



## MEMORANDUM

**TO:** Low Income Consumer Advisory Task Force

**FROM:** Liz Jambor, Customer Energy Solutions

**DATE:** September 14, 2015

**SUBJECT:** Response to Task Force Question

During the September 4<sup>th</sup> Low Income Consumer Advisory Task Force meeting, a question was asked regarding the load factors across all programs. This memo serves as the response.

The discussion during the meeting centered on energy savings and load factor as measured by the rebate programs. While we capture the kW and kWh per program, the number of hours, specific to the energy and demand savings, is a bit more a challenge.

Based on the method by which meter data is collected, there are very few programs from which we have a load factor or a load shape. Interval meters are needed to capture the fluctuations in use over the hours of the day, typically read in 15-minute increments. The vast majority of our residential meters are read daily as well as most of our commercial meters. Additionally, formulas that do use the interval meter data, thus producing a load factor and load shape, are based on the “average” customer and would not represent all customers across all energy efficiency programs.

Savings for our residential energy efficiency programs were originally based on the DOE-2 model (Department of Energy) and have been modified with subsequent bill analysis. We focus on the kW savings by measure and by program as an indication of the savings generated by the energy efficiency measures. We report this as part of our monthly and annual reports of savings by program. Typically, the benefit of the savings over the expenditure is viewed in terms of the benefit/cost ratio of the Total Resource Cost test, the Utility test or the Participant test. Each test is deemed as a positive benefit to cost ratio if the result is 1.0 or greater. Table 1 below provides the results of the FY14 programs and the corresponding Benefit/Cost Ratio tests. As the table indicates, a majority of the residential programs exceed 1.0 across all three tests.

Another way we measure the impact of the programs (in the absence of load factors) is assessing the dollars per kW, or the rebate plus 65% O&M dollars spent to gain a kW of savings. The residential programs range from \$542/kW to \$5,003/kW for FY14. The low income weatherization program had the highest rebate dollars spent per kW realized. Table 1 below shows the dollars per kW across the programs.

**Table 1**

Austin Energy DSM Performance Measures Summary- FY2014														
Program	Participant Type	Participants	MWh	MW	Incentives Rebates	Total O&M+Rebate	Savings \$0.10/kwh	Benefit/Cost Ratio TRC	Utility	Participant	TRC = Utility Net Benefit NPV	Life Years	Utility Life Cycle	\$/kW
<b>Residential</b>														
EES- Appliance Efficiency Program	Customer	5,409	6,468	2.4	\$ 1,645,441	\$ 1,918,752	\$ 644,152	1.3	3.2	2.8	\$ 1,486,656	15	2.83	\$ 807
EES- Home Performance ES - Rebate	Customer	1,634	3,227	2.9	\$ 2,794,942	\$ 3,133,013	\$ 321,377	1.4	2.1	1.9	\$ 1,866,381	15	9.26	\$ 1,065
EES- Home Performance ES - Loan	Customer	457	903	0.8	\$ 351,576	\$ 446,128	\$ 89,883	1.6	4.1	1.7	\$ 659,217	15	4.71	\$ 542
EES- Free Weatherization	Customer	312	387	0.4	\$ 1,830,136	\$ 1,873,171	\$ 38,559	0.4	0.4	1.3	\$ (1,050,286)	15	46.12	\$ 5,003
EES- Clothes Washer Rebate	Customer	33	10	0.0	\$ 1,100	\$ 1,290	\$ 946	1.3	3.4	3.6	\$ 902	10	1.77	\$ 782
EES- Refrigerator Recycling	Refrigerator	2,524	1,384	0.4	\$ 346,693	\$ 389,165	\$ 137,868	0.9	2.1	2.2	\$ (78,667)	10	3.67	\$ 1,053
GB- Residential Ratings	Residence	729	944	0.5	\$0.0	\$ 272,302	\$ 93,961	2.7	5.2	9.0	\$ 891,053	23	2.06	\$ 566
GB- Residential Energy Code	Residence	2,754	11,397	8.2	\$0.0	\$ 185,424	\$ 1,134,947	7.9	123.1	9.8	\$ 19,945,777	23	0.12	\$ 23
Subtotal Residential		13,852	24,719	15.5	\$ 6,969,889	\$ 8,219,245	\$ 2,461,693							
<b>Commercial</b>														
EES- Commercial Rebate	Customer	542	41,298	8.0	\$ 2,469,569	\$ 3,387,829	\$ 4,112,719	2.4	5.9	6.0	\$ 11,747,829	10	1.07	\$ 424
EES- Small Business	Customer	539	10,692	3.4	\$ 2,989,386	\$ 3,383,388	\$ 1,064,816	1.3	2.1	2.8	\$ 1,798,597	10	4.14	\$ 987
EES- Municipal	Building	0	1,691	0.0	\$ 32,284	\$ 32,284	\$ 168,393	3.6	11.0	18.0	\$ 256,060	10	0.25	N.A.
EES- Multifamily	Apartment	7,403	6,813	3.9	\$ 2,507,220	\$ 2,955,882	\$ 678,476	2.1	3.1	2.6	\$ 5,111,009	18	5.86	\$ 757
EES/GB Commercial Projects	Customer	1	4,533	1.1				First year of program: no financial break out						
GB- Multifamily Ratings	Apartment	2,067	4,788	1.1	\$0.0	\$ 276,984	\$ 476,767	2.2	3.3	2.6	\$ 5,326,960	18	5.46	\$ 263
GB- Multifamily Energy Code	Apartment	7,803	10,504	6.9	\$0.0	\$ 185,424	\$ 1,046,053	8.4	102.1	9.4	\$ 16,670,421	20	0.14	\$ 27
GB- Commercial Ratings	1000 SF <sup>1</sup>	3,779	7,153	2.9	\$0.0	\$ 367,406	\$ 712,334	6.9	22.9	15.3	\$ 7,193,270	20	0.40	\$ 128
GB- Commercial Energy Code	1001 SF <sup>1</sup>	4,699	15,404	4.6	\$0.0	\$ 185,424	\$ 1,534,030	11.7	98.6	-	\$ 16,722,497	11.27489789	0.14	\$ 40
Subtotal Commercial		18,355	102,876	31.8	\$ 7,998,459	\$ 10,774,622	\$ 9,793,589							
<b>Demand Response (DR)</b>														
DR- Power Partner	Thermostat	3,306	39	4.7	\$ 856,912	\$ 1,396,515	\$ 3,871	2.8	3.3	0.8	\$ 3,002,038	7	>999	\$ 297
DR- Cycle Saver	Cycle Saver	2,462	15	0.4	\$ 390,606	\$ 438,272	\$ 1,471	4.8	1.3	6.1	\$ 444,701	10	147.34	\$ 1,057
DR- Power Partner (Comm & Muni)	Thermostat	0	0	0.0	\$ 70,122	\$ 70,122	-	0.0	0.0	1.2	\$ (67,311)	7	83.83	N.A.
DR- Load Coop	Meter	38	0	6.2	\$ 187,233	\$ 904,478	\$0	2.7	2.1	90.9	\$ 1,219,278	2	>999	\$ 145
DR- Engineering Support & TES	Project	4	0	8.3		\$ 951,867	\$0	1.6	16.0	0.0	\$ 5,981,769	15	>999	\$ 115
Subtotal DR		5,810	54	19.6	\$ 1,504,873	\$ 3,761,255	\$ 5,342							
<b>Total DSM Programs</b>		<b>38,017</b>	<b>127,649</b>	<b>67.0</b>	<b>\$16,473,221</b>	<b>\$ 22,755,122</b>	<b>\$12,260,624</b>	<b>1.9</b>	<b>4.3</b>	<b>2.4</b>	<b>\$ 45,450,216</b>	<b>7.00</b>	<b>3.15</b>	<b>\$ 340</b>