

Inputs	
WS Conversion	65%
\$/Customer/month	\$ 10.00
MN G/E Ratio	0.373
CO G/E Ratio	1.003
Attrition Rate	5%
Admin/Cust	\$ 80.00
Supply Price/Dth	\$ 15.00
Carbon Offset price	\$ 15.00

Emissions Reduction Source		
Source	Emission Reduction	Cost Split
Offsets	90%	22%
RNG	10%	78%

Assumptions	
100% product \$/mth	20
RNG Price	15
Source	Landfill
Offset	15

Program Year	Colorado				
	1	2	3	4	5
Incremental Customers	5,292	5,474	3,953	5,262	3,755
Cumulative Cust.	5,292	10,502	14,195	19,272	22,773
Cumulative Revenue	\$ 635,092.19	\$ 1,260,248.60	\$ 1,703,374.37	\$ 2,312,634.70	\$ 2,732,781.36
% Customer Base	0.39%	0.78%	1.05%	1.43%	1.69%
Total Admin	\$ 423,394.79	\$ 437,940.68	\$ 316,255.73	\$ 420,944.41	\$ 300,406.45
Supply revenue	\$ 211,697.40	\$ 822,307.92	\$ 1,387,118.64	\$ 1,891,690.29	\$ 2,432,374.91
RNG Revenue	\$ 164,713.63	\$ 639,806.29	\$ 1,079,263.88	\$ 1,471,851.75	\$ 1,892,537.74
Offset Revenue	\$ 46,983.76	\$ 182,501.63	\$ 307,854.76	\$ 419,838.54	\$ 539,837.17
RNG Volume (Dth)	10,981	42,654	71,951	98,123	126,169
Offset purchases (tonnes)	3,132	12,167	20,524	27,989	35,989
CO2 Reduced (MT)	3,502	13,602	22,945	31,292	40,236

	Block Analysis	
	Monthly	Annual
Block Price	\$ 5.00	\$ 60.00
Tonnes/block	0.083	0.993
standard Dth reduction	1.00	12.01

Natural Gas Carbon Intensity by Source		
RNG Source	Carbon Intensity (g CO2e/MJ)	tonnes/dkTh
Traditional Fossil gas	78.3	0.08
Landfill	46.4	0.05
Dairy	-276.2	(0.29)
Wastewater	19.3	0.02
Municipal solid waste	-22.9	(0.02)

Conversions  
 MJ/dTh  
 1055.057

Colorado					
Usage (dTh/yr)	Emmissions (tonnes)	Cost RNG/dTh			
74.88	3.97	\$ 15.00			
RNG Emission Reductions					
Source	Reduction/Dth	Dth required for net zero	Cost of RNG/yr	cost/mth	\$/tonne
Landfill	0.03	117.96	\$ 1,769.36	\$ 147.45	<b>445.68</b>
Dairy	0.37	10.61	\$ 159.22	\$ 13.27	<b>40.11</b>
Wastewater	0.06	63.78	\$ 956.65	\$ 79.72	<b>240.97</b>
Solid Waste	0.11	37.18	\$ 557.73	\$ 46.48	<b>140.49</b>
Offset Emmission Reductions					
\$/tonne	Cost/yr	Cost/mth			
\$ 5.00	\$ 19.85	\$ 1.65			
\$ 10.00	\$ 39.70	\$ 3.31			
\$ 15.00	\$ 59.55	\$ 4.96			
\$ 20.00	\$ 79.40	\$ 6.62			

	Price/dth
Traditional Fossil gas	\$ 2.00
Landfill	\$ 15.00
Dairy	\$ 70.00
Wastewater	\$ 20.00
Municipal solid waste	\$ 20.00

Price for 100% Carbon free  
 per month \$ 20.00 per year \$ 240.00

	\$/tonne	Cost/yr	% Split	Cust. Spend	tonnes reduced	Spend %
Offset	\$ 15.00	\$ 59.55	0.894461695	\$ 53.27	3.551012929	0.221938308
RNG	\$ 445.68	\$ 1,769.36	0.105538305	\$ 186.73	0.418987071	0.778061692
		<b>Annual Premium</b>		\$ 240.00	3.97	
		<b>Monthly Premium</b>		\$ 20.00		

Customer Counts				
MN				
Gas Only	Electric Only	Gas and electric	total	
107,120	944,987	364,849	1,416,956	
CO				
Gas Only	Electric Only	Gas and electric	total	
403525	506670	1063437	1,973,632	
MN Gas	471,969			
CO Gas	1,466,962			
MN Electric	1,309,836			
CO Electric	1,570,107			
MN G/E Ratio	0.360326789			
CO G/E Ratio	0.934307025			

Res Customer Counts				
MN				
Gas Only	Electric Only	Gas and electric	total	
91,179	822,553	343,635	1,257,367	
CO				
Gas Only	Electric Only	Gas and electric	total	
361748	358230	988918	1,708,896	
MN Gas	434,814			
CO Gas	1,350,666			
MN Electric	1,166,188			
CO Electric	1,347,148			
MN G/E Ratio	0.37285069			
CO G/E Ratio	1.002611443			

SALES (MWh)		2007	2008	2009	2010	2011	2012	2013	2014
CO	Residential	174,654	175,517	158,759	149,996	139,065	127,642	122,092	117,137
	C&I	37,667	50,021	57,888	62,901	72,446	73,597	74,900	70,407
	Total	212,321	225,538	216,647	212,897	211,511	201,239	196,992	187,544
MN	Residential	86,967	91,431	89,698	89,797	90,498	88,413	91,301	99,380
	C&I	19,500	36,788	57,687	71,239	77,943	86,535	78,883	74,458
	Total	106,467	128,219	147,385	161,036	168,441	174,948	170,185	173,837
NM	Residential	3,148	3,738	4,213	4,714	4,666	3,511	3,608	3,185
	C&I	4,617	4,545	4,427	4,247	838	881	845	788
	Total	7,765	8,283	8,640	8,961	5,504	4,392	4,453	3,973
WI	Residential			1,605	5,943	8,081	8,848	6,760	8,192
	C&I			-	-	-	-	4,065	3,792
	Total			1,605	5,943	8,081	8,848	10,826	11,984
MI	Residential						50	86	142
	C&I						-	-	-
	Total						50	86	142
TOTAL	Residential	264,769	270,686	254,275	250,450	242,310	228,464	223,848	228,036
	C&I	61,784	91,354	120,002	138,387	151,227	161,013	158,693	149,446
	Total	326,553	362,040	374,277	388,837	393,537	389,477	382,542	377,480

COUNT		2007	2008	2009	2010	2011	2012	2013	2014
CO	Residential	46,002	44,971	40,949	38,034	34,930	32,765	35,843	40,124
	C&I	832	958	976	997	921	868	827	762
	Total	46,834	45,929	41,925	39,031	35,851	33,633	36,670	40,886
MN	Residential	23,952	24,162	23,082	21,804	21,497	22,434	33,115	39,003
	C&I	160	205	262	264	278	275	264	268
	Total	24,112	24,367	23,344	22,068	21,775	22,709	33,379	39,271
NM	Residential	1,048	1,157	992	1,285	1,107	963	852	818
	C&I	39	44	42	76	133	91	91	90
	Total	1,087	1,201	1,034	1,361	1,240	1,054	943	908
WI	Residential			384	714	899	1,447	3,568	4,688
	C&I			24	28	42	54	59	55
	Total			408	742	941	1,501	3,627	4,743
MI	Residential						14	67	90
	C&I						0	0	0
	Total						14	67	90
TOTAL	Residential	71,002	70,290	65,407	61,837	58,433	57,623	73,445	84,723
	C&I	1,031	1,207	1,304	1,365	1,374	1,288	1,241	1,175
	Total	72,033	71,497	66,711	63,202	59,807	58,911	74,686	85,898

ACQUISITION		2014	2015	2016	2017	2018	2019
CO	Residential	8,121	8,400	6,066	8,074	5,762	5,156
	C&I	31	60	57	74	716	73
	Total	8,152	8,460	6,123	8,148	6,478	5,229
MN	Residential	11,457	9,102	8,326	9,603	7,547	5,147
	C&I	11	39	44	46	46	50
	Total	11,468	9,141	8,370	9,649	7,593	5,197
NM	Residential	76	50	87	72	97	79
	C&I	-	0	0	0	2	4
	Total	76	50	87	72	99	83
WI	Residential	1,706	1,610	1,786	2,762	1,147	170
	C&I	1	6	4	9	11	1
	Total	1,707	1,616	1,790	2,771	1,158	171
MI	Residential	36	25	65	74	23	46
	C&I	-	0	0	0	0	0
	Total	36	25	65	74	23	46
TOTAL	Residential	21,396	19,187	16,330	20,585	14,576	10,598
	C&I	43	105	105	129	775	128
	Total	21,439	19,292	16,435	20,714	15,351	10,726

ATTRITION		2,010	2,011	2,012	2,013	2,014	2,015	2,016
CO	Residential	3,469	2,730	2,564	2,837	5,176	6,116	4,660
	C&I	-	-	-	-	56	44	38
	Total	3,469	2,730	2,564	2,837	5,232	6,160	4,698
MN	Residential	1,571	1,417	1,842	2,884	5,525	5,371	4,626
	C&I	-	-	-	-	20	13	9
	Total	1,571	1,417	1,842	2,884	5,545	5,384	4,635
NM	Residential	42	46	126	104	78	71	52
	C&I	-	-	-	-	1	0	3
	Total	42	46	126	104	79	71	55
WI	Residential	19	33	66	158	1,179	1,045	752
	C&I	-	-	-	-	1	7	0
	Total	19	33	66	158	1,180	1,052	752
MI	Residential	-	-	-	-	-	-	1
	C&I	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	1
TOTAL	Residential	5,101	4,226	4,598	5,983	11,958	12,603	10,091
	C&I	-	-	-	-	78	64	50
	Total	5,101	4,226	4,598	5,983	12,036	12,667	10,141

Scenarios

Gas Sales

PSCO 2018 10k

Customer	Amount (thousands of mmBtu)	Number of Customers	Revenue (millions \$)	thousands mmBTU/cust	dTh/Cust
Residential	97,409	1,300,826	649.9	0.074882421	74.88
Commercial & Industrial	40,467	101,036	244.5	0.400520607	400.5206065

NSPM 2019 10k

Customer	Amount (thousands of mmBtu)	Number of Customers	Revenue (millions \$)	thousands mmBTU/cust	dTh/Cust
Residential	45,706	480,760	319.928	0.095070305	95.07
Commercial & Industrial	47,831	44,725	245.659		106.9446618

Daily per customer (CO)	0.21
Daily per customer (MN)	0.26

Availability	Dth/Day	State	Scenario 1	Scenario 2
1	N/A	MN		
2		2,142 MN		
3		1,208 CO	1,208	1,208
4		2,739 • IN • MD • MS		
5		5,000 AZ	5,000	5,000
6		5,000 AK		
7		1,500 NC		
8		2,900 MI		
9		3,000 TX	3,000	
10		456 TX	456	
11		1,543 CO	1,543	1,543
12		154 IA		
13		4,110 TX	4,110	
14	50 - 1,000	WI, MI, OH, AZ, CO, FL, IA, ID, KS, NY, SD		
15		2,900 CO	2,900	2,900
16		3,000 MI		
17	Not mentioned	MN		
18		0 WI		
19		0	0-Jan	
			18,217	10,651
		<b>Number of Customers that could participate at 100% gas volume substitution:</b>	<b>88,795</b>	<b>51,916</b>

Windsorce Customers

CO		2007	2008	2009	2010	2011
	Windsorce Residential Count	46,002	44,971	40,949	38,034	34,930
	Total Approx Residential Count (elec)	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
	% Enrolled	3.7%	3.6%	3.3%	3.0%	2.8%

		dTh Total	therm total	Supply Revenue
Residential		97,409,000	974,090,000	\$ 488,993,180.00
C&I		40,467,000	404,670,000	\$ 185,975,086.69
<b>Emissions</b>	tonnes CO2			
CO	11,390,069			
MN	3,775,817			
<b>Total</b>		137,876,000	1,378,760,000	\$ 674,968,266.69

% RNG	dTh	Cost	New Revenue Requirement	Bill Increase % Increase	Absolute Bill Increase (yr)	Absolute Increase/mth	Carbon reduction (tonnes)	Carbon reduction %	
1%		1,378,760	\$ 20,681,400.00	\$ 695,649,666.69	3.1%	\$ 11.52	\$ 0.96	46,404	0.41%
2%		2,757,520	\$ 41,362,800.00	\$ 716,331,066.69	6.1%	\$ 23.04	\$ 1.92	92,808	0.81%
3%		4,136,280	\$ 62,044,200.00	\$ 737,012,466.69	9.2%	\$ 34.55	\$ 2.88	139,212	1.22%
4%		5,515,040	\$ 82,725,600.00	\$ 757,693,866.69	12.3%	\$ 46.07	\$ 3.84	185,616	1.63%
5%		6,893,800	\$ 103,407,000.00	\$ 778,375,266.69	15.3%	\$ 57.59	\$ 4.80	232,020	2.04%

Minnesota				
Customer Charge	9	12	\$	108.00
Dist. Charge	0.175996	951	\$	167.32
Summer therm	0.59611	95.07	\$	56.67
Winter therm	0.65392	760.56	\$	497.35
Average Bill			\$	829.34
			\$	69.11

		Charge	average usage (DTH)	2016 Sales	% of Total	2018 sales		
		small commercial	4.747	26.1	32275682	85%	34,325,610.66	\$ 162,943,673.79
		large commercial	3.7502	702	5772282	15%	6,138,897.53	\$ 23,022,093.52
		interruptible sales	3.74	1673	2343	0%	2,491.81	\$ 9,319.37
					38050307			\$ 185,975,086.69
<b>Colorado Residential</b>								
Customer Charge	12.21	12	\$	146.52				
Therm Charge	0.502	748.82	\$	375.91				
Average Bill			\$	522.43				\$ 43.54

Wisconsin				
Customer Charge	14	12	\$	168.00
Therm Charge	0.2973	950.70	\$	282.64
Average Bill			\$	450.64
			\$	37.55

2012	2013	2014	2015	2016	2017	2018
32,765	35,843	40,124	44,017	44,597	48,904	51,197
1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
2.6%	2.9%	3.2%	3.5%	3.6%	3.9%	4.1%