

NorthWestern Energy South Dakota DSM Program Cost Effectiveness Calculations												
	07/01/2014 - 06/30/2015			07/01/2014 - 09/30/2016			07/01/2015 - 06/30/2016			07/01/2015 - 09/30/2016		
	PAC Test	TRC Test	RIM Test	PAC Test	TRC Test	RIM Test	PAC Test	TRC Test	RIM Test	PAC Test	TRC Test	RIM Test
E+ Residential Home Energy Audits - Electric	0.12	0.12	0.09	0.14	0.14	0.10	0.17	0.17	0.11	0.17	0.17	0.11
E+ Residential Home Energy Audits - Gas	0.19	0.19	0.14	0.24	0.24	0.16	0.30	0.30	0.18	0.30	0.30	0.18
Commercial Electric Programs	1.34	0.81	0.32	2.66	1.36	0.32	2.34	1.23	0.31	3.16	1.52	0.32
Residential Electric Programs	0.16	0.15	0.12	0.17	0.16	0.12	0.20	0.18	0.12	0.24	0.22	0.14
Commercial Natural Gas Programs	0.01	0.01	0.01	3.15	0.91	0.47	0.27	0.25	0.22	5.87	1.05	0.49
Residential Natural Gas Programs	0.72	0.55	0.40	1.28	0.76	0.38	2.03	0.91	0.38	1.87	0.89	0.37

PAC- Program Administrator Cost Test also known as the Utility Cost Test (UCT)

TRC- Total Resource Cost Test

RIM- Ratepayer Impact Measure Test

South Dakota

11/14/2016

Program savings for 07/01/2014 - 06/30/2015

		kW	kWh	dKt	NWE Program	Incremental Customer	Total Program	Program Savings	Program Resource	NWE PAC	NWE TRC	RIM
		<u>Savings</u>	<u>Savings</u>	<u>Savings</u>	<u>Cost</u>	<u>Cost</u>	<u>Cost</u>	<u>Life</u>	<u>Value</u>	<u>Test</u>	<u>Test</u>	<u>Test</u>
1	E+ Residential Home Energy Audits - Electric	34	159,332	-	\$ 267,445	\$ -	\$ 267,445	10	\$ 30,800	0.12	0.12	0.09
2	E+ Residential Home Energy Audits - Gas	-	-	1,747	\$ 268,369	\$ -	\$ 268,369	10	\$ 49,759	0.19	0.19	0.14
3	Commercial Electric Programs	135	976,254	-	\$ 228,888	\$ 147,142	\$ 376,029	20	\$ 306,388	1.34	0.81	0.32
4	Residential Electric Programs	276	214,092	-	\$ 183,375	\$ 15,759	\$ 199,134	15	\$ 29,246	0.16	0.15	0.12
5	Commercial Natural Gas Programs	-	-	16	\$ 72,175	\$ 1,234	\$ 73,409	13	\$ 555	0.01	0.01	0.01
6	Residential Natural Gas Programs	-	-	1,322	\$ 79,246	\$ 23,651	\$ 102,898	18	\$ 56,947	0.72	0.55	0.40
	Totals	444	1,349,678	3,084	\$ 1,099,498	\$ 187,786	\$ 1,287,284		\$ 473,695	0.43	0.37	0.21

Program savings for 07/01/2014 - 06/30/2015

		kW	kWh	dKt	NWE Program	Incremental Customer	Total Program	Program Savings	Program Resource	NWE PAC	NWE TRC	RIM
		<u>Savings</u>	<u>Savings</u>	<u>Savings</u>	<u>Cost</u>	<u>Cost</u>	<u>Cost</u>	<u>Life</u>	<u>Value</u>	<u>Test</u>	<u>Test</u>	<u>Test</u>
1	E+ Residential Home Energy Audits - Electric	34	159,332	-	\$ 267,445	\$ -	\$ 267,445	10	\$ 30,800	0.12	0.12	0.09
2	E+ Residential Home Energy Audits - Gas	-	-	1,747	\$ 268,369	\$ -	\$ 268,369	10	\$ 49,759	0.19	0.19	0.14
3	E+ Commercial Lighting Rebate Program	135	716,854	-	\$ 108,736	\$ 120,291	\$ 229,026	19	\$ 223,029	2.05	0.97	0.34
4	E+ Residential Lighting Program	276	203,159	-	\$ 139,875	\$ 13,766	\$ 153,641	6	\$ 25,435	0.18	0.17	0.12
5	E+ Commercial EX Electric Rebate Program	-	259,400	-	\$ 92,310	\$ 26,851	\$ 119,161	20	\$ 83,359	0.90	0.70	0.28
6	E+ Commercial NC Electric Rebate Program	-	-	-	\$ -	\$ -	\$ -	-	\$ -	NA	NA	NA
7	E+ Residential EX Electric Rebate Program	-	10,933	-	\$ 15,658	\$ 1,993	\$ 17,651	23	\$ 3,811	0.24	0.22	0.15
8	E+ Residential NC Electric Rebate Program	-	-	-	\$ -	\$ -	\$ -	-	\$ -	NA	NA	NA
9	E+ Commercial EX Gas Rebate Program	-	-	16	\$ 44,349	\$ 1,234	\$ 45,583	13	\$ 555	0.01	0.01	0.01
10	E+ Residential EX Gas Rebate Program	-	-	1,322	\$ 51,421	\$ 23,651	\$ 75,072	18	\$ 56,947	1.11	0.76	0.40
11	E+ Business Partners Program - electric	-	-	-	\$ -	\$ -	\$ -	-	\$ -	NA	NA	NA
12	E+ Business Partners Program - gas	-	-	-	\$ -	\$ -	\$ -	-	\$ -	NA	NA	NA
13	General Electric	-	-	-	\$ 55,685	\$ -	\$ 55,685	-	\$ -	NA	NA	NA
14	General Gas	-	-	-	\$ 55,651	\$ -	\$ 55,651	-	\$ -	NA	NA	NA
	Totals	444	1,349,678	3,084	\$ 1,099,498	\$ 187,786	\$ 1,287,284		\$ 473,695	0.43	0.37	0.21

Notes:

- Analysis to determine program cost-effectiveness **trends**. This analysis is not considered an in-depth third party program evaluation for free-riders, spillover, or realization rates.
- All NWE reported savings are post SBW program evaluation savings and based on the rebate program savings for 07/01/2014 - 06/30/2015.
- Resource Value is determined using the 2014-15 RVSS, and coming on-line in 2015, and using weighted average program lives.
- Program Savings Life based on weighted average project/measure life, rounded to the nearest whole number.
Sum of (project measure life * project measure savings) / program savings (kWh or dKt)
- Total Program Cost based on invoices/data from customer/contractor, minus NWE rebate/incentive, plus NWE program cost for Commercial Lighting. Customer cost is not considered incremental.
- Total Program Cost based on weighted average measure cost from resource potential assessments, minus rebate/incentive, plus NWE program cost.
- Total Program Cost based on SBW average project/measure cost, minus rebate/incentive, plus NWE program cost for Residential Lighting.
- PAC and TRC tests are based on NWE Program Resource Savings Life.
- PAC and TRC based on NWE Reported savings which incorporate SBW savings adjustments, updated potential assessment study data, ENERGY STAR calculator adjustments, and building code changes.
- For programs #11 - #14 there are no savings to report for the time frame of 07/01/2014 - 06/30/2015.

Program Administrator Cost (PAC) test = Resource value of savings based on program savings life, divided by total utility program cost.

Program Total Resource Cost (TRC) test = Resource value of savings based on program savings life, divided by societal program cost.

Alternate method when incremental customer costs are unknown: SBW Evaluation Report Program 4.5 year TRC / PAC = X. Program 2015 PAC * X = current 2015 TRC.

South Dakota

11/14/2016

Program savings for 07/01/2014 - 09/30/2016

		kW	kWh	dKt	NWE Program	Incremental Customer	Total Program	Program Savings	Program Resource	NWE PAC	NWE TRC	RIM
		<u>Savings</u>	<u>Savings</u>	<u>Savings</u>	<u>Cost</u>	<u>Cost</u>	<u>Cost</u>	<u>Life</u>	<u>Value</u>	<u>Test</u>	<u>Test</u>	<u>Test</u>
1	E+ Residential Home Energy Audits - Electric	83	385,053	-	\$ 524,181	\$ -	\$ 524,181	10	\$ 73,460	0.14	0.14	0.10
2	E+ Residential Home Energy Audits - Gas	-	-	4,752	\$ 525,105	\$ -	\$ 525,105	10	\$ 126,116	0.24	0.24	0.16
3	Commercial Electric Programs	793	7,369,252	-	\$ 833,471	\$ 801,084	\$ 1,634,554	20	\$ 2,219,629	2.66	1.36	0.32
4	Residential Electric Programs	304	254,178	-	\$ 220,261	\$ 19,357	\$ 239,618	20	\$ 38,243	0.17	0.16	0.12
5	Commercial Natural Gas Programs	-	-	12,306	\$ 155,620	\$ 382,981	\$ 538,601	20	\$ 490,059	3.15	0.91	0.47
6	Residential Natural Gas Programs	-	-	5,220	\$ 154,929	\$ 108,105	\$ 263,034	17	\$ 198,735	1.28	0.76	0.38
	Totals	1,181	8,008,483	22,278	\$ 2,413,565	\$ 1,311,527	\$ 3,725,092		\$ 3,146,242	1.30	0.84	0.30

Program savings for 07/01/2014 - 09/30/2016

		kW	kWh	dKt	NWE Program	Incremental Customer	Total Program	Program Savings	Program Resource	NWE PAC	NWE TRC	RIM
		<u>Savings</u>	<u>Savings</u>	<u>Savings</u>	<u>Cost</u>	<u>Cost</u>	<u>Cost</u>	<u>Life</u>	<u>Value</u>	<u>Test</u>	<u>Test</u>	<u>Test</u>
1	E+ Residential Home Energy Audits - Electric	83	385,053	-	\$ 524,181	\$ -	\$ 524,181	10	\$ 73,460	0.14	0.14	0.10
2	E+ Residential Home Energy Audits - Gas	-	-	4,752	\$ 525,105	\$ -	\$ 525,105	10	\$ 126,116	0.24	0.24	0.16
3	E+ Commercial Lighting Rebate Program	793	3,697,129	-	\$ 462,410	\$ 483,173	\$ 945,583	20	\$ 1,127,183	2.44	1.19	0.32
4	E+ Residential Lighting Program	304	224,115	-	\$ 151,252	\$ 15,730	\$ 166,982	6	\$ 28,018	0.19	0.17	0.12
5	E+ Commercial EX Electric Rebate Program	-	3,496,944	-	\$ 271,398	\$ 301,830	\$ 573,228	20	\$ 1,039,301	3.83	1.81	0.33
6	E+ Commercial NC Electric Rebate Program	-	175,179	-	\$ 62,474	\$ 16,081	\$ 78,555	20	\$ 53,146	0.85	0.68	0.25
7	E+ Residential EX Electric Rebate Program	-	27,269	-	\$ 30,571	\$ 3,028	\$ 33,599	23	\$ 9,211	0.30	0.27	0.16
8	E+ Residential NC Electric Rebate Program	-	2,795	-	\$ 10,422	\$ 599	\$ 11,021	30	\$ 1,014	0.10	0.09	0.08
9	E+ Commercial EX Gas Rebate Program	-	-	12,306	\$ 118,447	\$ 382,981	\$ 501,428	20	\$ 490,059	4.14	0.98	0.47
10	E+ Residential EX Gas Rebate Program	-	-	5,220	\$ 126,930	\$ 108,105	\$ 235,035	17	\$ 198,735	1.57	0.85	0.38
11	E+ Business Partners Program - electric	-	-	-	\$ 9,173	\$ -	\$ 9,173	-	\$ -	NA	NA	NA
12	E+ Business Partners Program - gas	-	-	-	\$ 9,173	\$ -	\$ 9,173	-	\$ -	NA	NA	NA
13	General Electric	-	-	-	\$ 56,031	\$ -	\$ 56,031	-	\$ -	NA	NA	NA
14	General Gas	-	-	-	\$ 55,998	\$ -	\$ 55,998	-	\$ -	NA	NA	NA
	Totals	1,181	8,008,483	22,278	\$ 2,413,565	\$ 1,311,527	\$ 3,725,092		\$ 3,146,242	1.30	0.84	0.30

Notes:

1. Analysis to determine program cost-effectiveness trends. This analysis is not considered an in-depth third party program evaluation for free-riders, spillover, or realization rates.
2. All NWE reported savings are post SBW program evaluation savings and based on the rebate program savings for 07/01/2014 - 09/30/2016.
3. Resource Value is determined using the 2014-15 RVSS and 2015-16 RVSS, and using weighted average program lives.
4. Program Savings Life based on weighted average project/measure life, rounded to the nearest whole number.
Sum of (project measure life * project measure savings) / program savings (kWh or dKt)
- 5a. Total Program Cost based on invoices/data from customer/contractor, minus NWE rebate/incentive, plus NWE program cost for Commercial Lighting. Customer cost is not considered incremental.
- 5b. Total Program Cost based on weighted average measure cost from resource potential assessments, minus rebate/incentive, plus NWE program cost.
- 5c. Total Program Cost based on SBW average project/measure cost, minus rebate/incentive, plus NWE program cost for Residential Lighting.
6. PAC and TRC tests are based on NWE Program Resource Savings Life.
7. PAC and TRC based on NWE Reported savings which incorporate SBW savings adjustments, updated potential assessment study data, ENERGY STAR calculator adjustments, and building code changes.
8. For programs #11 - #14 there are no savings to report for the time frame of 07/01/2014 - 09/30/2016.

Program Administrator Cost (PAC) test = Resource value of savings based on program savings life, divided by total utility program cost.

Program Total Resource Cost (TRC) test = Resource value of savings based on program savings life, divided by societal program cost.

Alternate method when incremental customer costs are unknown: SBW Evaluation Report Program 4.5 year TRC / PAC = X. Program 2015 PAC * X = current 2015 TRC.

South Dakota

11/14/2016

Program savings for 07/01/2015 - 06/30/2016

		kW	kWh	dKt	NWE	Incremental	Total	Program	Program	NWE	NWE	RIM
		<u>Savings</u>	<u>Savings</u>	<u>Savings</u>	Program	Customer	Program	Savings	Resource	PAC	TRC	RIM
					<u>Cost</u>	<u>Cost</u>	<u>Cost</u>	<u>Life</u>	<u>Value</u>	<u>Test</u>	<u>Test</u>	<u>Test</u>
1	E+ Residential Home Energy Audits - Electric	40	180,092	-	\$ 203,472	\$ -	\$ 203,472	10	\$ 34,036	0.17	0.17	0.11
2	E+ Residential Home Energy Audits - Gas	-	-	2,413	\$ 203,472	\$ -	\$ 203,472	10	\$ 61,316	0.30	0.30	0.18
3	Commercial Electric Programs	466	3,437,349	-	\$ 450,434	\$ 403,352	\$ 853,786	21	\$ 1,053,972	2.34	1.23	0.31
4	Residential Electric Programs	27	30,629	-	\$ 29,624	\$ 2,920	\$ 32,544	19	\$ 5,934	0.20	0.18	0.12
5	Commercial Natural Gas Programs	-	-	177	\$ 23,898	\$ 1,893	\$ 25,791	17	\$ 6,464	0.27	0.25	0.22
6	Residential Natural Gas Programs	-	-	3,396	\$ 61,160	\$ 74,666	\$ 135,826	17	\$ 124,064	2.03	0.91	0.38
	Totals	533	3,648,070	5,986	\$ 972,059	\$ 482,832	\$ 1,454,891		\$ 1,285,786	1.32	0.88	0.29

Program savings for 07/01/2015 - 06/30/2016

		kW	kWh	dKt	NWE	Incremental	Total	Program	Program	NWE	NWE	RIM
		<u>Savings</u>	<u>Savings</u>	<u>Savings</u>	Program	Customer	Program	Savings	Resource	PAC	TRC	RIM
					<u>Cost</u>	<u>Cost</u>	<u>Cost</u>	<u>Life</u>	<u>Value</u>	<u>Test</u>	<u>Test</u>	<u>Test</u>
1	E+ Residential Home Energy Audits - Electric	40	180,092	-	\$ 203,472	\$ -	\$ 203,472	10	\$ 34,036	0.17	0.17	0.11
2	E+ Residential Home Energy Audits - Gas	-	-	2,413	\$ 203,472	\$ -	\$ 203,472	10	\$ 61,316	0.30	0.30	0.18
3	E+ Commercial Lighting Rebate Program	466	1,948,926	-	\$ 246,230	\$ 274,568	\$ 520,798	20	\$ 591,264	2.40	1.14	0.31
4	E+ Residential Lighting Program	27	20,241	-	\$ 9,253	\$ 1,912	\$ 11,165	6	\$ 2,494	0.27	0.22	0.14
5	E+ Commercial EX Electric Rebate Program	-	1,349,758	-	\$ 146,910	\$ 116,017	\$ 262,927	22	\$ 420,640	2.86	1.60	0.32
6	E+ Commercial NC Electric Rebate Program	-	138,665	-	\$ 49,990	\$ 12,768	\$ 62,758	20	\$ 42,068	0.84	0.67	0.25
7	E+ Residential EX Electric Rebate Program	-	7,593	-	\$ 11,832	\$ 409	\$ 12,242	22	\$ 2,425	0.20	0.20	0.13
8	E+ Residential NC Electric Rebate Program	-	2,795	-	\$ 8,526	\$ 599	\$ 9,126	30	\$ 1,014	0.12	0.11	0.09
9	E+ Commercial EX Gas Rebate Program	-	-	177	\$ 16,595	\$ 1,893	\$ 18,488	17	\$ 6,464	0.39	0.35	0.22
10	E+ Residential EX Gas Rebate Program	-	-	3,396	\$ 61,148	\$ 74,666	\$ 135,814	17	\$ 124,064	2.03	0.91	0.38
11	E+ Business Partners Program - electric	-	-	-	\$ 7,291	\$ -	\$ 7,291	-	\$ -	NA	NA	
12	E+ Business Partners Program - gas	-	-	-	\$ 7,291	\$ -	\$ 7,291	-	\$ -	NA	NA	
13	General Electric	-	-	-	\$ 24	\$ -	\$ 24	-	\$ -	NA	NA	
14	General Gas	-	-	-	\$ 24	\$ -	\$ 24	-	\$ -	NA	NA	
	Totals	533	3,648,070	5,986	\$ 972,059	\$ 482,832	\$ 1,454,891		\$ 1,285,786	1.32	0.88	0.29

Notes:

1. Analysis to determine program cost-effectiveness trends. This analysis is not considered an in-depth third party program evaluation for free-riders, spillover, or realization rates.
2. All NWE reported savings are post SBW program evaluation savings and based on the rebate program savings for 07/01/2015 - 06/30/2016.
3. Resource Value is determined using the 2015-16 RVSS, and coming on-line in 2016, and using weighted average program lives.
4. Program Savings Life based on weighted average project/measure life, rounded to the nearest whole number.
Sum of (project measure life * project measure savings) / program savings (kWh or dKt)
- 5a. Total Program Cost based on invoices/data from customer/contractor, minus NWE rebate/incentive, plus NWE program cost for Commercial Lighting. Customer cost is not considered incremental.
- 5b. Total Program Cost based on weighted average measure cost from resource potential assessments, minus rebate/incentive, plus NWE program cost.
- 5c. Total Program Cost based on SBW average project/measure cost, minus rebate/incentive, plus NWE program cost for Residential Lighting.
6. PAC and TRC tests are based on NWE Program Resource Savings Life.
7. PAC and TRC based on NWE Reported savings which incorporate SBW savings adjustments, updated potential assessment study data, ENERGY STAR calculator adjustments, and building code changes.
8. For programs #11 - #14 there are no savings to report for the time frame of 07/01/2015 - 06/30/2016.

Program Administrator Cost (PAC) test = Resource value of savings based on program savings life, divided by total utility program cost.

Program Total Resource Cost (TRC) test = Resource value of savings based on program savings life, divided by societal program cost.

Alternate method when incremental customer costs are unknown: SBW Evaluation Report Program 4.5 year TRC / PAC = X. Program 2015 PAC * X = current 2015 TRC.

South Dakota

11/14/2016

Program savings for 07/01/2015 - 09/30/2016

		kW	kWh	dKt	NWE	Incremental	Total	Program	Program	NWE	NWE	RIM
		<u>Savings</u>	<u>Savings</u>	<u>Savings</u>	<u>Program</u>	<u>Customer</u>	<u>Program</u>	<u>Savings</u>	<u>Resource</u>	<u>PAC</u>	<u>TRC</u>	<u>Test</u>
					<u>Cost</u>	<u>Cost</u>	<u>Cost</u>	<u>Life</u>	<u>Value</u>	<u>Test</u>	<u>Test</u>	<u>Test</u>
1	E+ Residential Home Energy Audits - Electric	50	225,721	-	\$ 256,736	\$ -	\$ 256,736	10	\$ 42,659	0.17	0.17	0.11
2	E+ Residential Home Energy Audits - Gas	-	-	3,005	\$ 256,736	\$ -	\$ 256,736	10	\$ 76,357	0.30	0.30	0.18
3	Commercial Electric Programs	658	6,322,158	-	\$ 604,583	\$ 653,942	\$ 1,258,525	20	\$ 1,913,241	3.16	1.52	0.32
4	Residential Electric Programs	28	40,087	-	\$ 36,885	\$ 3,598	\$ 40,484	20	\$ 8,996	0.24	0.22	0.14
5	Commercial Natural Gas Programs	-	-	12,290	\$ 83,445	\$ 381,747	\$ 465,192	19	\$ 489,505	5.87	1.05	0.49
6	Residential Natural Gas Programs	-	-	3,899	\$ 75,682	\$ 84,453	\$ 160,136	17	\$ 141,788	1.87	0.89	0.37
	Totals	737	6,587,965	19,194	\$ 1,314,067	\$ 1,123,741	\$ 2,437,808		\$ 2,672,547	2.03	1.10	0.33

Program savings for 07/01/2015 - 09/30/2016

		kW	kWh	dKt	NWE	Incremental	Total	Program	Program	NWE	NWE	RIM
		<u>Savings</u>	<u>Savings</u>	<u>Savings</u>	<u>Program</u>	<u>Customer</u>	<u>Program</u>	<u>Savings</u>	<u>Resource</u>	<u>PAC</u>	<u>TRC</u>	<u>Test</u>
					<u>Cost</u>	<u>Cost</u>	<u>Cost</u>	<u>Life</u>	<u>Value</u>	<u>Test</u>	<u>Test</u>	<u>Test</u>
1	E+ Residential Home Energy Audits - Electric	50	225,721	-	\$ 256,736	\$ -	\$ 256,736	10	\$ 42,659	0.17	0.17	0.11
2	E+ Residential Home Energy Audits - Gas	-	-	3,005	\$ 256,736	\$ -	\$ 256,736	10	\$ 76,357	0.30	0.30	0.18
3	E+ Commercial Lighting Rebate Program	658	2,980,275	-	\$ 353,674	\$ 362,882	\$ 716,556	20	\$ 904,154	2.56	1.26	0.31
4	E+ Residential Lighting Program	28	20,956	-	\$ 11,377	\$ 1,964	\$ 13,341	6	\$ 2,582	0.23	0.19	0.13
5	E+ Commercial EX Electric Rebate Program	-	3,166,703	-	\$ 179,088	\$ 274,979	\$ 454,068	20	\$ 955,942	5.34	2.11	0.34
6	E+ Commercial NC Electric Rebate Program	-	175,179	-	\$ 62,474	\$ 16,081	\$ 78,555	20	\$ 53,146	0.85	0.68	0.25
7	E+ Residential EX Electric Rebate Program	-	16,336	-	\$ 14,913	\$ 1,035	\$ 15,948	24	\$ 5,400	0.36	0.34	0.17
8	E+ Residential NC Electric Rebate Program	-	2,795	-	\$ 10,422	\$ 599	\$ 11,021	30	\$ 1,014	0.10	0.09	0.08
9	E+ Commercial EX Gas Rebate Program	-	-	12,290	\$ 74,098	\$ 381,747	\$ 455,845	19	\$ 489,505	6.61	1.07	0.49
10	E+ Residential EX Gas Rebate Program	-	-	3,899	\$ 75,509	\$ 84,453	\$ 159,963	17	\$ 141,788	1.88	0.89	0.37
11	E+ Business Partners Program - electric	-	-	-	\$ 9,173	\$ -	\$ 9,173	-	\$ -	NA	NA	NA
12	E+ Business Partners Program - gas	-	-	-	\$ 9,173	\$ -	\$ 9,173	-	\$ -	NA	NA	NA
13	General Electric	-	-	-	\$ 346	\$ -	\$ 346	-	\$ -	NA	NA	NA
14	General Gas	-	-	-	\$ 346	\$ -	\$ 346	-	\$ -	NA	NA	NA
	Totals	737	6,587,965	19,194	\$ 1,314,067	\$ 1,123,741	\$ 2,437,808		\$ 2,672,547	2.03	1.10	0.33

Notes:

1. Analysis to determine program cost-effectiveness trends. This analysis is not considered an in-depth third party program evaluation for free-riders, spillover, or realization rates.
2. All NWE reported savings are post SBW program evaluation savings and based on the rebate program savings for 07/01/2015 - 09/30/2016.
3. Resource Value is determined using the 2015-16 RVSS, and coming on-line in 2016, and using weighted average program lives.
4. Program Savings Life based on weighted average project/measure life, rounded to the nearest whole number.
Sum of (project measure life * project measure savings) / program savings (kWh or dKt)
- 5a. Total Program Cost based on invoices/data from customer/contractor, minus NWE rebate/incentive, plus NWE program cost for Commercial Lighting. Customer cost is not considered incremental.
- 5b. Total Program Cost based on weighted average measure cost from resource potential assessments, minus rebate/incentive, plus NWE program cost.
- 5c. Total Program Cost based on SBW average project/measure cost, minus rebate/incentive, plus NWE program cost for Residential Lighting.
6. PAC and TRC tests are based on NWE Program Resource Savings Life.
7. PAC and TRC based on NWE Reported savings which incorporate SBW savings adjustments, updated potential assessment study data, ENERGY STAR calculator adjustments, and building code changes.
8. For programs #11 - #14 there are no savings to report for the time frame of 07/01/2015 - 09/30/2016.

Program Administrator Cost (PAC) test = Resource value of savings based on program savings life, divided by total utility program cost.

Program Total Resource Cost (TRC) test = Resource value of savings based on program savings life, divided by societal program cost.

Alternate method when incremental customer costs are unknown: SBW Evaluation Report Program 4.5 year TRC / PAC = X. Program 2015 PAC * X = current 2015 TRC.

South Dakota

11/14/2016

Program savings for 07/01/2016 - 09/30/2016

		kW	kWh	dKt	NWE	Incremental	Total	Program	Program	NWE	NWE	RIM
		<u>Savings</u>	<u>Savings</u>	<u>Savings</u>	<u>Program</u>	<u>Customer</u>	<u>Program</u>	<u>Savings</u>	<u>Resource</u>	<u>PAC</u>	<u>TRC</u>	<u>RIM</u>
					<u>Cost</u>	<u>Cost</u>	<u>Cost</u>	<u>Life</u>	<u>Value</u>	<u>Test</u>	<u>Test</u>	<u>Test</u>
1	E+ Residential Home Energy Audits - Electric	10	45,629	-	\$ 53,263	\$ -	\$ 53,263	10	\$ 8,623	0.16	0.16	0.11
2	E+ Residential Home Energy Audits - Gas	-	-	592	\$ 53,263	\$ -	\$ 53,263	10	\$ 15,041	0.28	0.28	0.17
3	Commercial Electric Programs	193	2,884,809	-	\$ 154,149	\$ 250,590	\$ 404,739	20	\$ 859,270	5.57	2.12	0.33
4	Residential Electric Programs	1	9,458	-	\$ 7,262	\$ 678	\$ 7,940	16	\$ 3,063	0.42	0.39	0.19
5	Commercial Natural Gas Programs	-	-	12,113	\$ 59,547	\$ 379,855	\$ 439,401	20	\$ 483,040	8.11	1.10	0.50
6	Residential Natural Gas Programs	-	-	503	\$ 14,523	\$ 9,787	\$ 24,310	16	\$ 17,724	1.22	0.73	0.34
	Totals	204	2,939,896	13,208	\$ 342,007	\$ 640,910	\$ 982,917		\$ 1,386,761	4.05	1.41	0.37

Program savings for 07/01/2016 - 09/30/2016

		kW	kWh	dKt	NWE	Incremental	Total	Program	Program	NWE	NWE	RIM
		<u>Savings</u>	<u>Savings</u>	<u>Savings</u>	<u>Program</u>	<u>Customer</u>	<u>Program</u>	<u>Savings</u>	<u>Resource</u>	<u>PAC</u>	<u>TRC</u>	<u>RIM</u>
					<u>Cost</u>	<u>Cost</u>	<u>Cost</u>	<u>Life</u>	<u>Value</u>	<u>Test</u>	<u>Test</u>	<u>Test</u>
1	E+ Residential Home Energy Audits - Electric	10	45,629	-	\$ 53,263	\$ -	\$ 53,263	10	\$ 8,623	0.16	0.16	0.11
2	E+ Residential Home Energy Audits - Gas	-	-	592	\$ 53,263	\$ -	\$ 53,263	10	\$ 15,041	0.28	0.28	0.17
3	E+ Commercial Lighting Rebate Program	193	1,031,349	-	\$ 107,444	\$ 88,314	\$ 195,758	20	\$ 312,890	2.91	1.60	0.32
4	E+ Residential Lighting Program	1	715	-	\$ 2,124	\$ 52	\$ 2,176	6	\$ 88	0.04	0.04	0.04
5	E+ Commercial EX Electric Rebate Program	-	1,816,945	-	\$ 32,178	\$ 158,963	\$ 191,141	19	\$ 535,302	16.64	2.80	0.35
6	E+ Commercial NC Electric Rebate Program	-	36,514	-	\$ 12,484	\$ 3,313	\$ 15,797	20	\$ 11,078	0.89	0.70	0.25
7	E+ Residential EX Electric Rebate Program	-	8,743	-	\$ 3,081	\$ 626	\$ 3,706	25	\$ 2,974	0.97	0.80	0.25
8	E+ Residential NC Electric Rebate Program	-	-	-	\$ 1,896	\$ -	\$ 1,896	-	\$ -	NA	NA	NA
9	E+ Commercial EX Gas Rebate Program	-	-	12,113	\$ 57,503	\$ 379,855	\$ 437,358	20	\$ 483,040	8.40	1.10	0.50
10	E+ Residential EX Gas Rebate Program	-	-	502.70	\$ 14,362	\$ 9,787	\$ 24,149	16	\$ 17,724	1.23	0.73	0.34
11	E+ Business Partners Program - electric	-	-	-	\$ 1,883	\$ -	\$ 1,883	-	\$ -	NA	NA	NA
12	E+ Business Partners Program - gas	-	-	-	\$ 1,883	\$ -	\$ 1,883	-	\$ -	NA	NA	NA
13	General Electric	-	-	-	\$ 322	\$ -	\$ 322	-	\$ -	NA	NA	NA
14	General Gas	-	-	-	\$ 322	\$ -	\$ 322	-	\$ -	NA	NA	NA
	Totals	204	2,939,896	13,208	\$ 342,007	\$ 640,910	\$ 982,917		\$ 1,386,761	4.05	1.41	0.37

Notes:

1. Analysis to determine program cost-effectiveness **trends**. This analysis is not considered an in-depth third party program evaluation for free-riders, spillover, or realization rates.
2. All NWE reported savings are post SBW program evaluation savings and based on the rebate program savings for 07/01/2016 - 09/30/2016.
3. Resource Value is determined using the 2015-16 RVSS, and coming on-line in 2016, and using weighted average program lives.
4. Program Savings Life based on weighted average project/measure life, rounded to the nearest whole number.
Sum of (project measure life * project measure savings) / program savings (kWh or dKt)
- 5a. Total Program Cost based on invoices/data from customer/contractor, minus NWE rebate/incentive, plus NWE program cost for Commercial Lighting. Customer cost is not considered incremental.
- 5b. Total Program Cost based on weighted average measure cost from resource potential assessments, minus rebate/incentive, plus NWE program cost.
- 5c. Total Program Cost based on SBW average project/measure cost, minus rebate/incentive, plus NWE program cost for Residential Lighting.
6. PAC and TRC tests are based on NWE Program Resource Savings Life.
7. PAC and TRC based on NWE Reported savings which incorporate SBW savings adjustments, updated potential assessment study data, ENERGY STAR calculator adjustments, and building code changes.
8. For programs #11 - #14 there are no savings to report for the time frame of 07/01/2016 - 09/30/2016.

Program Administrator Cost (PAC) test = Resource value of savings based on program savings life, divided by total utility program cost.

Program Total Resource Cost (TRC) test = Resource value of savings based on program savings life, divided by societal program cost.

Alternate method when incremental customer costs are unknown: SBW Evaluation Report Program 4.5 year TRC / PAC = X. Program 2015 PAC * X = current 2015 TRC.