

MEMORANDUM

To: Don Jones, Jr.
 From: Brian Hedman and Byron Boyle
 Subject: 2015-2017 UT Mid-Market Incentive Cost-Effectiveness
 Date: February 17, 2015

The tables below present the cost-effectiveness findings for the 2015-2017 Mid-Market Incentive, based on costs and savings estimates provided by PacifiCorp in the spreadsheet entitled “3-year Forecast 021615.xlsx”; and in an email from Don Jones, Jr. on February 16, 2015. The utility discount rate is from the 2013 PacifiCorp Integrated Resource Plan.

For all scenarios, cost-effectiveness was tested using the 2013 IRP 48% load factor east commercial lighting decrement. Table 1 lists modeling inputs. Table 2 list the costs and incentives and Table 3 lists the annual energy savings for each year and scenario. Table 4 provides a comparative summary of the benefit/cost ratios from all five test perspectives by scenario. Table 5 to Table 7 show the complete cost-effectiveness results for each scenario. All scenarios are cost-effective from all test perspectives except the RIM.

Table 1. 2015-17 UT Mid-Market Incentive Financial Inputs

Parameter	Value
Discount Rate	6.88%
Commercial Line Loss	8.71%
Commercial Energy Rate (\$/kWh) - 2013 base rate	\$0.0821
Inflation Rate	1.9%

Table 2. 2015-17 UT Mid-Market Incentive Program Costs

Measure	Year	Delivery	Incentives	Total Utility Costs	Participant Incremental Cost
Mid-Market Incentive	2015	\$308,236	\$664,085	\$972,321	\$1,779,010
Mid-Market Incentive	2016	\$345,865	\$946,321	\$1,292,186	\$2,535,089
Mid-Market Incentive	2017	\$415,903	\$1,167,129	\$1,583,032	\$3,126,610

Table 3. 2015-17 UT Mid-Market Incentive Annual Savings

Measure	Year	Gross KWh Savings	Leakage Rate	Installation Rate	Adjusted KWh Savings	Net-to-Gross Percentage	Net KWh Savings	Measure Life
Mid-Market Incentive	2015	6,204,529	0.4%	91%	5,623,537	70%	3,936,476	13
Mid-Market Incentive	2016	8,841,454	0.4%	91%	8,013,540	70%	5,609,478	13
Mid-Market Incentive	2017	10,904,460	0.4%	91%	9,883,366	70%	6,918,356	13
Mid-Market Incentive -10% kWh Savings	2015	5,584,076	0.4%	91%	5,061,183	70%	3,542,828	13
Mid-Market Incentive -10% kWh Savings	2016	7,957,308	0.4%	91%	7,212,186	70%	5,048,530	13
Mid-Market Incentive -10% kWh Savings	2017	9,814,014	0.4%	91%	8,895,030	70%	6,226,521	13
Mid-Market Incentive +10% kWh Savings	2015	6,824,982	0.4%	91%	6,185,891	70%	4,330,123	13
Mid-Market Incentive +10% kWh Savings	2016	9,725,599	0.4%	91%	8,814,894	70%	6,170,426	13
Mid-Market Incentive +10% kWh Savings	2017	11,994,906	0.4%	91%	10,871,703	70%	7,610,192	13

Table 4. 2015-17 UT Mid-Market Incentive Benefit/Cost Ratios

Measure	PTRC	TRC	UCT	RIM	PCT
2015-17 Mid-Market Incentive	2.59	2.35	3.83	0.83	3.05
2015-17 Mid-Market Incentive -10% kWh Savings	2.33	2.12	3.45	0.81	2.79
2015-17 Mid-Market Incentive +10% kWh Savings	2.84	2.59	4.22	0.85	3.32

Table 5. 2015-17 UT Mid-Market Incentive – Cost-Effectiveness

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.039	\$5,817,362	\$15,040,033	\$9,222,671	2.59
Total Resource Cost Test (TRC) No Adder	\$0.039	\$5,817,362	\$13,672,757	\$7,855,395	2.35
Utility Cost Test (UCT)	\$0.024	\$3,567,042	\$13,672,757	\$10,105,716	3.83
Rate Impact Test (RIM)		\$16,489,725	\$13,672,757	(\$2,816,968)	0.83
Participant Cost Test (PCT)		\$6,887,804	\$21,032,118	\$14,144,315	3.05
Discounted Participant Payback (years)					3.47
Lifecycle Revenue Impact (\$/KWh)					\$0.00001034

Table 6. 2015-17 UT Mid-Market Incentive -10% kWh Savings – Cost-Effectiveness

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.043	\$5,817,362	\$13,536,030	\$7,718,668	2.33
Total Resource Cost Test (TRC) No Adder	\$0.043	\$5,817,362	\$12,305,482	\$6,488,120	2.12
Utility Cost Test (UCT)	\$0.027	\$3,567,042	\$12,305,482	\$8,738,440	3.45
Rate Impact Test (RIM)		\$15,197,457	\$12,305,482	(\$2,891,975)	0.81
Participant Cost Test (PCT)		\$6,887,804	\$19,186,021	\$12,298,217	2.79
Discounted Participant Payback (years)					3.72
Lifecycle Revenue Impact (\$/KWh)					\$0.00001062

Table 7. 2015-17 UT Mid-Market Incentive +10% kWh Savings – Cost-Effectiveness

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.035	\$5,817,362	\$16,544,037	\$10,726,674	2.84
Total Resource Cost Test (TRC) No Adder	\$0.035	\$5,817,362	\$15,040,033	\$9,222,671	2.59
Utility Cost Test (UCT)	\$0.022	\$3,567,042	\$15,040,033	\$11,472,992	4.22
Rate Impact Test (RIM)		\$17,781,993	\$15,040,033	(\$2,741,960)	0.85
Participant Cost Test (PCT)		\$6,887,804	\$22,878,216	\$15,990,412	3.32
Discounted Participant Payback (years)					3.27
Lifecycle Revenue Impact (\$/KWh)					\$0.00001006