepayer impact in response to other concerns of the commission.

1) The Average Cost of Programs to Residential Programs

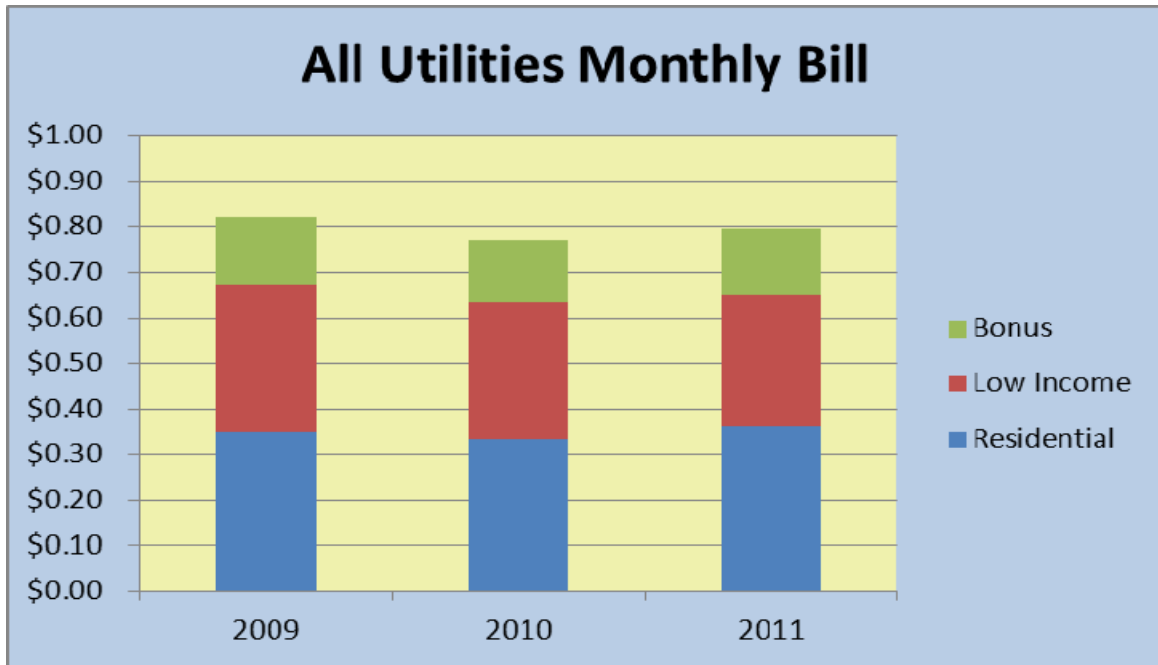
The 92 cents per month typical bill impact quoted by EUMMOT is actually the rate for Oncor in 2009, including their bonus. Their actual cost for all residential programs was 75 cents/month, with the bonus accounting for an additional 17 cents.

However, Oncor had high costs in 2008 and 2009, due to a temporary expansion of their weatherization and hard-to-reach programs. In their plans for 2010 and 2011, the cost per residential customer is substantially reduced:



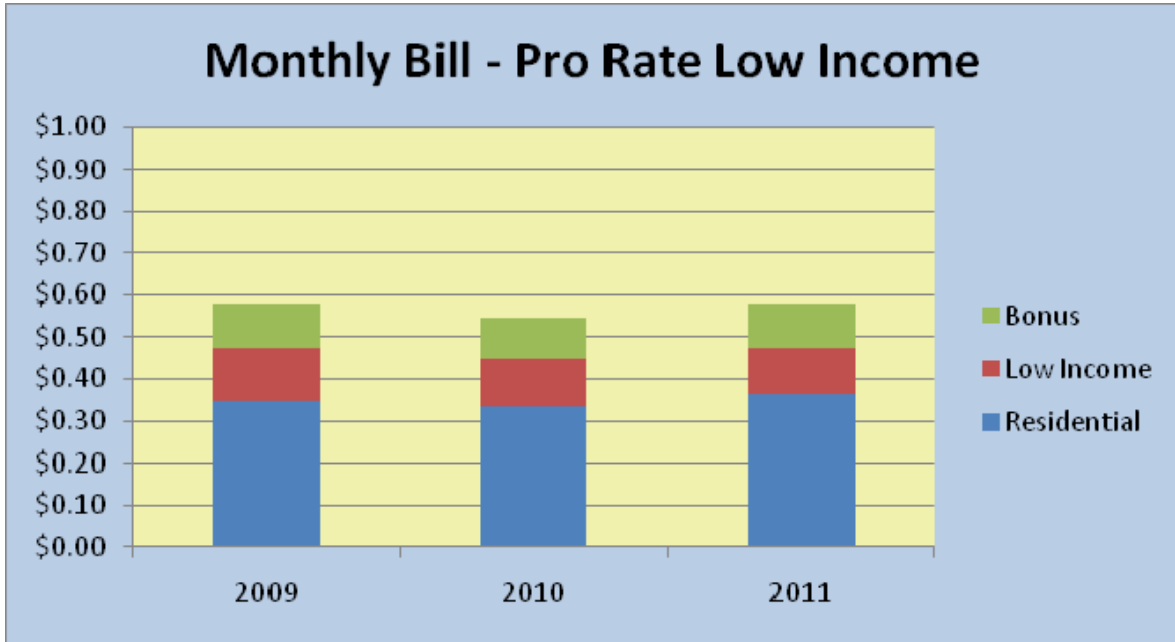
The average for all utilities is lower, as was shown by the REP presentation. The REP numbers for 2010, which estimated a monthly bill cost of 83.5 cents, however, were inflated by inclusion of about \$6 million in CenterPoint Settlement costs as residential spending. Exclusion of this spending would reduce average customer bills about 6.8 cents a month, plus another 1.4 cents in reduced bonus spending, to about 75 cents per month statewide.

The next chart represents the REP calculated ratepayer impact, less the CenterPoint settlement funds, and incremental bonus cost. Our current estimate, using the REP provided residential consumption figures, is very close to what is shown here, as we discuss in section 3, below.



Note the impact of the bonus, and the equity programs, part of which were originally intended to be funded by the System Benefit Fund. If the commission allocated all program costs, or even all equity program costs, there would be a significant impact on the rate impact on residential customers which bear the entire burden of equity programs in most utility areas.

The following chart represents the impact on residential ratepayers if hard-to-reach and weatherization programs were allocated on a pro-rata basis to both residential and commercial customer classes.



2) Good Company v EUMMOT Projections of Cost

There are a number of reasons why the Good Company projections of total costs differ from the EUMMOT projections of total costs. Three major factors: (1) Good Company did not include the bonus in our cost calculations; (2) Good Company did account for the impact of energy efficiency on peak demand and thus the efficiency goals in future years; (3) Good Company used more reasonable cost escalation factors than the arbitrary doubling of costs between 2011 and 2015.¹

Good Company's assumption that residential costs would rise about 40% by the time Texas programs reach 7 GWH of additional residential energy efficiency is achieved (after 2009), is more reasonable than a doubling of costs by 2015.² While some programs like ENERGY STAR may become more expensive in the future, hard-to-reach and weatherization programs, which account for the bulk of residential energy efficiency spending, should experience little cost inflation. The stock of eligible housing could be exploited for decades, as TDHCA testified, while the ARRA weatherization funding will provide a large pool of experienced labor after 2012, putting downward pressure on labor costs. The large pool of commercial customers (almost 60% of total energy consumption eligible for funding under the EE programs), CHP opportunities, and the continued relatively low cost of these programs suggests that this sector can provide substantial efficiency savings at low cost for years into the future.

We presented the findings of Synapse Energy Economics at the hearing that suggest that efficiency gains could be maintained for an extended period with flat or even declining costs. Reasons provided for these surprising results include economies of scale, economies of scope (e.g., exploiting synergies

¹ EUMMOT also made a number of other assumptions that raised the total cost of efficiency programs.

² Based on the ITRON efficiency supply curves and experience of other jurisdictions.

among different measures), more efficient administration and development of technology and programs over time. We felt the assumption of flat costs was too optimistic, and adopted a more conservative approach that anticipates some cost increases, but not an arbitrary doubling of costs in four years.

California has energy efficiency costs per kW of reduction about double that of Texas, but has also spend more on efficiency (in a market of similar size) than Texas will reach until well into the next decade, even under the most aggressive assumptions of the growth of energy efficiency programs. California, a highly unionized state with high tax rates, property costs and other costs of doing business, is a far more expensive state in which to conduct business than Texas. California utilities are also allowed higher administrative and other costs in their energy efficiency programs than Texas utilities. Minnesota and Washington State have costs per kWh saved that are about 20% above Texas, despite far more investment in efficiency on a per customer (or per kWh sold) basis.

Good Company also correctly accounted for the impact of energy efficiency on future growth rates, and therefore future goals. As the investment in efficiency increases, the growth of peak demand is reduced, as is the growth of the energy efficiency goal. Due to this factor, in our calculations energy efficiency goals level off at 410 MW instead of 520 MW in 2016, resulting in a 20 percent reduction in total costs.

3) Allocation of Costs to Residential Consumers

With respect to the estimation of monthly billing impacts on residential customers, we relied upon EIA data to estimate residential sales, and thereby the allocation of the costs discussed here to the residential class. If the REP estimates of residential sales are more accurate, it indicates there are fewer residential kWh over which to spread the same costs. The impact of this assumption is to increase the monthly bills of residential customers and decrease the bills of commercial customers with respect to our original estimates. Adding the bonus on top of this adjusted monthly cost raises our estimate of billing costs to a level similar to the low EUMMOT estimate and the corrected REP estimate for the starting point of 2010. The REP presentation, however, did not attempt to estimate actual future costs, but simply calculated what the costs would be if the utility programs operated at their maximum caps. We would note that the utilities have never approached their spending caps. And, as noted above, the EUMMOT high cost estimate simply escalated program costs 25% per year, doubling costs by 2015.

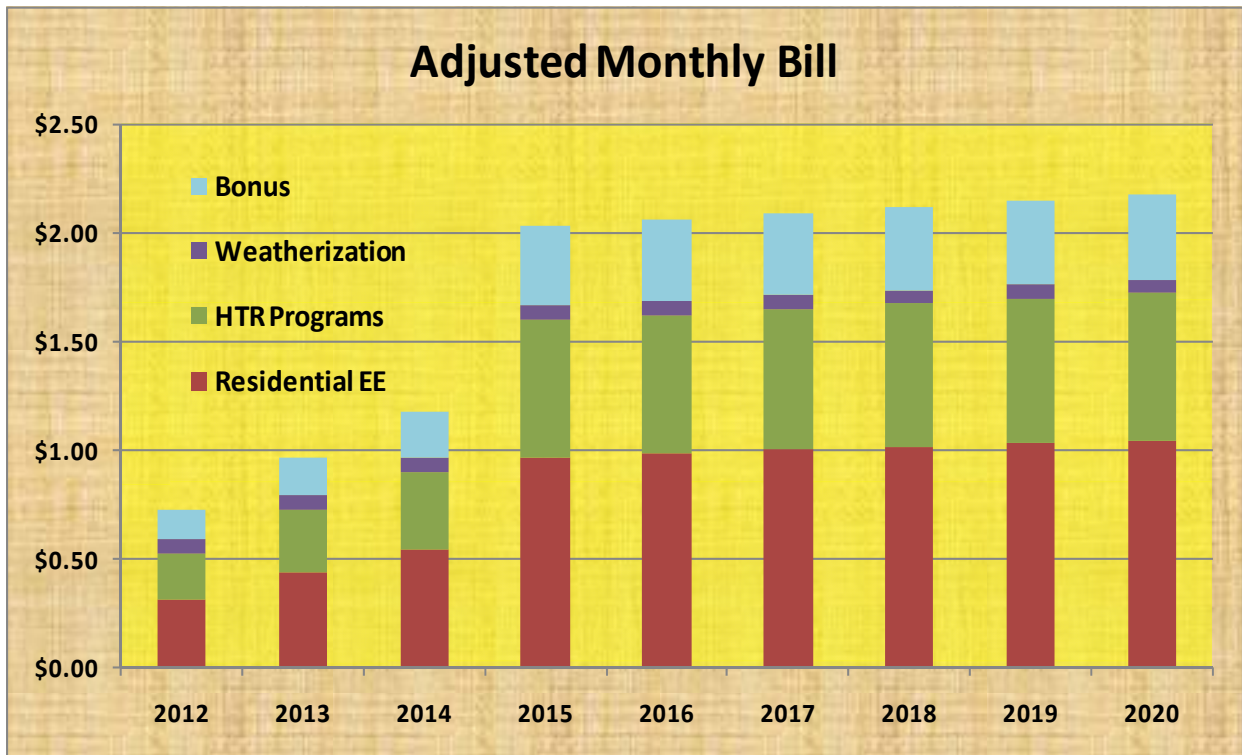
Even with the maximum bonus, the average 2012 residential bill allocation is well below the 92 cent Oncor monthly bill for 2009 (which was higher than the planned monthly Oncor bill for 2010 and 2011, and higher than the average monthly EE billing across the state).

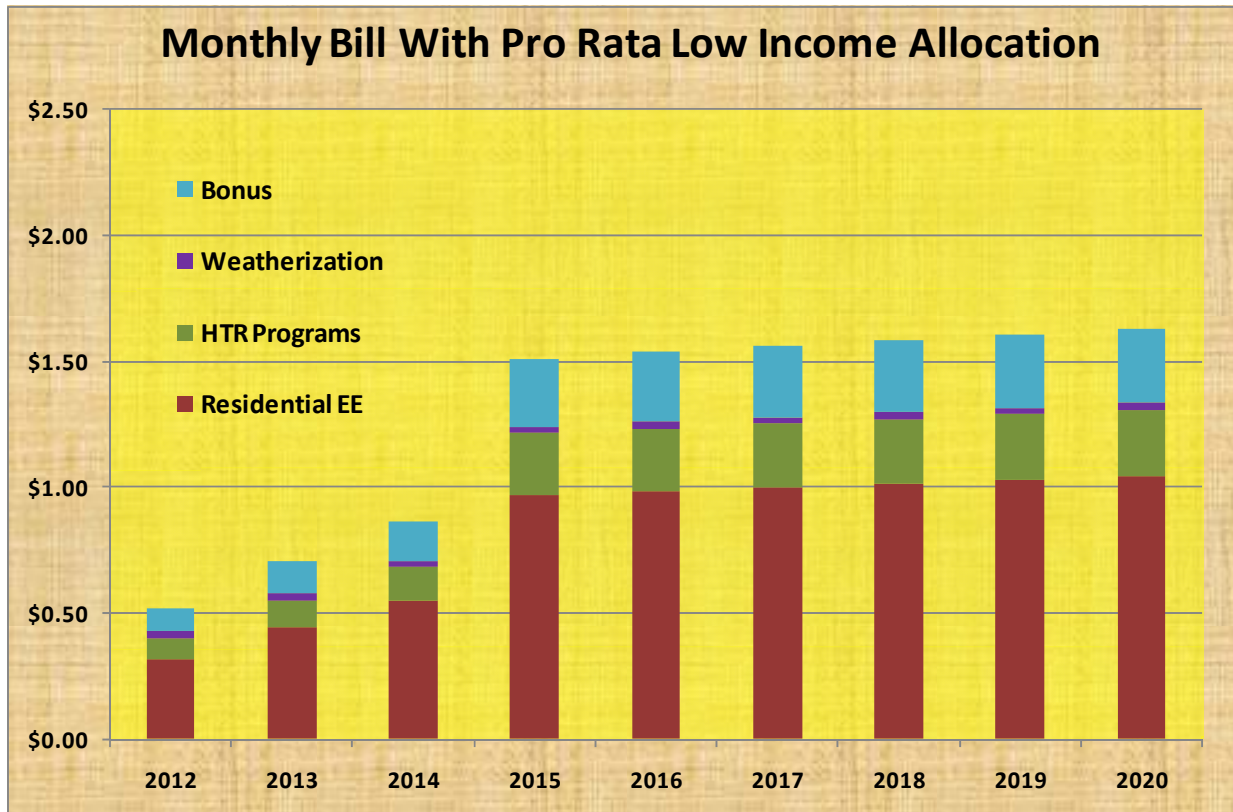
Following are charts for years 2012 through 2020, showing 1) the adjusted bill impact using the REP supplied residential consumption figures, broken down by program category, and adding the maximum bonus on top of that value, and 2) the allocation-adjusted bill impact with the bonus, assuming the reallocation of hard-to-reach and weatherization funds to both residential and commercial customers.

We made the following assumptions in recalculating these numbers:

- a. Initial costs were based on the average of actual 2009 and planned costs in 2010 and 2011.
- b. Costs escalate gradually, 20% for industrial programs up to 7,000 GWH, and 40% for residential programs up to 7,000 GWH;
- c. Weatherization spending remains constant at the 2009-2011 average level;
- d. Once the efficiency goal is met, the utilities follow their current practice of using load management programs to reach the maximum bonus; and
- e. The relative levels of commercial, residential and hard-to-reach demand reductions remains at the 2009-2011 levels.

2009-2011 Average Costs	Average Cost (\$/kW)	Percent of Total (no LM)
Commercial and Industrial SOP	\$443	27%
Load Management	\$43	
All Other Industrial Programs	\$770	17%
Residential SOP	\$530	18%
Energy Star	\$338	13%
All Other Residential Programs	\$519	10%
Hard-To-Reach	\$995	14%
Weatherization	\$3400	1%



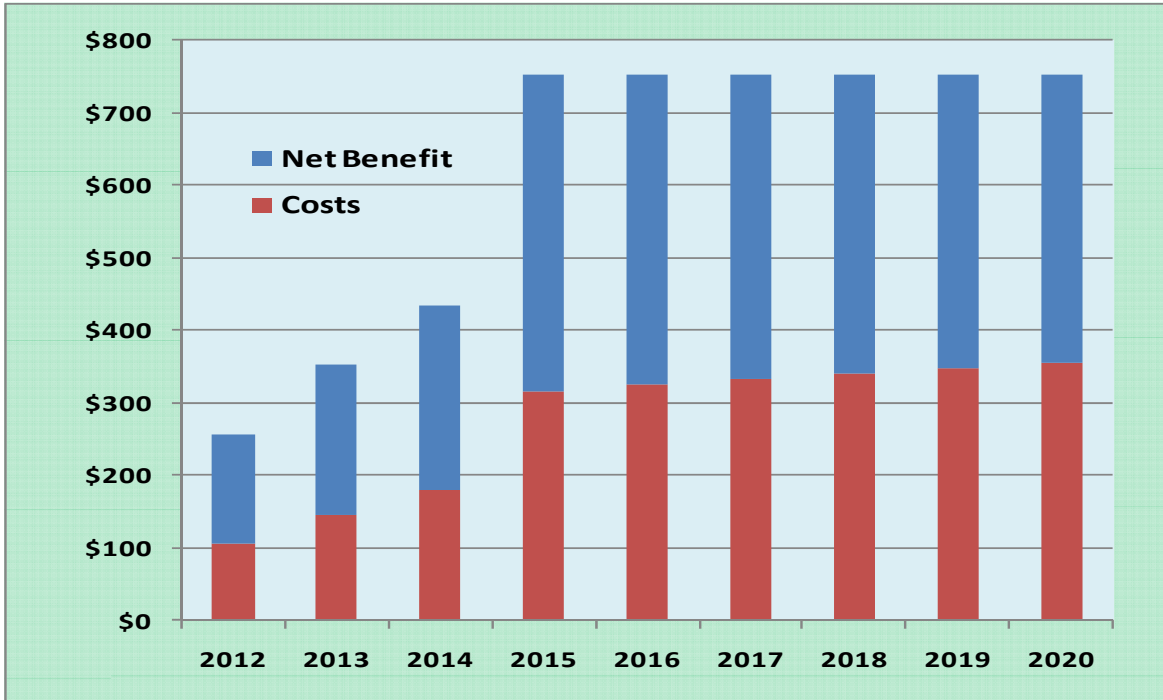


4) Net Benefit and Discounted Benefits

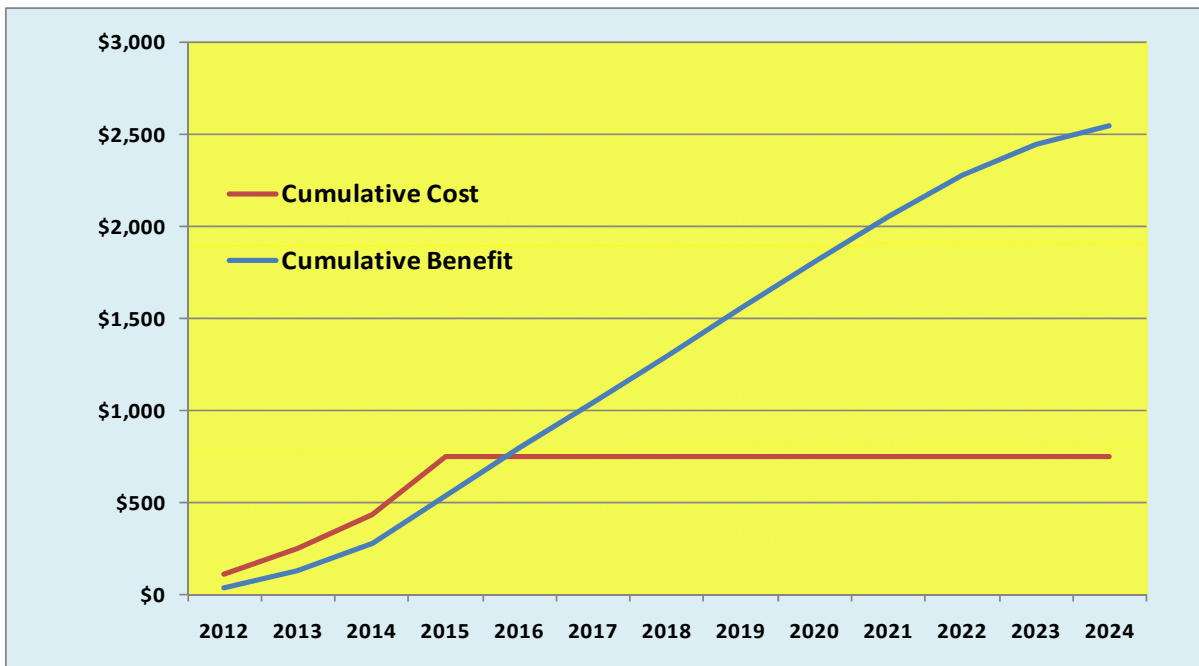
EUMMOT’s analysis artificially cut off the value of any benefits received after 2015, which gave a skewed impression of the relationship between costs and benefits for the energy efficiency programs. The structure of the energy efficiency programs allows the utilities to recover their costs up front, while the benefits of the programs are accrued over a period of time. This results in an analysis which doesn’t examine the costs and benefits over the long run and understates the value of these programs, particularly as you draw toward 2015.

EUMMOT also used an effective discount rate of 7%, and assumed a 10 year measure life in calculation of the benefits presented to the commission. The reason benefits are normally discounted to arrive at their present value, is to acknowledge that efficiency measures create a stream of benefits that should be weighed against the current costs. The following table, with adopts the same assumptions as the EUMMOT presentation, shows costs and discounted net benefits (note that total benefits are the height of the column, the net benefits are those above the current costs):

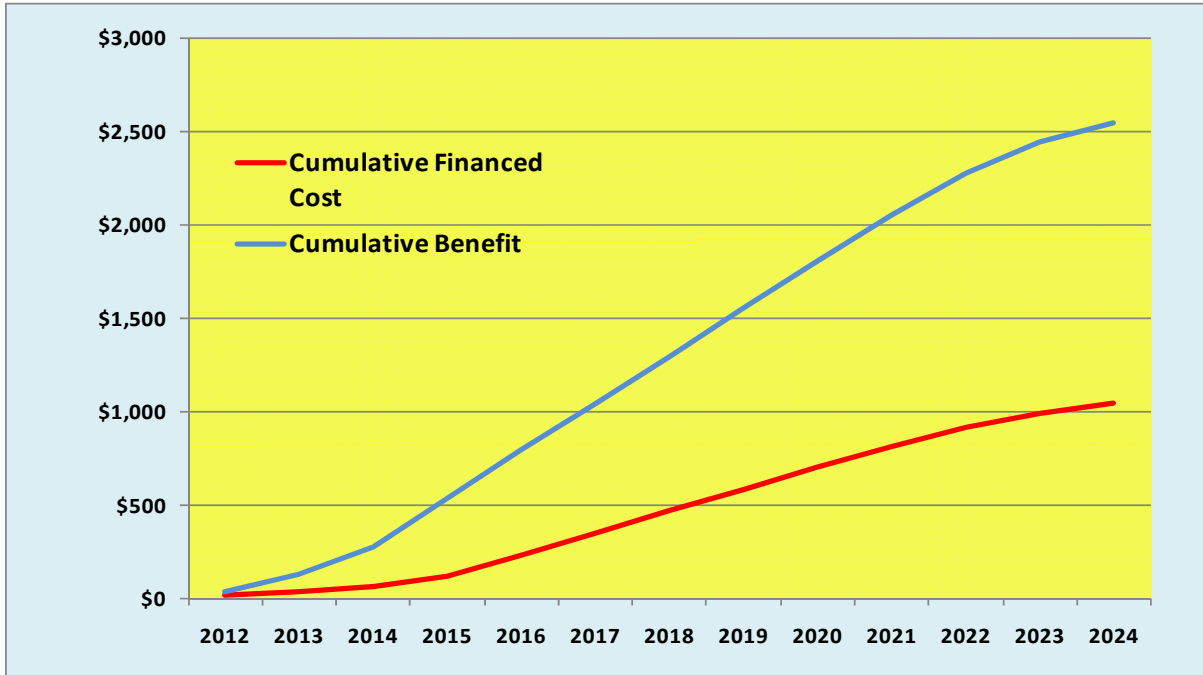
COSTS AND NET BENEFITS (millions of dollars)



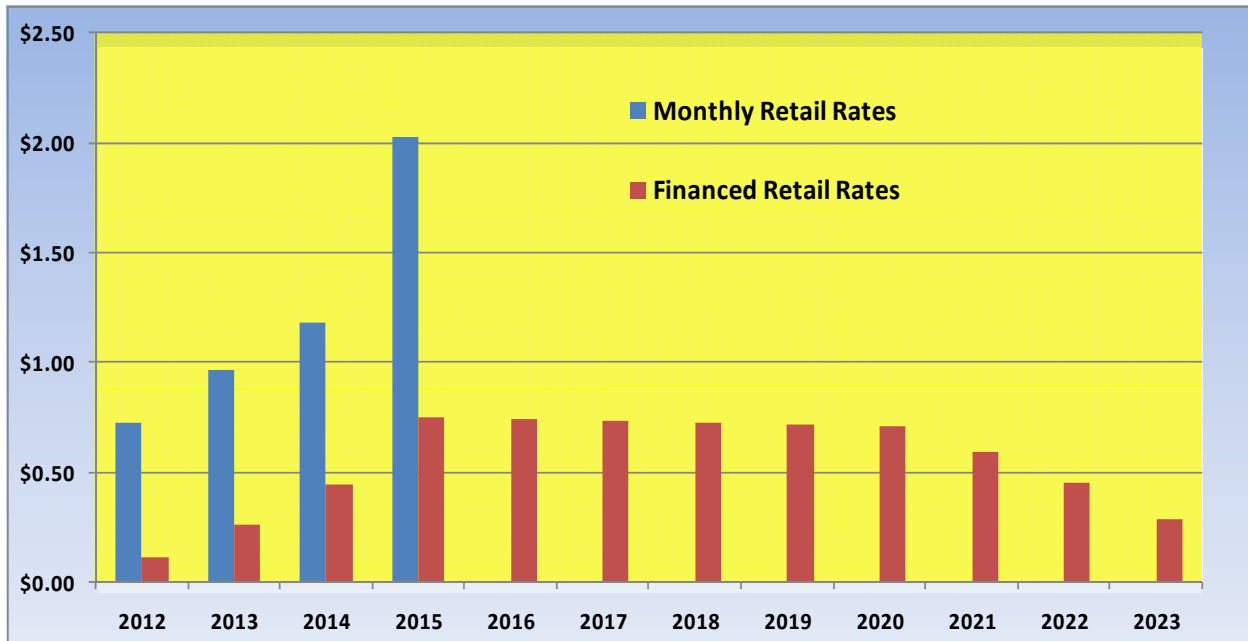
If you just stopped the analysis at 2015, and didn't look past that year for added benefits, it would seem the programs are not as cost effective. This is because costs rise rapidly, as we currently allow cost recovery, but benefits accumulate over a longer period of time. The following chart shows the projected benefits for the proposed increase in investment in energy efficiency through 2015. While the cumulative costs of programs up to that point in time are frozen in that year, the cumulative benefits increase to 2024.



One solution to overcome this problem of timing of costs and benefits would be to convert the costs of energy efficiency programs into a stream of costs that parallels the stream of benefits. For example, if each year's costs could be recovered over time, through rates, the costs would be paid over the same period the benefits are expected to be experienced. The following graph shows the impact of financing each year's cost at a conservative 9% interest rate.



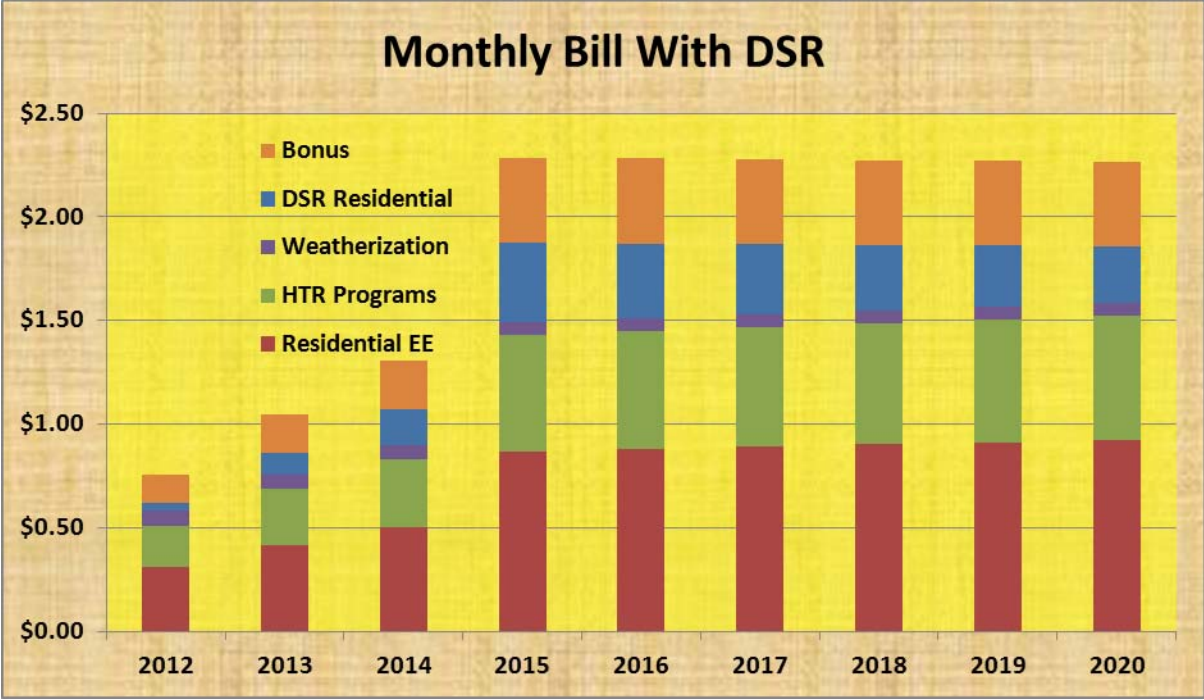
This would also prevent rate shock, as rates to pay for efficiency programs would slowly rise over time, in concert with increasing benefits. The following chart demonstrates the impact on consumer bills of financing program costs.



5) Impact of a 10 percent Demand Side Renewables Target

Once we developed this model, which includes projections of commercial, residential, hard-to-reach and weatherization spending, as well as, a calculation of the maximum bonus, we added two categories of demand side renewables (DSR), assuming half would come from the commercial sector and half from the residential sector. The reason for separating DSR by customer classes is the expectation that commercial applications would have lower costs due to economies of scale in construction. For example, it is cheaper per kW to put large flat panels on the roofs of flat commercial buildings than to custom install solar systems on residential roofs.

The starting value for DSR was \$2,200/kW (including 10% administrative costs) for residential DSR, and \$1,650/kW for commercial DSR. We also assumed that costs would decline by 5% per year starting in 2012. The 10% goal would be phased in over a 4 year period to allow the utilities to ramp up these programs. The costs are close to what TXU is currently offering in 2010, and they're already closed their commercial program to new applicants, so these incentives seem reasonable, and a gradual decline in cost reflects the experience of the last few years in the solar industry. If other renewables such as solar hot water, geothermal heat pumps or other technologies gain market share, the average cost per kW may fall substantially from these estimates.



The DSR goal does raise the monthly residential bill by about 26 cents in 2015, compared to the efficiency programs without DSR (see page 5), as DSR resources displace less expensive EE resources to meet the EE goal. However, over time the net bill impact declines even more than the program expenditure for DSR indicates in the chart above. Total monthly residential costs would only be increased about 9 cents by 2020. Because the cost of DSR slowly declines while the cost of the residential programs displaced by DSR gradually increases, later in the decade there is a smaller difference in cost between DSR and EE programs, and thus a smaller effect on monthly bills.