General assumptions

6.80%	DR
79%	2011 portfolio realization rate
87%	2011 non-res realization rate
66%	2011 res realization rate
26.27%	of NIUC allocated to components that will NOT vary with throughput (
$ 1,996,664	2011 actual NIUC (table 6 of 2011 Annual Report)

Estimated distribution of 2011 NIUC

$ 524,524	Fixed portion of NIUC (2011 actual)
$ 1,472,140	Variable portion of NIUC (2011 actual)
$ 1,996,664	Total NIUC (2011 actual)

Gross 2011 therm acquisition

515,187	Residential gas programs (Table 14 of 2011 Annual Report)
35,877	Low income gas programs (Table 16 of 2011 Annual Report)
832,374	Non-residential gas program (Table 18 of 2011 Annual Report)
1,383,438	

Estimated distribution of 2013 NIUC

$ 524,524	Fixed NIUC
$ 859,584	Variable NIUC
$ 1,384,108	Total NIUC
69%	Portfolio weighted average NTG ratio (hardwired to prevent circular

(see comment for amount in the event that the link is broken).

references in scenario analysis)

Application Number	Payment Date	Contract Request Date	Fuel Type	Measure Type	Simple Payback	KWH
36815		8/29/11 7:00 AM	Gas	HVAC Heating	17	0
32483		12/14/10 8:00 AM	Gas	HVAC Heating	22	
35256		1/17/11 8:00 AM	Gas	HVAC Heating	25	
35888	12/23/11 8:00 AM	3/31/11 7:00 AM	Gas	HVAC Heating	40	
36155		7/11/11 7:00 AM	Dual Fuel	HVAC Heating	43	3,468
37498		11/29/11 8:00 AM	Gas	HVAC Heating	59	
35257		1/17/11 8:00 AM	Gas	Shell	64	
35425		2/28/11 8:00 AM	Dual Fuel	Shell	64	4,031
36638		8/11/11 7:00 AM	Gas	Appliances	65	
37064		11/21/11 8:00 AM	Gas	HVAC Heating	72	
33405		10/4/10 7:00 AM	Dual Fuel	Shell	77	422
35950		7/18/11 7:00 AM	Dual Fuel	HVAC Cooling	70	123,584
36478		10/17/11 7:00 AM	Gas	HVAC Heating	79	0
35426		2/28/11 8:00 AM	Dual Fuel	HVAC Combine	80	22,030
35479		2/9/11 8:00 AM	Dual Fuel	Shell	88	73
37571		11/21/11 8:00 AM	Gas	HVAC Heating	96	
37570		11/21/11 8:00 AM	Gas	HVAC Heating	96	
36581		6/30/11 7:00 AM	Gas	Shell	101	
36593		6/30/11 7:00 AM	Gas	Shell	102	
36595		6/30/11 7:00 AM	Gas	Shell	108	
36594		6/30/11 7:00 AM	Gas	Shell	108	
37572		11/21/11 8:00 AM	Gas	HVAC Heating	110	
37289	12/23/11 8:00 AM	11/1/11 7:00 AM	Gas	HVAC Heating	114	
37378		10/17/11 7:00 AM	Gas	HVAC Heating	123	
34995		12/10/10 8:00 AM	Dual Fuel	HVAC Combine	130	6,210
30438		1/10/11 8:00 AM	Dual Fuel	HVAC Combine	118	483,712
31908		11/30/09 8:00 AM	Gas	HVAC Heating	104	
37057		9/20/11 7:00 AM	Dual Fuel	HVAC Combine	123	18,110
35480		2/9/11 8:00 AM	Dual Fuel	Shell	144	44
35952		10/24/11 7:00 AM	Gas	HVAC Heating	104	
36339		5/26/11 7:00 AM	Gas	HVAC Heating	127	
				Total for contracted projects		661,684
				Number of contracted projects in process	31	
				Number of additional contracts projected	83	1,771,606
				Total for all qualifying contracts	114	2,433,290

THERM	Incentive Electric	Incentive Gas	Measure Cose	Incentive Cost	CE Cost	NEB Value	PVOFNEB
25,099		12,399	24,797	24,797	24,797	0	0
2,017		1,200	2,400	2,400	2,400	0	0
3,563		2,500	5,000	5,000	5,000	0	0
903		1,065	2,130	2,130	2,130	41	0
939	168	1,322	3,000	3,000	3,000	0	0
10,330		18,080	36,160	36,160	36,160	0	0
462		834	1,668	1,668	1,668	0	0
397	340	980	2,640	2,640	2,640	0	0
3,438		6,700	13,400	13,400	13,400	0	0
11,659		25,000	50,000	50,000	50,000	11	0
542	32	1,218	2,500	2,500	2,500	0	0
11,325	13,264	35,614	97,756	97,756	97,756	0	0
7,953		18,725	37,450	37,450	37,450	0	0
2,173	2,391	6,911	18,604	18,604	18,604	0	0
57	6	144	300	300	300	0	0
967		2,750	5,500	5,500	5,500	11	0
1,436		4,100	82,000	8,200	8,200	11	0
225		788	1,631	1,631	1,631	0	0
423		1,481	3,075	3,075	3,075	0	0
1,346		4,711	10,350	10,350	10,350	0	0
2,692		9,422	20,700	20,700	20,700	0	0
766		2,500	5,000	5,000	5,000	11	0
402		1,370	11,787	2,739	2,739	0	0
368		1,288	2,700	2,700	2,700	0	0
11,856	1,242	41,496	93,233	93,233	93,233	0	0
37,963	96,742	132,871	647,393	647,393	647,393	0	0
308		1,078	3,031	3,031	3,031	0	0
4,766	3,622	16,681	47,998	47,998	47,998	0	0
35	9	121	300	300	300	0	0
3,799		13,297	40,630	40,630	40,630	0	0
3,561		12,464	32,425	32,425	32,425	0	0
151,770	117,816	379,110	1,305,558	1,222,710	1,222,710	85	-
406,352	315,443	1,015,036	3,495,526	3,273,707	3,273,707	228	-
558,122	433,259	1,394,146	4,801,084	4,496,417	4,496,417	313	-

Phase	KWH2	THERM2	Measure Live	State	Rate Electric	Rate Gas	therms type
Contracted			16	WA	21	111	Winter
Contracted			20	WA	21	111	Winter
Contracted			16	ID	21	111	Winter
Contracted			16	WA	21	111	Winter
Contracted			16	ID		111	Winter
Contracted			16	WA	21	111	Winter
Contracted			22	ID	21	111	Winter
Contracted			22	ID	21	111	Winter
Contracted			12	WA	21	111	Annual
Contracted			16	WA	21	111	Winter
Contracted			20	WA	21	111	Winter
Contracted			16	WA	21	111	Annual
Contracted			20	WA	21	111	Winter
Contracted			16	ID	21	111	Winter
Contracted			20	WA	21	121	Winter
Contracted			16	WA	21	111	Winter
Contracted			16	WA	21	111	Winter
Contracted			22	WA	11	101	Winter
Contracted			22	WA	11	101	Winter
Contracted			22	WA	11	101	Winter
Contracted			22	WA	11	101	Winter
Contracted			16	WA	21	111	Winter
Contracted			16	WA	21	111	Winter
Contracted			12	WA	21	111	Winter
Contracted			16	WA		111	Winter
Contracted			20	WA	21	111	Winter
Contracted			16	WA	11	101	Winter
Contracted	0	0	16	WA	21	111	Winter
Contracted			20	WA	21	121	Winter
Contracted	1,854		12	WA	21	101	Winter
Contracted			16	WA		111	Winter
	1,854	-					
	4,964	-					
	6,818	-					

	% of CIC assigned to gas for DF	In G portfolio?	Applicable E rate	Applicable G rate	Gas rate for DF, GE projects	E rate for DF or GE projects	G rate for DF or GE projects
GE		yes	-	111	111	^	0.70523
GE		yes	-	111	111	^	0.70523
GE		yes	-	111	111	^	0.66427
GE		yes	-	111	111	^	0.70523
DF	21%	yes	0	111	111	no rate	0.66427
GE		yes	-	111	111	^	0.70523
GE		yes	-	111	111	^	0.66427
DF	9%	yes	21	111	111	0.05349	0.66427
GE		yes	-	111	111	^	0.70523
GE		yes	-	111	111	^	0.70523
DF	56%	yes	21	111	111	0.06271	0.70523
DF	40%	yes	21	111	111	0.06271	0.70523
GE		yes	-	111	111	^	0.70523
DF	9%	yes	21	111	111	0.05349	0.66427
DF	44%	yes	21	121	121	0.06271	0.63282
GE		yes	-	111	111	^	0.70523
GE		yes	-	111	111	^	0.70523
GE		yes	-	101	101	^	0.84889
GE		yes	-	101	101	^	0.84889
GE		yes	-	101	101	^	0.84889
GE		yes	-	101	101	^	0.84889
GE		yes	-	111	111	^	0.70523
GE		yes	-	111	111	^	0.70523
GE		yes	-	111	111	^	0.70523
DF	66%	yes	0	111	111	no rate	0.70523
DF	7%	yes	21	111	111	0.06271	0.70523
GE		yes	-	101	101	^	0.84889
DF	21%	yes	21	111	111	0.05349	0.66427
DF	44%	yes	21	121	121	0.06271	0.63282
GE		yes	-	101	101	^	0.84889
GE		yes	-	111	111	^	0.70523

Total retail electric per year	Total retail gas per year	Total retail energy per year	Months en SPB	E AC benefit	G AC benefit	NEB benefit	CIC cost
$ -	$ 17,701	$ 17,701	**16.8**	$ -	$ 15,686	$ -	$ 24,797
$ -	$ 1,422	$ 1,422	**20.2**	$ -	$ 1,490	$ -	$ 2,400
$ -	$ 2,367	$ 2,367	**25.4**	$ -	$ 2,227	$ -	$ 5,000
$ -	$ 637	$ 637	**40.1**	$ -	$ 564	$ 392	$ 2,130
$ -	$ 624	$ 624	**57.7**	$ 2,167	$ 587	$ -	$ 639
$ -	$ 7,285	$ 7,285	**59.6**	$ -	$ 6,456	$ -	$ 36,160
$ -	$ 307	$ 307	**65.2**	$ -	$ 365	$ -	$ 1,668
$ 216	$ 264	$ 479	**66.1**	$ 3,182	$ 313	$ -	$ 237
$ -	$ 2,425	$ 2,425	**66.3**	$ -	$ 12,639	$ -	$ 13,400
$ -	$ 8,222	$ 8,222	**73.0**	$ -	$ 7,287	$ 105	$ 50,000
$ 26	$ 382	$ 409	**73.4**	$ 312	$ 400	$ -	$ 1,406
$ 7,750	$ 7,987	$ 15,737	**74.5**	$ 77,237	$ 52,110	$ -	$ 39,383
$ -	$ 5,609	$ 5,609	**80.1**	$ -	$ 5,876	$ -	$ 37,450
$ 1,178	$ 1,443	$ 2,622	**85.1**	$ 13,768	$ 1,358	$ -	$ 1,670
$ 5	$ 36	$ 41	**88.6**	$ 54	$ 42	$ -	$ 132
$ -	$ 682	$ 682	**96.8**	$ -	$ 604	$ 105	$ 5,500
$ -	$ 1,013	$ 1,013	**97.2**	$ -	$ 897	$ 105	$ 8,200
$ -	$ 191	$ 191	**102.5**	$ -	$ 178	$ -	$ 1,631
$ -	$ 359	$ 359	**102.8**	$ -	$ 334	$ -	$ 3,075
$ -	$ 1,143	$ 1,143	**108.7**	$ -	$ 1,063	$ -	$ 10,350
$ -	$ 2,285	$ 2,285	**108.7**	$ -	$ 2,125	$ -	$ 20,700
$ -	$ 540	$ 540	**111.1**	$ -	$ 479	$ 105	$ 5,000
$ -	$ 284	$ 284	**115.9**	$ -	$ 251	$ -	$ 2,739
$ -	$ 260	$ 260	**124.8**	$ -	$ 183	$ -	$ 2,700
$ -	$ 8,361	$ 8,361	**133.8**	$ 3,881	$ 7,410	$ -	$ 61,185
$ 30,334	$ 26,773	$ 57,106	**136.0**	$ 357,365	$ 28,047	$ -	$ 47,112
$ -	$ 261	$ 261	**139.1**	$ -	$ 192	$ -	$ 3,031
$ 969	$ 3,166	$ 4,135	**139.3**	$ 11,318	$ 2,979	$ -	$ 10,000
$ 3	$ 22	$ 25	**144.5**	$ 33	$ 26	$ -	$ 133
$ -	$ 3,225	$ 3,225	**151.2**	$ -	$ 1,890	$ -	$ 40,630
$ -	$ 2,511	$ 2,511	**154.9**	$ -	$ 2,226	$ -	$ 32,425
	107,785	148,266		469,319	156,284	814	470,882
	288,587	396,969	-	1,256,563	418,437	2,179	1,260,748
	396,372	545,235	-	1,725,882	574,721	2,992	1,731,630

Sub TRC $	Input en SPB	% of calc vs input en SPB
$ (9,111)	17	99%
$ (910)	22	92%
$ (2,773)	25	101%
$ (1,173)	40	100%
$ 2,115	43	134%
$ (29,704)	59	101%
$ (1,303)	64	102%
$ 3,259	64	103%
$ (761)	65	102%
$ (42,608)	72	101%
$ (693)	77	95%
$ 89,965	70	106%
$ (31,574)	79	101%
$ 13,456	80	106%
$ (35)	88	101%
$ (4,790)	96	101%
$ (7,197)	96	101%
$ (1,453)	101	101%
$ (2,741)	102	101%
$ (9,287)	108	101%
$ (18,575)	108	101%
$ (4,416)	110	101%
$ (2,488)	114	102%
$ (2,517)	123	101%
$ (49,894)	130	103%
$ 338,301	118	115%
$ (2,839)	104	134%
$ 4,297	123	113%
$ (75)	144	100%
$ (38,740)	104	145%
$ (30,199)	127	122%
155,534		
416,431		
571,965		

DATA FOR COLUMNS C TH

Input Input

Measure	Program	Pre-optimization planned unit	Surviving gas pgm ("Y" or "N")
Energy Star 50% effic.gas fryer	Food Service	2	Y
Energy Star 80% effic. electric fryer	Food Service	-	N
Energy Star 38% effic. 3-pan gas steam cooker	Food Service	1	Y
Energy Star 38% effic. 4-pan gas steam cooker	Food Service	1	Y
Energy Star 38% effic. 5-pan gas steam cooker	Food Service	1	Y
Energy Star 38% effic. 6-pan gas steam cooker	Food Service	2	Y
Energy Star 50% effic. 3-pan electric steam cooker	Food Service	-	N
Energy Star 50% effic. 4-pan electric steam cooker	Food Service	-	N
Energy Star 50% effic. 5-pan electric steam cooker	Food Service	-	N
Energy Star 50% effic. 6-pan electric steam cooker	Food Service	-	N
Energy Star electric hot food holding cabinet, over 18 cu.ft.	Food Service	-	N
Energy Star electric hot food holding cabinet, between 12 & 18 cu.ft.	Food Service	-	N
Energy Star electric hot food holding cabinet, 12 cu.ft. or less	Food Service	-	N
Energy Star refrigerator, solid 1 door	Food Service	-	N
Energy Star refrigerator, solid 2 door	Food Service	-	N
Energy Star refrigerator, solid 3 door	Food Service	-	N
Energy Star freezer, solid 1 door	Food Service	-	N
Energy Star freezer, solid 2 door	Food Service	-	N
Energy Star freezer, solid 3 door	Food Service	-	N
Energy Star refrigerator, glass 1 door	Food Service	-	N
Energy Star refrigerator, glass 2 door	Food Service	-	N
Energy Star refrigerator, glass 3 door	Food Service	-	N
Energy Star 91% AFUE gas furnace & programmable thermostat	Food Service	-	N
Vent hood variable speed control, gas space heat	Food Service	7	Y
Vent hood variable speed control, electric space heat	Food Service	-	N
Vent hood variable speed control, electric space heat w/ Make-Up Air Ctrl	Food Service	-	N
Vent hood variable speed control, natural gas space heat w/ Make-Up Air Ctrl	Food Service	7	Y
Vent hood dedicated makeup air unit (MAU) variable speed control	Food Service	-	N
H.E. gas convection oven, 40% effic. or better	Food Service	13	y
H.E. electric convection oven, 70% effic. or better	Food Service	-	N
H.E. gas combination oven, 40% effic. or better	Food Service	2	y
H.E. electric combination oven, 60% effic. or better	Food Service	-	N
H.E. gas rack oven, 50% effic. or better	Food Service	2	Y
EPACT05 ice maker, air cooled, ice making head, under 200 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, air cooled, ice making head, 201 to 300 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, air cooled, ice making head, 301 to 400 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, air cooled, ice making head, 401 to 500 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, air cooled, ice making head, 501 to 1000 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, air cooled, ice making head, 1001 to 1500 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, air cooled, ice making head, over 1500 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, water cooled, ice making head, under 300 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, water cooled, ice making head, 301 to 400 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, water cooled, ice making head, 401 to 500 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, water cooled, ice making head, 501 to 1000 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, water cooled, ice making head, 1001 to 1500 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, water cooled, ice making head, over 1500 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, air cooled, self contained, 200 lbs./day capacity & under	Food Service	-	N
EPACT05 ice maker, water cooled, self contained, 200 lbs./day capacity & under	Food Service	-	N
EPACT05 ice maker, water cooled, self contained, over 200 lbs./day capacity	Food Service	-	N
EPACT05 ice maker, air cooled, remote condensing, 400 lbs./day capacity & under	Food Service	-	N
EPACT05 ice maker, air cooled, remote condensing, 401 to 500 lbs./day capacity	Food Service	-	N

EPACT05 ice maker, air cooled, remote condensing, 501 to 1000 lbs./day capacity		Food Service	-	N
EPACT05 ice maker, air cooled, remote condensing, 1001 to 1500 lbs./day capacity		Food Service	-	N
EPACT05 ice maker, air cooled, remote condensing, over 1500 lbs./day capacity		Food Service	-	N
	0	Food Service	-	N
CEE Tier 2 ice maker, air cooled, ice making head, under 200 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, air cooled, ice making head, 201 to 300 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, air cooled, ice making head, 301 to 400 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, air cooled, ice making head, 401 to 500 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, air cooled, ice making head, 501 to 1000 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, air cooled, ice making head, 1001 to 1500 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, air cooled, ice making head, over 1500 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, water cooled, ice making head, under 300 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, water cooled, ice making head, 301 to 400 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, water cooled, ice making head, 401 to 500 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, water cooled, ice making head, 501 to 1000 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, water cooled, ice making head, 1001 to 1500 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, water cooled, ice making head, over 1500 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, air cooled, self contained, 200 lbs./day capacity & under		Food Service	-	N
CEE Tier 2 ice maker, water cooled, self contained, 200 lbs./day capacity & under		Food Service	-	N
CEE Tier 2 ice maker, water cooled, self contained, over 200 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, air cooled, remote condensing, 400 lbs./day capacity & under		Food Service	-	N
CEE Tier 2 ice maker, air cooled, remote condensing, 401 to 500 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, air cooled, remote condensing, 501 to 1000 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, air cooled, remote condensing, 1001 to 1500 lbs./day capacity		Food Service	-	N
CEE Tier 2 ice maker, air cooled, remote condensing, over 1500 lbs./day capacity		Food Service	-	N
	0	Food Service	-	N
CEE Tier 3 ice maker, air cooled, ice making head, under 200 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, air cooled, ice making head, 201 to 300 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, air cooled, ice making head, 301 to 400 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, air cooled, ice making head, 401 to 500 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, air cooled, ice making head, 501 to 1000 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, air cooled, ice making head, 1001 to 1500 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, air cooled, ice making head, over 1500 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, water cooled, ice making head, under 300 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, water cooled, ice making head, 301 to 400 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, water cooled, ice making head, 401 to 500 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, water cooled, ice making head, 501 to 1000 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, water cooled, ice making head, 1001 to 1500 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, water cooled, ice making head, over 1500 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, air cooled, self contained, 200 lbs./day capacity & under		Food Service	-	N
CEE Tier 3 ice maker, water cooled, self contained, 200 lbs./day capacity & under		Food Service	-	N
CEE Tier 3 ice maker, water cooled, self contained, over 200 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, air cooled, remote condensing, 400 lbs./day capacity & under		Food Service	-	N
CEE Tier 3 ice maker, air cooled, remote condensing, 401 to 500 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, air cooled, remote condensing, 501 to 1000 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, air cooled, remote condensing, 1001 to 1500 lbs./day capacity		Food Service	-	N
CEE Tier 3 ice maker, air cooled, remote condensing, over 1500 lbs./day capacity		Food Service	-	N
	0	Food Service	-	N
H.E. gas griddle, 40% effic. or better		Food Service	2	Y
H.E. electric griddle, 70% effic. or better		Food Service	-	N
	0	Food Service	-	N
Energy Star dishwasher Under Counter, Low Temp - elect. bldg. H.W.& booster H.W.		Food Service	-	N
Energy Star dishwasher Under Counter, High Temp - elect. bldg. H.W.& booster H.W.		Food Service	-	N
Energy Star dishwasher Door Type, Low Temp - elect. bldg. H.W.& booster H.W.		Food Service	-	N
Energy Star dishwasher Door Type, High Temp - elect. bldg. H.W.& booster H.W.		Food Service	-	N
Energy Star dishwasher Single Tank Conveyor, Low Temp - elect. bldg. H.W.& booster I		Food Service	-	N
Energy Star dishwasher Single Tank Conveyor, High Temp - elect. bldg. H.W.& booster		Food Service	-	N
Energy Star dishwasher Multi Tank Conveyor, Low Temp - elect. bldg. H.W.& booster H		Food Service	-	N
Energy Star dishwasher Multi Tank Conveyor, High Temp - elect. bldg. H.W.& booster I		Food Service	-	N

Energy Star dishwasher Under Counter, Low Temp - gas bldg. H.W.& elec. booster H.W	Food Service	-	Y
Energy Star dishwasher Under Counter, High Temp - gas bldg. H.W.& elec. booster H.W	Food Service	1	Y
Energy Star dishwasher Door Type, Low Temp - gas bldg. H.W.& elec. booster H.W.	Food Service	2	Y
Energy Star dishwasher Door Type, High Temp - gas bldg. H.W.& elec. booster H.W.	Food Service	2	Y
Energy Star dishwasher Single Tank Conveyor, Low Temp - gas bldg. H.W.& elec. boost	Food Service	2	Y
Energy Star dishwasher Single Tank Conveyor, High Temp - gas bldg. H.W.& elec. boost	Food Service	2	Y
Energy Star dishwasher Multi Tank Conveyor, Low Temp - gas bldg. H.W.& elec. boost	Food Service	2	Y
Energy Star dishwasher Multi Tank Conveyor, High Temp - gas bldg. H.W.& elec. boost	Food Service	2	Y
Energy Star dishwasher Under Counter, Low Temp - elec. bldg. H.W.& gas booster H.W	Food Service	-	N
Energy Star dishwasher Under Counter, High Temp - elec. bldg. H.W.& gas booster H.W	Food Service	2	Y
Energy Star dishwasher Door Type, Low Temp - elec. bldg. H.W.& gas booster H.W.	Food Service	-	N
Energy Star dishwasher Door Type, High Temp - elec. bldg. H.W.& gas booster H.W.	Food Service	2	Y
Energy Star dishwasher Single Tank Conveyor, Low Temp - elec. bldg. H.W.& gas boost	Food Service	-	N
Energy Star dishwasher Single Tank Conveyor, High Temp - elec. bldg. H.W.& gas boost	Food Service	2	Y
Energy Star dishwasher Multi Tank Conveyor, Low Temp - elec. bldg. H.W.& gas booste	Food Service	-	N
Energy Star dishwasher Multi Tank Conveyor, High Temp - elec. bldg. H.W.& gas boost	Food Service	2	Y
Energy Star dishwasher Under Counter, Low Temp - gas bldg. H.W.& booster H.W.	Food Service	-	Y
Energy Star dishwasher Under Counter, High Temp - gas bldg. H.W.& booster H.W.	Food Service	2	Y
Energy Star dishwasher Door Type, Low Temp - gas bldg. H.W.& booster H.W.	Food Service	2	Y
Energy Star dishwasher Door Type, High Temp - gas bldg. H.W.& booster H.W.	Food Service	2	Y
Energy Star dishwasher Single Tank Conveyor, Low Temp - gas bldg. H.W.& booster H.	Food Service	2	Y
Energy Star dishwasher Single Tank Conveyor, High Temp - gas bldg. H.W.& booster H.	Food Service	2	Y
Energy Star dishwasher Multi Tank Conveyor, Low Temp - gas bldg. H.W.& booster H.W	Food Service	2	Y
Energy Star dishwasher Multi Tank Conveyor, High Temp - gas bldg. H.W.& booster H.W	Food Service	2	Y
Furnace (lower eff consistent w $3.50/kBTU incent)	HVAC	35	y
Furnace (higher eff consistent w $5.00/kBTU incent)	HVAC	20	y
Boiler (lower eff w $6.00/kBTU incent)	HVAC	3	y
Boiler (lower eff w $7.25/kBTU incent)	HVAC	5	y
Unit heater w $5.00/kBtu incent)	HVAC	5	y
Wall <R4 to R11-R18	windows/insulation	26,614	Y
Wall <R4 to R19+	windows/insulation	21,370	Y
Attic <R11 up to R30-R44	windows/insulation	24,212	Y
Attic <R11 up to R45+	windows/insulation	10,000	Y
Roof <R11 up to R30+	windows/insulation	200,590	Y
New Windows (U-value.3/SHGC.35)	windows/insulation	5,000	Y
[redacted]	windows/insulation	16,000	y
Energy Star clothes washer - elect. H.W.& gas dryer	Clothes washers	-	Y
[redacted]	Clothes washers	1	y
[redacted]	Clothes washers	2	y
[redacted]	Clothes washers	2	y
Energy Star clothes washer - gas H.W.& elect. dryer	Clothes washers	15	Y
[redacted]	Clothes washers	1	y
[redacted]	Clothes washers	2	y
[redacted]	Clothes washers	2	y
Energy Star clothes washer - gas H.W.& dryer	Clothes washers	5	Y
[redacted]	Clothes washers	1	y
[redacted]	Clothes washers	15	y
[redacted]	Clothes washers	1	y

Clothes washers
Food Service
windows/insulation
HVAC

Clothes washers
Food Service
windows/insulation
HVAC

HROUGH S WERE DRAWN FROM OTHER SPREADSHEETS AND HARDWIRED FOR THIS VERSION TO SAFEGUARD AGAINST BROKEN LINKS

Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input
Measure life	# units	unit type	CIC/unit	*One-time NEB/unit (from Imp Tm)*	*Annual NEB/unit (from Imp Tm)*	One-time NEB/unit	Annual NEB/unit	Original One-time NEB/unit	Original Annual NEB/unit	
10	2	each	2,500	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	1	each	1,867	-	-	-	-	-	-	
10	1	each	2,489	-	-	-	-	-	-	
10	1	each	3,111	-	-	-	-	-	-	
10	2	each	3,733	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	7	kCFM	1,298	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	7	kCFM	3,000	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	13	each	1,886	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	2	each	5,717	293	-	-	108	-	293	
10	-	each	-	-	-	-	-	-	-	
10	2	each	4,933	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
10	-	each	-	-	-	-	-	-	-	
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10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
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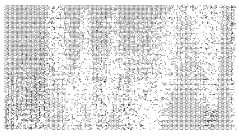
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	2	each	491	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	-	-	-
10	-	each	-	-	-	-	66	-	-
10	-	each	-	-	-	-	66	-	-
10	-	each	-	-	-	-	2	-	-
10	-	each	-	-	-	-	2	-	-
10	-	each	-	-	-	-	2	-	-
10	-	each	-	-	-	-	2	-	-
10	-	each	-	-	-	-	2	-	-
10	-	each	-	-	-	-	2	-	-

10	-	each	1,000	33	-	-	17	-	33
10	1	each	1,000	128	-	-	66	-	128
10	2	each	2,000	328	-	-	169	-	328
10	2	each	2,100	240	-	-	124	-	240
10	2	each	3,000	307	-	-	159	-	307
10	2	each	3,000	300	-	-	155	-	300
10	2	each	4,000	471	-	-	244	-	471
10	2	each	4,000	587	-	-	303	-	587
10	-	each	1,000	33	-	-	2	-	33
10	2	each	1,000	128	-	-	66	-	128
10	-	each	2,000	328	-	-	2	-	328
10	2	each	2,100	240	-	-	124	-	240
10	-	each	3,000	307	-	-	2	-	307
10	2	each	3,000	300	-	-	155	-	300
10	-	each	4,000	471	-	-	2	-	471
10	2	each	4,000	587	-	-	303	-	587
10	-	each	1,000	33	-	-	17	-	33
10	2	each	1,000	128	-	-	66	-	128
10	2	each	2,000	328	-	-	169	-	328
10	2	each	2,100	240	-	-	124	-	240
10	2	each	3,000	307	-	-	159	-	307
10	2	each	3,000	300	-	-	155	-	300
10	2	each	4,000	471	-	-	244	-	471
10	2	each	4,000	587	-	-	303	-	587
20	35	kBTU	7	-	-	-	-	-	-
20	20	kBTU	9	-	-	-	-	-	-
20	3	kBTU	12	-	-	-	-	-	-
20	5	kBTU	15	-	-	-	-	-	-
20	5	kBTU	12	-	-	-	-	-	-
25	26,614	SF	1	-	-	-	-	-	-
25	21,370	SF	1	-	-	-	-	-	-
25	24,212	SF	1	-	-	-	-	-	-
25	10,000	SF	1	-	-	-	-	-	-
25	200,590	SF	1	-	-	-	-	-	-
20	5,000	SF	2	-	-	-	-	-	-
20	16,000	SF	19	-	-	-	-	-	-
7	-	each	370	-	-	-	39	-	-
7	1	each	370	-	-	-	5	-	-
7	2	each	1,120	-	-	-	5	-	-
7	2	each	1,420	-	-	-	5	-	-
7	15	each	370	-	-	-	39	-	-
7	1	each	370	-	-	-	5	-	-
7	2	each	1,120	-	-	-	5	-	-
7	2	each	1,420	-	-	-	5	-	-
7	5	each	370	-	-	-	39	-	-
7	1	each	370	-	-	-	5	-	-
7	15	each	1,120	-	-	-	5	-	-
7	1	each	1,420	-	-	-	5	-	-



Follow-up w engineers

Input	Input	Input	Input		Calculation	Calculation	Full EG portf	Full EG portf
therms/unit	% therms winter profile	kWhs/unit	Incentive per unit	NIUC per unit	% BTU svgs gas	% of AC svgs gas	PV of gas AC (pgm)	PV of electric AC (pgm)
505	-	-	500	-	100%	100%	$ 3,153	$ -
-	-	-	-	-	0%	0%	$ -	$ -
1,042	-	-	500	-	100%	100%	$ 3,253	$ -
1,389	-	-	540	-	100%	100%	$ 4,336	$ -
1,737	-	-	590	-	100%	100%	$ 5,423	$ -
2,084	-	-	630	-	100%	100%	$ 13,012	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
293	-	-	650	-	100%	100%	$ 6,396	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
500	-	-	650	-	100%	100%	$ 10,927	$ -
-	-	-	-	-	0%	0%	$ -	$ -
323	-	-	500	-	100%	100%	$ 13,109	$ -
-	-	-	-	-	0%	0%	$ -	$ -
403	-	-	1,000	-	100%	100%	$ 2,516	$ -
-	-	-	-	-	0%	0%	$ -	$ -
1,034	-	-	1,000	-	100%	100%	$ 6,456	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
-	-	-	-	-	0%	0%	$ -	$ -
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-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
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-	-	-	-	-	0%	0%	$	-	$	-
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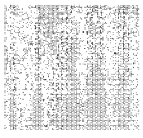
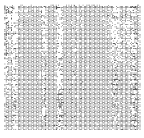
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
88	-	-	250	-	100%	100%	$	549	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-
-	-	-	-	-	0%	0%	$	-	$	-

55	-	-	-	-	100%	0%	$ -	$	-
217	-	2,680	250	-	70%	37%	$ 678	$	1,146
554	-	-	1,000	-	100%	100%	$ 3,461	$	-
405	-	5,197	1,000	-	70%	36%	$ 2,531	$	4,446
520	-	-	1,500	-	100%	100%	$ 3,247	$	-
508	-	7,998	1,500	-	65%	32%	$ 3,174	$	6,843
798	-	-	2,000	-	100%	100%	$ 4,982	$	-
993	-	12,249	2,000	-	70%	37%	$ 6,199	$	10,479
-	-	1,196	-	-	0%	0%	$ -	$	-
109	-	4,689	250	-	40%	14%	$ 678	$	4,012
-	-	11,969	-	-	0%	0%	$ -	$	-
203	-	8,948	1,000	-	40%	14%	$ 1,266	$	7,655
-	-	11,228	-	-	0%	0%	$ -	$	-
254	-	12,701	1,500	-	37%	13%	$ 1,587	$	10,866
-	-	17,225	-	-	0%	0%	$ -	$	-
496	-	21,436	2,000	-	40%	14%	$ 3,100	$	18,339
55	-	-	-	-	100%	0%	$ -	$	-
326	-	-	250	-	100%	100%	$ 2,034	$	-
554	-	-	1,000	-	100%	100%	$ 3,461	$	-
608	-	195	1,000	-	99%	96%	$ 3,797	$	167
520	-	-	1,500	-	100%	100%	$ 3,247	$	-
762	-	1,728	1,500	-	93%	76%	$ 4,760	$	1,478
798	-	-	2,000	-	100%	100%	$ 4,982	$	-
1,489	-	-	2,000	-	100%	100%	$ 9,299	$	-
3	1	-	3	-	100%	100%	$ 569	$	-
4	1	-	5	-	100%	100%	$ 414	$	-
1	1	-	6	-	100%	100%	$ 21	$	-
2	1	-	7	-	100%	100%	$ 66	$	-
2	1	-	5	-	100%	100%	$ 46	$	-
0	1	1	0	-	95%	82%	$ 53,010	$	11,434
0	1	0	0	-	96%	87%	$ 49,430	$	7,161
0	1	0	0	-	95%	83%	$ 15,557	$	3,121
0	1	0	0	-	97%	88%	$ 8,353	$	1,117
0	1	0	0	-	96%	87%	$ 154,658	$	22,406
1	1	0	1	-	100%	98%	$ 20,659	$	369
0	1	8	4	-	62%	30%	$ 41,094	$	96,339
14	-	629	200	-	39%	0%	$ -	$	-
14	-	629	200	-	39%	13%	$ 30	$	200
17	-	776	200	-	39%	13%	$ 73	$	492
19	-	896	200	-	39%	13%	$ 85	$	568
12	-	610	200	-	36%	12%	$ 384	$	2,901
12	-	610	200	-	36%	12%	$ 26	$	193
14	-	752	200	-	36%	12%	$ 63	$	477
17	-	869	200	-	36%	12%	$ 73	$	551
25	-	214	200	-	77%	45%	$ 277	$	340
25	-	214	200	-	77%	45%	$ 55	$	68
31	-	264	200	-	77%	45%	$ 1,024	$	1,257
36	-	305	200	-	77%	45%	$ 79	$	97





	$ 2,168	$ 7,144
	$ 128,461	$ 65,431
	$ 342,759	$ 141,947
	$ 1,116	$ -
	$ 474,505	$ 214,522

0.068

Full EG portf	Full EG portf	Full EG portf	Full EG portf	Full EG portf	Full EG portf	Full EG portf	G port alloc
PV of NEB (pgm)	PV of CIC (pgm)	NIUC (pgm)	PV of incentive (pgm)	Sub-TRC	Energy only sub-TRC	Sub-UCT	Gas share of PV of EG AC
$ -	$ 5,000	$ -	$ 1,000	0.63	0.63	3.15	$ 3,153
$ -	$ -	$ -	$ -				$ -
$ -	$ 1,867	$ -	$ 500	1.74	1.74	6.51	$ 3,253
$ -	$ 2,489	$ -	$ 540	1.74	1.74	8.03	$ 4,336
$ -	$ 3,111	$ -	$ 590	1.74	1.74	9.19	$ 5,423
$ -	$ 7,466	$ -	$ 1,260	1.74	1.74	10.33	$ 13,012
$ -	$ -	$ -	$ -				$ -
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$ -	$ 9,083	$ -	$ 4,550	0.70	0.70	1.41	$ 6,396
$ -	$ -	$ -	$ -				$ -
$ -	$ -	$ -	$ -				$ -
$ -	$ 21,000	$ -	$ 4,550	0.52	0.52	2.40	$ 10,927
$ -	$ -	$ -	$ -				$ -
$ -	$ 24,518	$ -	$ 6,500	0.53	0.53	2.02	$ 13,109
$ -	$ -	$ -	$ -				$ -
$ 1,536	$ 11,434	$ -	$ 2,000	0.35	0.22	1.26	$ 2,516
$ -	$ -	$ -	$ -				$ -
$ -	$ 9,866	$ -	$ 2,000	0.65	0.65	3.23	$ 6,456
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$	-	$	982	$	-	$	500	0.56	0.56	1.10	$	549
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$ -	$ -	$ -	$ -					$ -
$ 470	$ 1,000	$ -	$ 250	2.29	1.82	7.30		$ 678
$ 2,401	$ 4,000	$ -	$ 2,000	1.47	0.87	1.73		$ 3,461
$ 1,756	$ 4,200	$ -	$ 2,000	2.08	1.66	3.49		$ 2,531
$ 2,253	$ 6,000	$ -	$ 3,000	0.92	0.54	1.08		$ 3,247
$ 2,201	$ 6,000	$ -	$ 3,000	2.04	1.67	3.34		$ 3,174
$ 3,456	$ 8,000	$ -	$ 4,000	1.05	0.62	1.25		$ 4,982
$ 4,300	$ 8,000	$ -	$ 4,000	2.62	2.08	4.17		$ 6,199
$ -	$ -	$ -	$ -					$ -
$ 941	$ 2,000	$ -	$ 500	2.82	2.34	9.38		$ 678
$ -	$ -	$ -	$ -					$ -
$ 1,756	$ 4,200	$ -	$ 2,000	2.54	2.12	4.46		$ 1,266
$ -	$ -	$ -	$ -					$ -
$ 2,201	$ 6,000	$ -	$ 3,000	2.44	2.08	4.15		$ 1,587
$ -	$ -	$ -	$ -					$ -
$ 4,300	$ 8,000	$ -	$ 4,000	3.22	2.68	5.36		$ 3,100
$ -	$ -	$ -	$ -					$ -
$ 941	$ 2,000	$ -	$ 500	1.49	1.02	4.07		$ 2,034
$ 2,401	$ 4,000	$ -	$ 2,000	1.47	0.87	1.73		$ 3,461
$ 1,756	$ 4,200	$ -	$ 2,000	1.36	0.94	1.98		$ 3,797
$ 2,253	$ 6,000	$ -	$ 3,000	0.92	0.54	1.08		$ 3,247
$ 2,201	$ 6,000	$ -	$ 3,000	1.41	1.04	2.08		$ 4,760
$ 3,456	$ 8,000	$ -	$ 4,000	1.05	0.62	1.25		$ 4,982
$ 4,300	$ 8,000	$ -	$ 4,000	1.70	1.16	2.32		$ 9,299
$ -	$ 233	$ -	$ 114	2.44	2.44	5.00		$ 569
$ -	$ 172	$ -	$ 100	2.41	2.41	4.14		$ 414
$ -	$ 37	$ -	$ 18	0.57	0.57	1.16		$ 21
$ -	$ 74	$ -	$ 36	0.89	0.89	1.82		$ 66
$ -	$ 60	$ -	$ 25	0.77	0.77	1.84		$ 46
$ -	$ 16,235	$ -	$ 7,984	3.97	3.97	8.07		$ 53,010
$ -	$ 13,891	$ -	$ 7,480	4.07	4.07	7.57		$ 49,430
$ -	$ 18,401	$ -	$ 6,779	1.01	1.01	2.75		$ 15,557
$ -	$ 8,600	$ -	$ 3,500	1.10	1.10	2.71		$ 8,353
$ -	$ 124,366	$ -	$ 56,165	1.42	1.42	3.15		$ 154,658
$ -	$ 11,250	$ -	$ 5,000	1.87	1.87	4.21		$ 20,659
$ -	$ 304,000	$ -	$ 56,000	0.45	0.45	2.45		$ 41,094
$ -	$ -	$ -	$ -					$ -
$ 27	$ 370	$ -	$ 200	0.69	0.62	1.15		$ 30
$ 54	$ 2,240	$ -	$ 400	0.28	0.25	1.41		$ 73
$ 54	$ 2,840	$ -	$ 400	0.25	0.23	1.63		$ 85
$ 3,192	$ 5,550	$ -	$ 3,000	1.17	0.59	1.09		$ 384
$ 27	$ 370	$ -	$ 200	0.66	0.59	1.09		$ 26
$ 54	$ 2,240	$ -	$ 400	0.27	0.24	1.35		$ 63
$ 54	$ 2,840	$ -	$ 400	0.24	0.22	1.56		$ 73
$ 1,064	$ 1,850	$ -	$ 1,000	0.91	0.33	0.62		$ 277
$ 27	$ 370	$ -	$ 200	0.41	0.33	0.62		$ 55
$ 403	$ 16,800	$ -	$ 3,000	0.16	0.14	0.76		$ 1,024
$ 27	$ 1,420	$ -	$ 200	0.14	0.12	0.88		$ 79
$ 4,981	$ 36,890		$ 9,400	0.39	0.25	0.99		$ 2,168
$ 44,880	$ 187,416		$ 69,240	1.27	1.03	2.80		$ 128,461
$ -	$ 496,742		$ 142,908	0.98	0.98	3.39		$ 342,759
$ -	$ 576		$ 293	1.94	1.94	3.81		$ 1,116
$ 49,861	$ 721,624	$ -	$ 221,841	1.02	0.95	3.11		$ 474,505

G port alloc	G port alloc	G port alloc	G port alloc	G port alloc	G port alloc	G port alloc	G port alloc
PV of NEB (pgm)	PV of CIC (pgm)	NIUC (pgm)	PV of incentive (pgm)	Sub-TRC	Energy only sub-TRC	Sub-UCT	% of TRC bene gas AC
$ -	$ 5,000	$ -	$ 1,000	0.63	0.63	3.15	100%
$ -	$ -	$ -	$ -				
$ -	$ 1,867	$ -	$ 500	1.74	1.74	6.51	100%
$ -	$ 2,489	$ -	$ 540	1.74	1.74	8.03	100%
$ -	$ 3,111	$ -	$ 590	1.74	1.74	9.19	100%
$ -	$ 7,466	$ -	$ 1,260	1.74	1.74	10.33	100%
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$ -	$ 9,083	$ -	$ 4,550	0.70	0.70	1.41	100%
$ -	$ -	$ -	$ -				
$ -	$ -	$ -	$ -				
$ -	$ 21,000	$ -	$ 4,550	0.52	0.52	2.40	100%
$ -	$ -	$ -	$ -				
$ -	$ 24,518	$ -	$ 6,500	0.53	0.53	2.02	100%
$ -	$ -	$ -	$ -				
$ 1,536	$ 11,434	$ -	$ 2,000	0.35	0.22	1.26	62%
$ -	$ -	$ -	$ -				
$ -	$ 9,866	$ -	$ 2,000	0.65	0.65	3.23	100%
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$	-	$	982	$	-	$	500	0.56	0.56	1.10	100%
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$ -	$ -	$ -	$ -					
$ 175	$ 372	$ -	$ 93	2.29	1.82	7.30	80%	
$ 2,401	$ 4,000	$ -	$ 2,000	1.47	0.87	1.73	59%	
$ 637	$ 1,524	$ -	$ 726	2.08	1.66	3.49	80%	
$ 2,253	$ 6,000	$ -	$ 3,000	0.92	0.54	1.08	59%	
$ 697	$ 1,901	$ -	$ 951	2.04	1.67	3.34	82%	
$ 3,456	$ 8,000	$ -	$ 4,000	1.05	0.62	1.25	59%	
$ 1,598	$ 2,974	$ -	$ 1,487	2.62	2.08	4.17	80%	
$ -	$ -	$ -	$ -					
$ 136	$ 289	$ -	$ 72	2.82	2.34	9.38	83%	
$ -	$ -	$ -	$ -					
$ 249	$ 596	$ -	$ 284	2.54	2.12	4.46	84%	
$ -	$ -	$ -	$ -					
$ 281	$ 765	$ -	$ 382	2.44	2.08	4.15	85%	
$ -	$ -	$ -	$ -					
$ 622	$ 1,157	$ -	$ 578	3.22	2.68	5.36	83%	
$ -	$ -	$ -	$ -					
$ 941	$ 2,000	$ -	$ 500	1.49	1.02	4.07	68%	
$ 2,401	$ 4,000	$ -	$ 2,000	1.47	0.87	1.73	59%	
$ 1,682	$ 4,023	$ -	$ 1,916	1.36	0.94	1.98	69%	
$ 2,253	$ 6,000	$ -	$ 3,000	0.92	0.54	1.08	59%	
$ 1,680	$ 4,578	$ -	$ 2,289	1.41	1.04	2.08	74%	
$ 3,456	$ 8,000	$ -	$ 4,000	1.05	0.62	1.25	59%	
$ 4,300	$ 8,000	$ -	$ 4,000	1.70	1.16	2.32	68%	
$ -	$ 233	$ -	$ 114	2.44	2.44	5.00	100%	
$ -	$ 172	$ -	$ 100	2.41	2.41	4.14	100%	
$ -	$ 37	$ -	$ 18	0.57	0.57	1.16	100%	
$ -	$ 74	$ -	$ 36	0.89	0.89	1.82	100%	
$ -	$ 60	$ -	$ 25	0.77	0.77	1.84	100%	
$ -	$ 13,354	$ -	$ 6,568	3.97	3.97	8.07	100%	
$ -	$ 12,133	$ -	$ 6,533	4.07	4.07	7.57	100%	
$ -	$ 15,327	$ -	$ 5,647	1.01	1.01	2.75	100%	
$ -	$ 7,586	$ -	$ 3,087	1.10	1.10	2.71	100%	
$ -	$ 108,628	$ -	$ 49,058	1.42	1.42	3.15	100%	
$ -	$ 11,052	$ -	$ 4,912	1.87	1.87	4.21	100%	
$ -	$ 90,899	$ -	$ 16,745	0.45	0.45	2.45	100%	
$ -	$ -	$ -	$ -					
$ 3	$ 48	$ -	$ 26	0.69	0.62	1.15	90%	
$ 7	$ 291	$ -	$ 52	0.28	0.25	1.41	91%	
$ 7	$ 368	$ -	$ 52	0.25	0.23	1.63	92%	
$ 373	$ 649	$ -	$ 351	1.17	0.59	1.09	51%	
$ 3	$ 43	$ -	$ 23	0.66	0.59	1.09	89%	
$ 6	$ 262	$ -	$ 47	0.27	0.24	1.35	91%	
$ 6	$ 332	$ -	$ 47	0.24	0.22	1.56	92%	
$ 478	$ 831	$ -	$ 449	0.91	0.33	0.62	37%	
$ 12	$ 166	$ -	$ 90	0.41	0.33	0.62	82%	
$ 181	$ 7,542	$ -	$ 1,347	0.16	0.14	0.76	85%	
$ 12	$ 638	$ -	$ 90	0.14	0.12	0.88	87%	
$ 1,089	$ 11,169	$ -	$ 2,573	0.29	0.19	0.84	67%	
$ 30,753	$ 155,994	$ -	$ 54,268	1.02	0.82	2.37	81%	
$ -	$ 258,979	$ -	$ 92,549	1.32	1.32	3.70	100%	
$ -	$ 576	$ -	$ 293	1.94	1.94	3.81	100%	
$ 31,842	$ 426,718	$ -	$ 149,682	1.19	1.11	3.17	94%	

Full EG portf	G port alloc	Full EG portf							
% of TRC bene EG AC	Gas incent/PV of gas AC	EG incent/PV of EG AC	gross therms (pgm)	NTG ratio	net sub TRC	net therms	% of 2012 impact likely to occur in 2013	Gross TRC benefits	Gross TRC costs
100%	32%	32%	1,010	87%	0.63	879	100%	3,153	5,000
			-	87%		-	100%	-	-
100%	15%	15%	1,042	87%	1.74	907	100%	3,253	1,867
100%	12%	12%	1,389	87%	1.74	1,208	100%	4,336	2,489
100%	11%	11%	1,737	87%	1.74	1,511	100%	5,423	3,111
100%	10%	10%	4,168	87%	1.74	3,626	100%	13,012	7,466
			-	87%		-	100%	-	-
			-	87%		-	100%	-	-
			-	87%		-	100%	-	-
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			-	87%		-	100%	-	-
			-	87%		-	100%	-	-
100%	71%	71%	2,049	87%	0.70	1,782	100%	6,396	9,083
			-	87%		-	100%	-	-
			-	87%		-	100%	-	-
100%	42%	42%	3,500	87%	0.52	3,045	100%	10,927	21,000
			-	87%		-	100%	-	-
100%	50%	50%	4,199	87%	0.53	3,653	100%	13,109	24,518
			-	87%		-	100%	-	-
62%	79%	79%	806	87%	0.35	701	100%	4,052	11,434
			-	87%		-	100%	-	-
100%	31%	31%	2,068	87%	0.65	1,799	100%	6,456	9,866
			-	87%		-	100%	-	-
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			-	87%		-	100%	-	-
100%	91%	91%	176	87%	0.56	153	100%	549	982
			-	87%		-	100%	-	-
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			-	87%		-	100%	-	-
80%	14%	14%	217	87%	2.29	189	100%	853	372
59%	58%	58%	1,109	87%	1.47	965	100%	5,862	4,000
80%	29%	29%	811	87%	2.08	705	100%	3,169	1,524
59%	92%	92%	1,040	87%	0.92	905	100%	5,500	6,000
82%	30%	30%	1,017	87%	2.04	884	100%	3,871	1,901
59%	80%	80%	1,596	87%	1.05	1,388	100%	8,437	8,000
80%	24%	24%	1,986	87%	2.62	1,728	100%	7,798	2,974
			-	87%		-	100%	-	-
83%	11%	11%	217	87%	2.82	189	100%	814	289
			-	87%		-	100%	-	-
84%	22%	22%	405	87%	2.54	353	100%	1,515	596
			-	87%		-	100%	-	-
85%	24%	24%	508	87%	2.44	442	100%	1,867	765
			-	87%		-	100%	-	-
83%	19%	19%	993	87%	3.22	864	100%	3,722	1,157
			-	87%		-	100%	-	-
68%	25%	25%	652	87%	1.49	567	100%	2,975	2,000
59%	58%	58%	1,109	87%	1.47	965	100%	5,862	4,000
69%	50%	50%	1,216	87%	1.36	1,058	100%	5,479	4,023
59%	92%	92%	1,040	87%	0.92	905	100%	5,500	6,000
74%	48%	48%	1,525	87%	1.41	1,327	100%	6,440	4,578
59%	80%	80%	1,596	87%	1.05	1,388	100%	8,437	8,000
68%	43%	43%	2,979	87%	1.70	2,591	100%	13,600	8,000
100%	20%	20%	102	87%	2.44	89	100%	569	233
100%	24%	24%	74	87%	2.41	65	100%	414	172
100%	86%	86%	4	87%	0.57	3	100%	21	37
100%	55%	55%	12	87%	0.89	10	100%	66	74
100%	54%	54%	8	87%	0.77	7	100%	46	60
100%	12%	12%	8,250	87%	3.97	7,178	100%	53,010	13,354
100%	13%	13%	7,693	87%	4.07	6,693	100%	49,430	12,133
100%	36%	36%	2,421	87%	1.01	2,106	100%	15,557	15,327
100%	37%	37%	1,300	87%	1.10	1,131	100%	8,353	7,586
100%	32%	32%	24,071	87%	1.42	20,942	100%	154,658	108,628
100%	24%	24%	3,700	87%	1.87	3,219	100%	20,659	11,052
100%	41%	41%	7,360	87%	0.45	6,403	100%	41,094	90,899
			-	87%		-	100%	-	-
90%	87%	87%	14	87%	0.69	12	100%	33	48
91%	71%	71%	33	87%	0.28	29	100%	80	291
92%	61%	61%	38	87%	0.25	33	100%	92	368
51%	91%	91%	174	87%	1.17	152	100%	757	649
89%	91%	91%	12	87%	0.66	10	100%	29	43
91%	74%	74%	29	87%	0.27	25	100%	69	262
92%	64%	64%	33	87%	0.24	29	100%	79	332
37%	162%	162%	126	87%	0.91	109	100%	754	831
82%	162%	162%	25	87%	0.41	22	100%	67	166
85%	132%	132%	465	87%	0.16	404	100%	1,205	7,542
87%	114%	114%	36	87%	0.14	31	100%	91	638
65%	119%	101%	984	87%	0.29	856		3,257	11,169
81%	42%	36%	41,149	87%	1.02	35,799		159,215	155,994
100%	27%	29%	54,796	87%	1.32	47,672		342,759	258,979
100%	26%	26%	200	87%	1.94	174		1,116	576
93%	32%	32%	97,129			84,502		506,347	426,718

Gross TRC B/C	Net TRC benefits	Net TRC costs	Net TRC B/C	Delivering therms	Measure offered?	% of annualized pgm in 2012	2012 gross TRC benefits	2012 gross TRC costs	2012 grossTRC B/C
0.63	$ 2,743	$ 4,350	0.63	1	1	92%	$ -	$ 4,583	-
	$ -	$ -		-	0	100%	$ -	$ -	
1.74	$ 2,830	$ 1,624	1.74	1	1	100%	$ -	$ 1,867	-
1.74	$ 3,773	$ 2,165	1.74	1	1	100%	$ -	$ 2,489	-
1.74	$ 4,718	$ 2,707	1.74	1	1	100%	$ -	$ 3,111	-
1.74	$ 11,320	$ 6,495	1.74	1	1	100%	$ -	$ 7,466	-
	$ -	$ -		-	0	100%	$ -	$ -	
	$ -	$ -		-	0	100%	$ -	$ -	
	$ -	$ -		-	0	100%	$ -	$ -	
	$ -	$ -		-	0	100%	$ -	$ -	
	$ -	$ -		-	0	100%	$ -	$ -	
	$ -	$ -		-	0	100%	$ -	$ -	
	$ -	$ -		-	0	100%	$ -	$ -	
	$ -	$ -		-	0	100%	$ -	$ -	
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	$ -	$ -		-	0	100%	$ -	$ -	
	$ -	$ -		-	0	100%	$ -	$ -	
	$ -	$ -		-	0	100%	$ -	$ -	
0.70	$ 5,564	$ 7,902	0.70	1	1	92%	$ -	$ 8,326	-
	$ -	$ -		-	0	100%	$ -	$ -	
	$ -	$ -		-	0	100%	$ -	$ -	
0.52	$ 9,506	$ 18,270	0.52	1	1	92%	$ -	$ 19,250	-
	$ -	$ -		-	0	100%	$ -	$ -	
0.53	$ 11,405	$ 21,331	0.53	1	1	92%	$ -	$ 22,475	-
	$ -	$ -		-	0	100%	$ -	$ -	
0.35	$ 3,525	$ 9,948	0.35	1	1	92%	$ 1,408	$ 10,481	0.13
	$ -	$ -		-	0	100%	$ -	$ -	
0.65	$ 5,617	$ 8,583	0.65	1	1	92%	$ -	$ 9,044	-
	$ -	$ -		-	0	100%	$ -	$ -	
	$ -	$ -		-	0	100%	$ -	$ -	
	$ -	$ -		-	0	100%	$ -	$ -	
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	$	-	$	-		-	0	100%	$	-	$	-	
	$	-	$	-		-	0	100%	$	-	$	-	
0.56	$	478	$	854	0.56	1	1	92%	$	-	$	900	-
	$	-	$	-		-	0	100%	$	-	$	-	
	$	-	$	-		-	0	100%	$	-	$	-	
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	$	-	$	-		-	0	100%	$	-	$	-	

	$ -	$ -		-	1	100%	$ -	$ -				
2.29	$ 742	$ 323	2.29	1	1	100%	$ 175	$ 372	0.47			
1.47	$ 5,100	$ 3,480	1.47	1	1	100%	$ 2,401	$ 4,000	0.60			
2.08	$ 2,757	$ 1,326	2.08	1	1	100%	$ 637	$ 1,524	0.42			
0.92	$ 4,785	$ 5,220	0.92	1	1	100%	$ 2,253	$ 6,000	0.38			
2.04	$ 3,368	$ 1,654	2.04	1	1	100%	$ 697	$ 1,901	0.37			
1.05	$ 7,341	$ 6,960	1.05	1	1	100%	$ 3,456	$ 8,000	0.43			
2.62	$ 6,784	$ 2,587	2.62	1	1	100%	$ 1,598	$ 2,974	0.54			
	$ -	$ -		-	0	100%	$ -	$ -				
2.82	$ 708	$ 252	2.82	1	1	100%	$ 136	$ 289	0.47			
	$ -	$ -		-	0	100%	$ -	$ -				
2.54	$ 1,318	$ 518	2.54	1	1	100%	$ 249	$ 596	0.42			
	$ -	$ -		-	0	100%	$ -	$ -				
2.44	$ 1,625	$ 665	2.44	1	1	100%	$ 281	$ 765	0.37			
	$ -	$ -		-	0	100%	$ -	$ -				
3.22	$ 3,238	$ 1,006	3.22	1	1	100%	$ 622	$ 1,157	0.54			
	$ -	$ -		-	1	100%	$ -	$ -				
1.49	$ 2,588	$ 1,740	1.49	1	1	100%	$ 941	$ 2,000	0.47			
1.47	$ 5,100	$ 3,480	1.47	1	1	100%	$ 2,401	$ 4,000	0.60			
1.36	$ 4,767	$ 3,500	1.36	1	1	100%	$ 1,682	$ 4,023	0.42			
0.92	$ 4,785	$ 5,220	0.92	1	1	100%	$ 2,253	$ 6,000	0.38			
1.41	$ 5,603	$ 3,983	1.41	1	1	100%	$ 1,680	$ 4,578	0.37			
1.05	$ 7,341	$ 6,960	1.05	1	1	100%	$ 3,456	$ 8,000	0.43			
1.70	$ 11,832	$ 6,960	1.70	1	1	100%	$ 4,300	$ 8,000	0.54			
2.44	$ 495	$ 203	2.44	1	1	100%	$ -	$ 233	-			
2.41	$ 360	$ 150	2.41	1	1	100%	$ -	$ 172	-			
0.57	$ 18	$ 32	0.57	1	1	100%	$ -	$ 37	-			
0.89	$ 57	$ 64	0.89	1	1	100%	$ -	$ 74	-			
0.77	$ 40	$ 52	0.77	1	1	100%	$ -	$ 60	-			
3.97	$ 46,118	$ 11,618	3.97	1	1	100%	$ -	$ 13,354	-			
4.07	$ 43,004	$ 10,556	4.07	1	1	100%	$ -	$ 12,133	-			
1.01	$ 13,534	$ 13,334	1.01	1	1	100%	$ -	$ 15,327	-			
1.10	$ 7,267	$ 6,599	1.10	1	1	100%	$ -	$ 7,586	-			
1.42	#######	$ 94,507	1.42	1	1	100%	$ -	$ 108,628	-			
1.87	$ 17,973	$ 9,616	1.87	1	1	100%	$ -	$ 11,052	-			
0.45	$ 35,752	$ 79,082	0.45	1	1	92%	$ -	$ 83,324	-			
	$ -	$ -		-	1	100%	$ -	$ -				
0.69	$ 29	$ 42	0.69	1	1	92%	$ 3	$ 44	0.07			
0.28	$ 70	$ 253	0.28	1	1	92%	$ 6	$ 266	0.02			
0.25	$ 80	$ 321	0.25	1	1	92%	$ 6	$ 338	0.02			
1.17	$ 659	$ 564	1.17	1	1	100%	$ 373	$ 649	0.58			
0.66	$ 25	$ 38	0.66	1	1	92%	$ 3	$ 40	0.07			
0.27	$ 60	$ 228	0.27	1	1	92%	$ 6	$ 240	0.02			
0.24	$ 69	$ 289	0.24	1	1	92%	$ 6	$ 304	0.02			
0.91	$ 656	$ 723	0.91	1	1	100%	$ 478	$ 831	0.58			
0.41	$ 59	$ 145	0.41	1	1	92%	$ 11	$ 152	0.07			
0.16	$ 1,048	$ 6,562	0.16	1	1	92%	$ 166	$ 6,914	0.02			
0.14	$ 79	$ 555	0.14	1	1	92%	$ 11	$ 584	0.02			

0.29	2,834	9,717	0.29	11	12	1,069	10,362	0.10
1.02	138,517	135,715	1.02	28	30	30,625	149,587	0.20
1.32	298,201	225,312	1.32	7	7	-	251,404	-
1.94	971	501	1.94	5	5	-	576	-
1.19	440,522	371,245	1.19	51	54	31,694	411,929	0.08

100%

2012 gross therms	% of annualized pgm in 2013	2013 TRC gross benefits	2013 TRC gross costs	2013 TRC gross B/C	2013 gross therms	PV of EG AC attributable to G portfolio for 2013	NEB for 2013 portfolio
926	0%	$ -	-		-	$ -	$ -
-	100%	$ -	-		-	$ -	$ -
1,042	100%	$ 3,253	1,867.00	1.74	1,042	$ 3,253	$ -
1,389	100%	$ 4,336	2,489.00	1.74	1,389	$ 4,336	$ -
1,737	100%	$ 5,423	3,111.00	1.74	1,737	$ 5,423	$ -
4,168	100%	$ 13,012	7,466.00	1.74	4,168	$ 13,012	$ -
-	100%	$ -	-		-	$ -	$ -
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1,878	0%	$ -	-		-	$ -	$ -
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3,208	0%	$ -	-		-	$ -	$ -
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3,849	0%	$ -	-		-	$ -	$ -
-	100%	$ -	-		-	$ -	$ -
739	0%	$ -	-		-	$ -	$ -
-	100%	$ -	-		-	$ -	$ -
1,896	0%	$ -	-		-	$ -	$ -
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217	100%	$ 853	371.70	2.29	217	$ 678	$ 175	
1,109	100%	$ 5,862	4,000.00	1.47	1,109	$ 3,461	$ 2,401	
811	100%	$ 3,169	1,523.82	2.08	811	$ 2,531	$ 637	
1,040	100%	$ 5,500	6,000.00	0.92	1,040	$ 3,247	$ 2,253	
1,017	100%	$ 3,871	1,901.02	2.04	1,017	$ 3,174	$ 697	
1,596	100%	$ 8,437	8,000.00	1.05	1,596	$ 4,982	$ 3,456	
1,986	100%	$ 7,798	2,973.57	2.62	1,986	$ 6,199	$ 1,598	
-	100%	$ -	-		-	$ -	$ -	
217	100%	$ 814	289.17	2.82	217	$ 678	$ 136	
-	100%	$ -	-		-	$ -	$ -	
405	100%	$ 1,515	595.91	2.54	405	$ 1,266	$ 249	
-	100%	$ -	-		-	$ -	$ -	
508	100%	$ 1,867	764.53	2.44	508	$ 1,587	$ 281	
-	100%	$ -	-		-	$ -	$ -	
993	100%	$ 3,722	1,156.69	3.22	993	$ 3,100	$ 622	
-	100%	$ -	-		-	$ -	$ -	
652	100%	$ 2,975	2,000.00	1.49	652	$ 2,034	$ 941	
1,109	100%	$ 5,862	4,000.00	1.47	1,109	$ 3,461	$ 2,401	
1,216	100%	$ 5,479	4,023.35	1.36	1,216	$ 3,797	$ 1,682	
1,040	100%	$ 5,500	6,000.00	0.92	1,040	$ 3,247	$ 2,253	
1,525	100%	$ 6,440	4,578.22	1.41	1,525	$ 4,760	$ 1,680	
1,596	100%	$ 8,437	8,000.00	1.05	1,596	$ 4,982	$ 3,456	
2,979	100%	$ 13,600	8,000.00	1.70	2,979	$ 9,299	$ 4,300	
102	100%	$ 569	233.00	2.44	102	$ 569	$ -	
74	100%	$ 414	172.10	2.41	74	$ 414	$ -	
4	100%	$ 21	36.93	0.57	4	$ 21	$ -	
12	100%	$ 66	73.85	0.89	12	$ 66	$ -	
8	100%	$ 46	60.00	0.77	8	$ 46	$ -	
8,250	100%	$ 53,010	13,354.13	3.97	8,250	$ 53,010	$ -	
7,693	100%	$ 49,430	12,132.77	4.07	7,693	$ 49,430	$ -	
2,421	100%	$ 15,557	15,326.66	1.01	2,421	$ 15,557	$ -	
1,300	100%	$ 8,353	7,585.58	1.10	1,300	$ 8,353	$ -	
24,071	100%	$ 154,658	108,628.31	1.42	24,071	$ 154,658	$ -	
3,700	100%	$ 20,659	11,052.37	1.87	3,700	$ 20,659	$ -	
6,747	0%	$ -	-		-	$ -	$ -	
-	100%	$ -	-		-	$ -	$ -	
12	0%	$ -	-		-	$ -	$ -	
31	0%	$ -	-		-	$ -	$ -	
35	0%	$ -	-		-	$ -	$ -	
174	100%	$ 757	648.70	1.17	174	$ 384	$ 373	
11	0%	$ -	-		-	$ -	$ -	
26	0%	$ -	-		-	$ -	$ -	
30	0%	$ -	-		-	$ -	$ -	
126	100%	$ 754	830.57	0.91	126	$ 277	$ 478	
23	0%	$ -	-		-	$ -	$ -	
426	0%	$ -	-		-	$ -	$ -	
33	0%	$ -	-		-	$ -	$ -	
927		1,511	1,479	1.02	300	$ 661	$ 851	
40,082		117,726	79,111	1.49	28,351	$ 88,508	$ 29,217	
54,182		301,665	168,080	1.79	47,436	$ 301,665	$ -	
200		1,116	576	1.94	200	$ 1,116	$ -	
95,392		422,018	249,246	1.69	76,286	$ 391,950	$ 30,068	

y

Input	Input	Input	Input	Input	Input

Measure	Program	Measure life	Offer or not	# units if offered	# units actually offered	unit type
E/G ES Home	ES Home	30	y	108	108	each
G ES Home	ES Home	30	y	15	15	each
Furnace	HVAC	20	y	2,931	2,931	each
Boiler	HVAC	20	y	43	43	each
40g gas WH	Water heat	12	y	90	90	each
50g gas WH	Water heat	12	y	379	379	each
Attic insulation old pgm	Insulation	20	y	843,333	843,333	SF
Attic insulation new pgm	Insulation	20	y	210,833	210,833	SF
Wall insulation	Insulation	20	y	128,333	128,333	SF
Floor insulation	Insulation	20	y	70,933	70,933	SF
Res clothes washer	Appliances	14	y	1,767	1,767	each
~~Res dishwasher~~	Appliances	9	y	1,233	1,233	each
Showerheads	Water heat	5	y	3,441	3,441	each
Duct sealing	Insulation	18	n	-	-	each
Programmable thermostats	HVAC	12	n	-	-	each
Furnace tune-up	HVAC	3	n	-	-	each

ES Home w/o added NIUC allocations
HVAC w/o added NIUC allocations
Water heat w/o added NIUC allocations
Insulation w/o added NIUC allocations
Appliance w/o added NIUC allocations

	Homes?	BP sq. ft
Attic insulation	1,408	1,265,000
Wall insulation	264	137,500
Floor insulation	152	76,000

Res Portfolio w/o added NIUC allocations

COLUMN N HARDWIRED TO PRESERVE LIN

Input	Input	Input	Input	Input	Input	Input	Input	Calculation
CIC/unit	One-time NEB/unit	Annual NEB/unit	therms/unit	% therms winter profile	kWhs/unit	Non-incentive utility cost/unit	Incentive per unit	% BTU svgs gas
$ 3,000.00	$ -	$ -	197.00	75%	1,068.00	-	$ 900.00	84%
$ 1,500.00	$ -	$ -	197.00	75%	-	-	$ 650.00	100%
$ 700.00	$ -	$ -	104.00	100%	-	-	$ 400.00	100%
$ 800.00	$ -	$ -	141.00	100%	-	-	$ 400.00	100%
$ 50.00	$ -	$ -	8.20	0%	-	-	$ -	100%
$ 50.00	$ -	$ -	6.40	0%	-	-	$ -	100%
$ 0.75	$ -	$ -	0.06	100%	0.10	-	$ -	95%
$ 0.75	$ -	$ -	0.09	100%	0.10	-	$ 0.25	96%
$ 0.65	$ -	$ -	0.31	100%	0.50	-	$ 0.50	95%
$ 1.00	$ -	$ -	0.31	100%	0.50	-	$ 0.50	95%
$ 33.00	$ -	$ -	14.80	0%	-	-	$ 25.00	100%
$ 12.00	$ -	$ -	2.50	0%	-	-	$ -	100%
$ 7.00	$ -	$ -	6.00	0%	-	0.35	$ 7.00	100%
$ 500.00	$ -	$ -	93.20	100%	-	-	$ -	100%
$ 125.00	$ -	$ -	27.00	100%	-	-	$ -	100%
$ 120.00	$ -	$ -	25.00	100%	-	-	$ -	100%

Sq ft/home?	% NEBs	WAML's
	0%	30.00
	0%	20.00
898.44	0%	5.93
520.83	0%	20.00
500.00	0%	30.00
	% NEBs	WAML's

JK

Calculation	Full EG portf	Full EG portf	Full EG portf	Full EG portf	Full EG portf	Full EG portf	Full EG portf
% of AC svgs gas	PV of gas AC (pgm)	PV of electric AC (pgm)	PV of NEB (pgm)	PV of CIC (pgm)	PV of NIUC	PV of incentive (pgm)	Sub-TRC
60%	$ 167,388	$ 110,788	$ -	$ 324,000	$ -	$ 97,200	0.86
100%	$ 23,248	$ -	$ -	$ 22,500	$ -	$ 9,750	1.03
100%	$ 1,905,071	$ -	$ -	$ 2,051,700	$ -	$ 1,172,400	0.93
100%	$ 37,892	$ -	$ -	$ 34,400	$ -	$ 17,200	1.10
100%	$ 3,039	$ -	$ -	$ 4,500	$ -	$ -	0.68
100%	$ 9,988	$ -	$ -	$ 18,950	$ -	$ -	0.53
84%	$ 316,237	$ 62,305	$ -	$ 632,500	$ -	$ -	0.60
88%	$ 118,589	$ 15,576	$ -	$ 158,125	$ -	$ 52,708	0.85
84%	$ 248,635	$ 47,406	$ -	$ 83,417	$ -	$ 64,167	3.55
84%	$ 137,428	$ 26,203	$ -	$ 70,933	$ -	$ 35,467	2.31
100%	$ 122,125	$ -	[redacted]	$ 58,311	$ -	$ 44,175	2.09
100%	$ 9,783	$ -	$ -	$ 14,796	$ -	$ -	0.66
100%	$ 36,283	$ -	[redacted]	$ 24,087	$ 1,204	$ 24,087	1.43
0%	$ -	$ -	$ -	$ -	$ -	$ -	
0%	$ -	$ -	$ -	$ -	$ -	$ -	
0%	$ -	$ -	$ -	$ -	$ -	$ -	

ES Home	$ 190,636	$ 110,788	$ -	$ 346,500	$ -	$ 106,950	0.87
HVAC	$ 1,942,963	$ -	$ -	$ 2,086,100	$ -	$ 1,189,600	0.93
Water heat	$ 49,310	$ -	$ -	$ 47,537	$ 1,204	$ 24,087	1.01
Insulation	$ 820,889	$ 151,491	$ -	$ 944,975	$ -	$ 152,342	1.03
Appliances	$ 131,908	$ -	$ -	$ 73,107	$ -	$ 44,175	1.80
Res Portfolio	$ 3,135,705	$ 262,279	$ -	$ 3,498,219	$ 1,204	$ 1,517,154	0.97

Full EG portf	Full EG portf	G port alloc	G port alloc	G port alloc	G port alloc	G port alloc	G port alloc
Energy only sub-TRC	Sub-UCT	Gas share of PV of EG AC	PV of NEB (pgm)	PV of CIC (pgm)	PV of NIUC	PV of incentive (pgm)	Sub-TRC	Energy only sub-TRC
0.86	2.86	$ 167,388	$ -	$ 194,961	$ -	$ 58,488	0.86	0.86
1.03	2.38	$ 23,248	$ -	$ 22,500	$ -	$ 9,750	1.03	1.03
0.93	1.62	$ 1,905,071	$ -	$ 2,051,700	$ -	$ 1,172,400	0.93	0.93
1.10	2.20	$ 37,892	$ -	$ 34,400	$ -	$ 17,200	1.10	1.10
0.68		$ 3,039	$ -	$ 4,500	$ -	$ -	0.68	0.68
0.53		$ 9,988	$ -	$ 18,950	$ -	$ -	0.53	0.53
0.60		$ 316,237	$ -	$ 528,395	$ -	$ -	0.60	0.60
0.85	2.55	$ 118,589	$ -	$ 139,767	$ -	$ 46,589	0.85	0.85
3.55	4.61	$ 248,635	$ -	$ 70,059	$ -	$ 53,891	3.55	3.55
2.31	4.61	$ 137,428	$ -	$ 59,575	$ -	$ 29,787	2.31	2.31
2.09	2.76	$ 122,125	$ -	$ 58,311	$ -	$ 44,175	2.09	2.09
0.66		$ 9,783	$ -	$ 14,796	$ -	$ -	0.66	0.66
1.43	1.43	$ 36,283	$ -	$ 24,087	$ 1,204	$ 24,087	1.43	1.43
		$ -	$ -	$ -	$ -	$ -		
		$ -	$ -	$ -	$ -	$ -		
		$ -	$ -	$ -	$ -	$ -		
0.87	2.82	$ 190,636	$ -	$ 217,461	$ -	$ 68,238	0.88	0.88
0.93	1.63	$ 1,942,963	$ -	$ 2,086,100	$ -	$ 1,189,600	0.93	0.93
1.01	1.95	$ 49,310	$ -	$ 47,537	$ 1,204	$ 24,087	1.01	1.01
1.03	6.38	$ 820,889	$ -	$ 797,795	$ -	$ 130,268	1.03	1.03
1.80	2.99	$ 131,908	$ -	$ 73,107	$ -	$ 44,175	1.80	1.80
0.97	2.24	$ 3,135,705	$ -	$ 3,222,001	$ 1,204	$ 1,456,368	0.97	0.97

G port alloc	G port alloc	Full EG portf	G port alloc	Full EG portf

Sub-UCT	% of TRC bene gas AC	% of TRC bene EG AC	Gas incent/PV of gas AC	EG incent/PV of EG AC	Gross Therms	% of portfolio	NTG ratio	sub-net-TRC
2.86	100%	100%	35%	35%	21,276	4%	74%	0.86
2.38	100%	100%	42%	42%	2,955	1%	74%	1.03
1.62	100%	100%	62%	62%	304,824	59%	61%	0.93
2.20	100%	100%	45%	45%	6,063	1%	61%	1.10
	100%	100%	0%	0%	738	0%	52%	0.68
	100%	100%	0%	0%	2,426	0%	52%	0.53
	100%	100%	0%	0%	50,600	10%	64%	0.60
2.55	100%	100%	39%	39%	18,975	4%	64%	0.85
4.61	100%	100%	22%	22%	39,783	8%	64%	3.55
4.61	100%	100%	22%	22%	21,989	4%	64%	2.31
2.76	100%	100%	36%	36%	26,152	5%	35%	2.09
	100%	100%	0%	0%	3,083	1%	100%	0.66
1.43	100%	100%	66%	66%	20,646	4%	*60%*	1.39
					-	0%	64%	
					-	0%	*60%*	
					-	0%	*60%*	
2.79	100%	100%	36%	35%	24,231	5%	74%	0.88
1.63	100%	100%	61%	61%	310,887	60%	61%	0.93
1.95	100%	100%	49%	49%	23,810	5%	59%	0.99
6.30	100%	100%	16%	16%	131,348	25%	64%	1.03
2.99	100%	100%	33%	33%	29,234	6%	42%	1.80
2.15	100%	100%	46%	45%	519,509	100%	61%	0.97

2013 results ***

net therms	% of annualized impact likely to occur in 2013	Gross TRC benefits 2013	Gross TRC costs 2013	Gross TRC B/C 2013	Gross therms 2013	Net TRC benefits 2013	Net TRC costs 2013	Net TRC B/C 2013
15,659	100%	167,388	194,961	0.86	21,276	123,197	143,492	0.86
2,175	100%	23,248	22,500	1.03	2,955	17,111	16,560	1.03
185,943	100%	1,905,071	2,051,700	0.93	304,824	1,162,093	1,251,537	0.93
3,698	100%	37,892	34,400	1.10	6,063	23,114	20,984	1.10
384	0%	-	-		-	-	-	
1,261	0%	-	-		-	-	-	
32,283	0%	-	-		-	-	-	
12,106	100%	118,589	139,767	0.85	18,975	75,660	89,171	0.85
25,382	75%	186,477	52,544	3.55	29,838	118,972	33,523	3.55
14,029	75%	103,071	44,681	2.31	16,492	65,759	28,506	2.31
9,153	100%	122,125	58,311	2.09	26,152	42,744	20,409	2.09
3,083	0%	-	-		-	-	-	
12,388	100%	36,283	25,291	1.43	20,646	21,770	15,175	1.43
-	100%	-	-		-	-	-	
-	100%	-	-		-	-	-	
-	100%	-	-		-	-	-	

17,834		$ 190,636	$ 217,461	0.88	24,231	$ 140,308	$ 160,052	0.88
189,641		$ 1,942,963	$ 2,086,100	0.93	310,887	$ 1,185,207	$ 1,272,521	0.93
14,033		$ 36,283	$ 25,291	1.43	20,646	$ 21,770	$ 15,175	1.43
83,800		$ 408,136	$ 236,992	1.72	65,305	$ 260,391	$ 151,201	1.72
12,236		$ 122,125	$ 58,311	2.09	26,152	$ 42,744	$ 20,409	2.09
317,543		$ 2,700,142	$ 2,624,156	1.03	447,220	$ 1,650,419	$ 1,619,357	1.02

Net therms 2013	PV of EG AC attributable to gas for 2013	G AC	NEB
15,659	$ 167,388	$ 167,388	$ -
2,175	$ 23,248	$ 23,248	$ -
185,943	$ 1,905,071	$ 1,905,071	$ -
3,698	$ 37,892	$ 37,892	$ -
-	$ -	$ -	$ -
-	$ -	$ -	$ -
-	$ -	$ -	$ -
12,106	$ 118,589	$ 118,589	$ -
19,036	$ 186,477	$ 186,477	$ -
10,522	$ 103,071	$ 103,071	$ -
9,153	$ 122,125	$ 122,125	$ -
-	$ -	$ -	$ -
12,388	$ 36,283	$ 36,283	$ -
-	$ -	$ -	$ -
-	$ -	$ -	$ -
-	$ -	$ -	$ -
17,834	$ 190,636	$ 190,636	$ -
189,641	$ 1,942,963	$ 1,942,963	$ -
12,388	$ 36,283	$ 36,283	$ -
41,664	$ 408,136	$ 408,136	$ -
9,153	$ 122,125	$ 122,125	$ -
270,680	$ 2,700,142	$ 2,700,142	$ -

Annualized natural gas DSM portfolio projections (6/12/12)

Scenario with fixed and variable NIUC components

	Gross therms realized	NTG ratio	Net therms realized	Electric incentives	Gas incentives	Net TRC benefits realized	Net sub-TRC costs	Net sub TRC B/C	Allocated (by therms) NIUC	Total net TRC cost	Net TRC B/C ratio	Residual net TRC benefit
Site-specific	368,360	75%	276,270	$ 433,259	$ 1,394,146	$ 1,503,096	$ 1,298,722	1.16	$ 686,595	$ 1,985,317	0.76	$ (482,221)
Non-res Psc clothes washers	198	87%	172	$ 6,827	$ 2,573	$ 1,144	$ 1,287	0.89	$ 428	$ 1,715	0.67	$ (571)
Non-res Psc food service	18,712	87%	16,279	$ 14,972	$ 54,268	$ 89,107	$ 68,827	1.29	$ 40,457	$ 109,284	0.82	$ (20,177)
Non-res Psc windows/insulation	31,307	87%	27,237	$ 50,359	$ 92,549	$ 228,331	$ 146,229	1.56	$ 67,691	$ 213,921	1.07	$ 14,410
Non-res Psc non-res HVAC	132	87%	115	$ -	$ 293	$ 845	$ 501	1.69	$ 285	$ 786	1.07	$ 58
Res Psc ES home	21,081	74%	15,516	$ 38,712	$ 68,238	$ 92,603	$ 160,052	0.58	$ 38,560	$ 198,611	0.47	$ (106,008)
Res Psc res HVAC	270,472	61%	164,988	$ -	$ 1,189,600	$ 782,237	$ 1,272,521	0.61	$ 410,032	$ 1,682,553	0.46	$ (900,316)
Res Psc water heat	17,962	59%	10,586	$ -	$ 24,087	$ 14,113	$ 14,906	0.95	$ 26,309	$ 41,215	0.34	$ (27,102)
Res Psc insulation	56,815	64%	36,248	$ 22,074	$ 130,268	$ 171,858	$ 151,201	1.14	$ 90,084	$ 241,285	0.71	$ (69,427)
Res Psc appliance	22,752	42%	9,523	$ -	$ 44,175	$ 33,735	$ 24,405	1.38	$ 23,666	$ 48,071	0.70	$ (14,336)
NIUC associated with program							$ 859,584					
Fixed NIUC							$ 524,524					
Gas portfolio overall	807,791		556,934	$ 566,203	$ 3,000,197	$ 2,917,068	$ 4,522,759		$ 1,384,108	$ 4,522,759	**0.64**	$ (1,605,691)

*** NIUC is based upon 2011 actual NIUC (from 2011 DSM Annual Report table 5) with estimated variable (with throughput) amount adjusted for reduced therm acquisition component
Revised (from 6/11/12) estimate of fixed vs. variable components of NIUC
NIUC allocated across program based upon net therms
Using natural gas AC's received from tom
Corrected for VLOOKUP reference error on site-specific program
Using res vs. non-res realization rates vs. gas portfolio realization rates
Corrected for nominal vs. real avoided cost inputs
Corrected to using non-res (rather than portfolio) realization rate for non-res programs

Annualized natural gas DSM portfolio projections (6/12/12)

Scenario assuming NIUC is fully variable

	Gross therms realized	NTG ratio	Net therms realized	Electric incentives	Gas incentives	Net TRC benefits realized	Net sub-TRC costs	Net sub TRC B/C	Allocated (by therms) NIUC	Total net TRC cost	Net TRC B/C ratio	Residual net TRC benefit
Site-specific	368,360	75%	276,270	$ 433,259	$ 1,394,146	$ 1,503,096	$ 1,298,722	1.16	$ 578,329	$ 1,877,051	0.80	$ (373,955)
Non-res Psc clothes washers	198	87%	172	$ 6,827	$ 2,573	$ 1,144	$ 1,287	0.89	$ 361	$ 1,647	0.69	$ (503)
Non-res Psc food service	18,712	87%	16,279	$ 14,972	$ 54,268	$ 89,107	$ 68,827	1.29	$ 34,078	$ 102,904	0.87	$ (13,798)
Non-res Psc windows/insulation	31,307	87%	27,237	$ 50,359	$ 92,549	$ 228,331	$ 146,229	1.56	$ 57,017	$ 203,247	1.12	$ 25,084
Non-res Psc non-res HVAC	132	87%	115	$ -	$ 293	$ 845	$ 501	1.69	$ 240	$ 741	1.14	$ 103
Res Psc ES home	21,081	74%	15,516	$ 38,712	$ 68,238	$ 92,603	$ 160,052	0.58	$ 32,479	$ 192,531	0.48	$ (99,928)
Res Psc res HVAC	270,472	61%	164,988	$ -	$ 1,189,600	$ 782,237	$ 1,272,521	0.61	$ 345,376	$ 1,617,897	0.48	$ (835,660)
Res Psc water heat	17,962	59%	10,586	$ -	$ 24,087	$ 14,113	$ 14,906	0.95	$ 22,161	$ 37,067	0.38	$ (22,953)
Res Psc insulation	56,815	64%	36,248	$ 22,074	$ 130,268	$ 171,858	$ 151,201	1.14	$ 75,879	$ 227,080	0.76	$ (55,222)
Res Psc appliance	22,752	42%	9,523	$ -	$ 44,175	$ 33,735	$ 24,405	1.38	$ 19,934	$ 44,339	0.76	$ (10,604)
Total NIUC							$ 1,165,854					
Gas portfolio overall	807,791		556,934	$ 566,203	$ 3,000,197	$ 2,917,068	$ 4,304,505		$ 1,165,854	$ 4,304,505	**0.68**	$ (1,387,437)

*** NIUC is based upon 2011 actual NIUC (from 2011 DSM Annual Report table 5) adjusted for reduced therm acquisition assuming no fixed component
Revised (from 6/11/12) estimate of fixed vs. variable components of NIUC
NIUC allocated across program based upon net therms
Using natural gas AC's received from tom
Corrected for VLOOKUP reference error on site-specific program
Using res vs. non-res realization rates vs. gas portfolio realization rates
Corrected for nominal vs. real avoided cost inputs
Corrected to using non-res (rather than portfolio) realization rate for non-res programs

GDP deflator 1.50%

	Nominal (levelized) Distribution capacity adder	PV (yr 0) of adder	Cum PV (yr 0) of adder	GDP inflator
1	0.009122	0.0085412	0.0085412	1.015
2	0.009122	0.0079974	0.0165386	1.030
3	0.009122	0.0074882	0.0240268	1.046
4	0.009122	0.0070114	0.0310382	1.061
5	0.009122	0.006565	0.0376031	1.077
6	0.009122	0.006147	0.0437501	1.093
7	0.009122	0.0057556	0.0495057	1.110
8	0.009122	0.0053891	0.0548949	1.126
9	0.009122	0.005046	0.0599409	1.143
10	0.009122	0.0047247	0.0646656	1.161
11	0.009122	0.0044239	0.0690896	1.178
12	0.009122	0.0041422	0.0732318	1.196
13	0.009122	0.0038785	0.0771103	1.214
14	0.009122	0.0036316	0.0807419	1.232
15	0.009122	0.0034003	0.0841422	1.250
16	0.009122	0.0031838	0.087326	1.269
17	0.009122	0.0029811	0.0903071	1.288
18	0.009122	0.0027913	0.0930984	1.307
19	0.009122	0.0026136	0.095712	1.327
20	0.009122	0.0024472	0.0981592	1.347
21	0.009122	0.0022914	0.1004506	1.367
22	0.009122	0.0021455	0.102596	1.388
23	0.009122	0.0020089	0.1046049	1.408
24	0.009122	0.001881	0.1064859	1.430
25	0.009122	0.0017612	0.1082471	1.451
26	0.009122	0.0016491	0.1098961	1.473
27	0.009122	0.0015441	0.1114402	1.495
28	0.009122	0.0014458	0.1128859	1.517
29	0.009122	0.0013537	0.1142396	1.540
30	0.009122	0.0012675	0.1155072	1.563
31	0.009122	0.0011868	0.116694	1.587
32	0.009122	0.0011112	0.1178052	1.610
33	0.009122	0.0010405	0.1188457	1.634
34	0.009122	0.0009742	0.1198199	1.659
35	0.009122	0.0009122	0.1207322	1.684
36	0.009122	0.0008541	0.1215863	1.709
37	0.009122	0.0007997	0.122386	1.735
38	0.009122	0.0007488	0.1231349	1.761
39	0.009122	0.0007012	0.123836	1.787
40	0.009122	0.0006565	0.1244925	1.814
41	0.009122	0.0006147	0.1251072	1.841
42	0.009122	0.0005756	0.1256828	1.869
43	0.009122	0.0005389	0.1262217	1.897
44	0.009122	0.0005046	0.1267263	1.925
45	0.009122	0.0004725	0.1271988	1.954

	1	2	3
VLOOKUPS	tom	tom	

	Nominal Annual therm	Nominal Winter therm
1	0.2728878	0.289002
2	0.3664002	0.3642108
3	0.4027147	0.418718
4	0.4265305	0.4403632
5	0.4513525	0.4645184
6	0.477349	0.492072
7	0.5090056	0.5252791
8	0.5360908	0.5557266
9	0.5524626	0.5695816
10	0.5728714	0.5911345
11	0.573007	0.5935698
12	0.5955645	0.6087957
13	0.5938371	0.6126668
14	0.6076653	0.6211788
15	0.6296545	0.6525036
16	0.6340305	0.661209
17	0.6456398	0.6678625
18	0.6599085	0.6821708
19	0.668804	0.692137
20	0.694141	0.7194005
21	*0.7078102*	*0.7335814*
22	*0.7217485*	*0.7480418*
23	*0.7359613*	*0.7627873*
24	*0.750454*	*0.7778234*
25	*0.765232*	*0.7931559*
26	*0.7803011*	*0.8087907*
27	*0.7956669*	*0.8247336*
28	*0.8113353*	*0.8409908*
29	*0.8273123*	*0.8575685*
30	*0.8436039*	*0.874473*
31	*0.8602163*	*0.8917107*
32	*0.8771558*	*0.9092882*
33	*0.8944289*	*0.9272121*
34	*0.9120421*	*0.9454894*
35	*0.9300022*	*0.964127*
36	*0.948316*	*0.9831319*
37	*0.9669904*	*1.0025115*
38	*0.9860325*	*1.0222731*
39	*1.0054497*	*1.0424242*
40	*1.0252492*	*1.0629726*
41	*1.0454385*	*1.083926*
42	*1.0660255*	*1.1052924*
43	*1.0870178*	*1.1270801*
44	*1.1084236*	*1.1492972*
45	*1.1302509*	*1.1719522*

46	0.009122	0.0004424	0.1276412	1.984
47	0.009122	0.0004142	0.1280554	2.013
48	0.009122	0.0003879	0.1284433	2.043
49	0.009122	0.0003632	0.1288065	2.074
50	0.009122	0.00034	0.1291465	2.105

46	*1.1525079*	*1.1950538*
47	*1.1752033*	*1.2186108*
48	*1.1983456*	*1.2426322*
49	*1.2219437*	*1.2671271*
50	*1.2460064*	*1.2921048*

Kelly Irvine annual AC's re
Tom Pardee annual and v
From DFIC v.3

6.0605 20 year annual therm
6.2497 20 year winter therm
0.7388 20 year kWh

Carbon costs (not includ

$	0.052	$/therm lev
	20	measure lif
	6.80%	discount ra
	$0.56	PV
	9.23%	increase in
	8.95%	increase in
	11.7	lbs per ther
$	8.90	per ton of C
	0.00585	tons per th
$	0.052	$ per therm
	20	measure lif
	6.80%	discount ra
	$0.56	PV

Kelly Irvine, phone conve

Calculation below is to de

2013	1
2014	2
2015	3
2016	4
2017	5
2018	6
2019	7

0.009122	per therm di
6.80%	
20	
$0.0982	PV for 20 ye
1.6%	Increase abo
1.6%	Increase abo

4	5	6	7	8	9	10	
0.068							For graphs
EOY discount of Annual therm	EOY discount of Winter therm	Cum EOY PV, Annual therm	Cum EOY PV, Winter therm	Nominal Cum EOY PV, Annual therm + 10% DSM pref and dist adder	Nominal Cum EOY PV, Winter therm + 10% DSM pref and dist adder	Electric cum PV + 10% pref	
0.2555129	0.2706011	0.2555129	0.2706011	**0.2905**	**0.3071**	0.0586	1
0.3212279	0.3193084	0.5767408	0.5899095	**0.6526**	**0.6671**	0.1116	2
0.3305854	0.3437224	0.9073262	0.9336319	**1.0245**	**1.0534**	0.1612	3
0.3278424	0.3384746	1.2351685	1.2721065	**1.3928**	**1.4335**	0.2037	4
0.3248326	0.3343079	1.5600011	1.6064144	**1.7574**	**1.8084**	0.2433	5
0.3216685	0.3315898	1.8816696	1.9380042	**2.1180**	**2.1799**	0.2811	6
0.3211617	0.3314296	2.2028314	2.2694338	**2.4776**	**2.5508**	0.3171	7
0.3167148	0.3283153	2.5195461	2.5977491	**2.8319**	**2.9179**	0.3550	8
0.3056058	0.3150755	2.8251519	2.9128246	**3.1736**	**3.2700**	0.3923	9
0.2967185	0.3061778	3.1218705	3.2190025	**3.5052**	**3.6120**	0.4278	10
0.2778921	0.2878644	3.3997625	3.5068669	**3.8157**	**3.9336**	0.4631	11
0.2704418	0.27645	3.6702043	3.7833169	**4.1178**	**4.2422**	0.4974	12
0.2524882	0.2604942	3.9226925	4.0438111	**4.3998**	**4.5330**	0.5309	13
0.2419173	0.2472972	4.1646097	4.2911082	**4.6699**	**4.8090**	0.5629	14
0.234711	0.2432283	4.3993208	4.5343365	**4.9318**	**5.0803**	0.5946	15
0.2212942	0.2307803	4.620615	4.7651168	**5.1787**	**5.3377**	0.6250	16
0.2109983	0.2182608	4.8316133	4.9833776	**5.4141**	**5.5811**	0.6555	17
0.2019301	0.2087424	5.0335434	5.19212	**5.6393**	**5.8137**	0.6847	18
0.1916219	0.1983071	5.2251653	5.3904271	**5.8530**	**6.0348**	0.7121	19
0.1862184	0.1929948	5.4113837	5.5834219	**6.0605**	**6.2497**	0.7388	20
0.1777954	0.1842689	5.5891791	5.7676908	**6.2586**	**6.4550**	0.7646	21
0.1697533	0.1759375	5.7589325	5.9436283	**6.4477**	**6.6508**	0.7895	22
0.162075	0.1679827	5.9210075	6.111611	**6.6282**	**6.8378**	0.8136	23
0.1547441	0.1603877	6.0757516	6.2719987	**6.8005**	**7.0163**	0.8368	24
0.1477447	0.153136	6.2234962	6.4251346	**6.9649**	**7.1867**	0.8592	25
0.1410619	0.1462122	6.3645581	6.5713468	**7.1219**	**7.3494**	0.8809	26
0.1346814	0.1396014	6.4992395	6.7109483	**7.2717**	**7.5046**	0.9019	27
0.1285894	0.1332896	6.6278289	6.8442378	**7.4148**	**7.6528**	0.9221	28
0.1227731	0.1272631	6.750602	6.9715009	**7.5513**	**7.7943**	0.9416	29
0.1172198	0.1215091	6.8678218	7.09301	**7.6817**	**7.9294**	0.9605	30
0.1119177	0.1160153	6.9797395	7.2090253	**7.8061**	**8.0583**	0.9777	31
0.1068554	0.1107698	7.086595	7.3197951	**7.9248**	**8.1814**	0.9963	32
0.1020222	0.1057615	7.1886171	7.4255567	**8.0382**	**8.2988**	1.0134	33
0.0974075	0.1009797	7.2860246	7.5265364	**8.1464**	**8.4110**	1.0298	34
0.0930015	0.0964141	7.3790261	7.6229504	**8.2497**	**8.5181**	1.0457	35
0.0887949	0.0920549	7.467821	7.7150053	**8.3483**	**8.6203**	1.0610	36
0.0847785	0.0878927	7.5525995	7.802898	**8.4425**	**8.7178**	1.0758	37
0.0809438	0.0839188	7.6335434	7.8868168	**8.5323**	**8.8109**	1.0901	38
0.0772826	0.0801246	7.7108259	7.9669414	**8.6181**	**8.8999**	1.1039	39
0.0737869	0.0765019	7.7846128	8.0434433	**8.7000**	**8.9847**	1.1173	40
0.0704494	0.0730429	7.8550622	8.1164862	**8.7782**	**9.0658**	*1.1173*	41
0.0672628	0.0697404	7.922325	8.1862266	**8.8528**	**9.1431**	*1.1173*	42
0.0642204	0.0665872	7.9865454	8.2528139	**8.9240**	**9.2169**	*1.1173*	43
0.0613156	0.0635766	8.0478609	8.3163904	**8.9920**	**9.2874**	*1.1173*	44
0.0585421	0.0607021	8.106403	8.3770925	**9.0570**	**9.3547**	*1.1173*	45

0.0558941	0.0579575	8.1622972	8.43505	**9.1189**	**9.4190**	*1.1173*	46
0.0533659	0.0553371	8.2156631	8.4903871	**9.1781**	**9.4803**	*1.1173*	47
0.0509521	0.0528351	8.2666152	8.5432222	**9.2346**	**9.5388**	*1.1173*	48
0.0486474	0.0504462	8.3152626	8.5936684	**9.2885**	**9.5947**	*1.1173*	49
0.046447	0.0481654	8.3617096	8.6418338	**9.3399**	**9.6481**	*1.1173*	50

ec'd 5/25/12. Extrapolated winter AC's based upon DFIC v.3 difference between winter and annual AC's
vinter AC's rec'd 6/8/12

per mmBTU	As a % of electric
$ 60.60	28%
$ 62.50	29%
$ 216.47	100%

ed in the calculations above)
velized cost
e
te

the annual gas avoided cost (including 10% adder)
the winter gas avoided cost (including 10% adder)

m
CO2 (nominal fixed value over measure life)

erm
1
e
te

rsation 6/22/12 around 8:15 AM: Carbon is in the commodity avoided cost for 2020 and beyond at $7 a ton. It's ex

etermine the impact of adding John Lyons $0.52/Dth to the avoided cost for the first seven years (2013 to 2019 incl

	6.80%		
levelized ac	EOY PV	EOY cum PV	
$ 0.052	0.048689		
$ 0.052	0.045589		
$ 0.052	0.042686		
$ 0.052	0.039969		
$ 0.052	0.037424		
$ 0.052	0.035041		
$ 0.052	0.03281	0.282208	cum PV of the carbon adder for the first seven years
		6.060497	PV of 20 year therm, with 10% adder, annual
		6.249739	PV of 20 year therm, with 10% adder, winter

4.7% % adder to bring 2013-2019 carbon cost into gas AC (including 10% preferen
4.5% % adder to bring 2013-2019 carbon cost into gas AC (including 10% preferen

stribution capacity adder per Tara and Joe's "2009 Long Run Incremental Cost Study"

ars
ıve cum PV for 20 year therm, annual load shape
ıve cum PV for 20 year therm, winter load shape

Real Kelly Annual AC	Real Kelly estimated winter AC	Real Tom annual AC	Real Tom winter AC	Real Projected Kelly Annual AC	Real Projected estimated Kelly AC	Real Projected Tom annual AC	Real Projected Tom winter AC
0.2777809	0.3058141	0.2688549	0.284731				
0.3397459	0.3781745	0.3556507	0.3535255				
0.3656577	0.4072812	0.3851229	0.4004271				
0.3750057	0.4164904	0.4018703	0.4149033				
0.3756361	0.4167555	0.4189726	0.431194				
0.3759872	0.4167645	0.4365558	0.4500206				
0.388218	0.429701	0.4586277	0.4732905				
0.3989049	0.4410413	0.4758938	0.4933247				
0.4078486	0.4507349	0.4831795	0.4981516				
0.4240105	0.4687792	0.4936246	0.5093612				
0.4408417	0.4873521	0.4864447	0.5039011				
0.4556576	0.5034895	0.4981226	0.5091891				
0.4712012	0.5205017	0.4893378	0.504854				
0.4837933	0.5342562	0.4933326	0.5043036				
0.5029715	0.5552334	0.5036301	0.521906				
0.5195876	0.5733619	0.4996357	0.5210532				
0.5375241	0.5929523	0.5012652	0.5185186				
0.5564396	0.61363	0.5047716	0.5218004				
0.574469	0.6333454	0.5040157	0.5215996				
0.5715088	0.6299402	0.5153792	0.5341336	0.5715088	0.6299402	0.5153792	0.5341336
				0.5862986	0.646047	0.5177617	0.5366133
				0.6014711	0.6625656	0.5201552	0.5391045
				0.6170362	0.6795065	0.5225598	0.5416072
				0.6330042	0.6968806	0.5249755	0.5441216
				0.6493853	0.7146989	0.5274024	0.5466477
				0.6661904	0.7329728	0.5298405	0.5491855
				0.6834304	0.751714	0.5322898	0.551735
				0.7011165	0.7709344	0.5347505	0.5542964
				0.7192603	0.7906461	0.5372226	0.5568697
				0.7378737	0.8108619	0.5397061	0.559455
				0.7569687	0.8315946	0.542201	0.5620522
				0.7765579	0.8528574	0.5447075	0.5646615
				0.796654	0.8746639	0.5472256	0.5672829
				0.8172701	0.8970279	0.5497554	0.5699165
				0.8384198	0.9199637	0.5522968	0.5725623
				0.8601168	0.943486	0.55485	0.5752204
				0.8823753	0.9676097	0.5574149	0.5778908
				0.9052098	0.9923502	0.5599918	0.5805737
				0.9286352	1.0177233	0.5625805	0.5832689
				0.9526669	1.0437452	0.5651812	0.5859767
				0.9773204	1.0704324	0.567794	0.5886971
				1.002612	1.0978019	0.5704188	0.5914301
				1.028558	1.1258713	0.5730557	0.5941758
				1.0551755	1.1546584	0.5757049	0.5969342
				1.0824818	1.1841815	0.5783662	0.5997055

1.1104947	1.2144595	0.5810399	0.6024896
1.1392326	1.2455116	0.583726	0.6052866
1.1687142	1.2773577	0.5864245	0.6080966
1.1989587	1.3100181	0.5891354	0.6109197
1.2299859	1.3435136	0.5918589	0.6137558

:pected to be a monetary penalty or otherwise incorporated into the commodity cost.

usive)

nce), annual therm
ce), winter therm

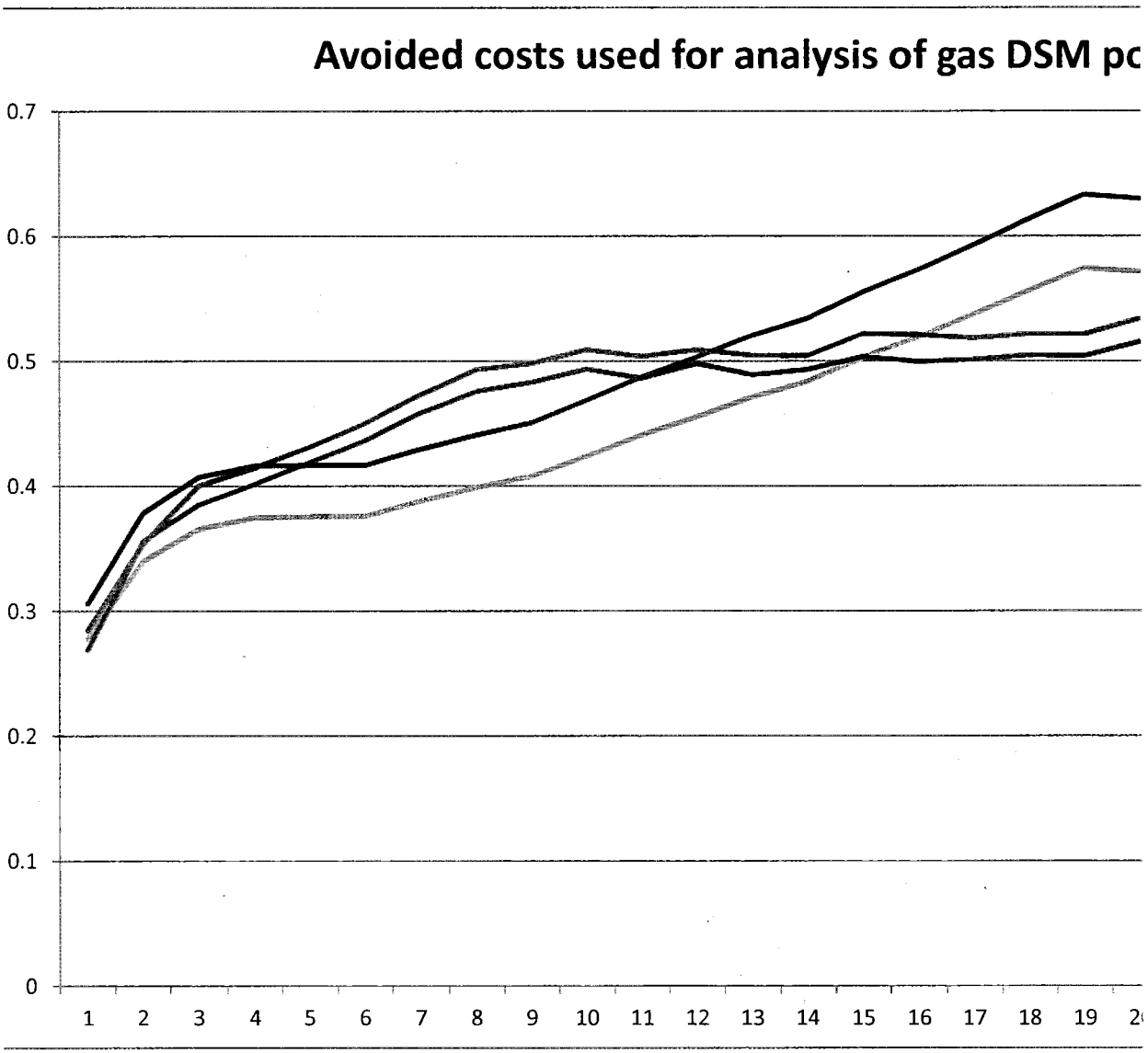
Kelly's Acs			0.068			
	Real Kelly Annual AC	Real Kelly extrapolated winter AC	Real Kelly PV of annual AC	Real Kelly PV of extrapolated winter AC	Real Kelly cum PV of annual AC	Real Kelly cum PV of extrapolated winter AC
1	0.2777809	0.3058141	0.2600945	0.2863428	0.2600945	0.2863428
2	0.3397459	0.3781745	0.2978597	0.3315506	0.5579542	0.6178933
3	0.3656577	0.4072812	0.3001656	0.3343341	0.8581198	0.9522274
4	0.3750057	0.4164904	0.2882391	0.3201253	1.1463589	1.2723527
5	0.3756361	0.4167555	0.2703404	0.2999336	1.4166993	1.5722862
6	0.3759872	0.4167645	0.2533644	0.2808427	1.6700637	1.853129
7	0.388218	0.429701	0.2449497	0.2711238	1.9150134	2.1242527
8	0.3989049	0.4410413	0.2356673	0.2605609	2.1506807	2.3848136
9	0.4078486	0.4507349	0.2256096	0.2493331	2.3762903	2.6341467
10	0.4240105	0.4687792	0.219616	0.242804	2.5959064	2.8769507
11	0.4408417	0.4873521	0.2137956	0.2363519	2.809702	3.1133026
12	0.4556576	0.5034895	0.206911	0.2286312	3.016613	3.3419337
13	0.4712012	0.5205017	0.2003457	0.2213074	3.2169588	3.5632411
14	0.4837933	0.5342562	0.1926027	0.2126924	3.4095614	3.7759335
15	0.5029715	0.5552334	0.1874885	0.2069697	3.5970499	3.9829032
16	0.5195876	0.5733619	0.1813505	0.2001192	3.7784004	4.1830224
17	0.5375241	0.5929523	0.1756656	0.1937798	3.954066	4.3768022
18	0.5564396	0.61363	0.170269	0.1877691	4.1243349	4.5645713
19	0.574469	0.6333454	0.1645935	0.1814625	4.2889285	4.7460337
20	0.5715088	0.6299402	0.1533197	0.1689952	4.4422481	4.9150289
21	*0.5862986*	*0.646047*	0.1472728	0.162281	4.589521	5.07731
22	*0.6014711*	*0.6625656*	0.1414644	0.1558337	4.7309854	5.2331436
23	*0.6170362*	*0.6795065*	0.1358851	0.1496424	4.8668705	5.3827861
24	*0.6330042*	*0.6968806*	0.1305258	0.1436972	4.9973963	5.5264833
25	*0.6493853*	*0.7146989*	0.1253779	0.1379882	5.1227743	5.6644714
26	*0.6661904*	*0.7329728*	0.1204331	0.1325059	5.2432073	5.7969774
27	*0.6834304*	*0.751714*	0.1156832	0.1272415	5.3588906	5.9242189
28	*0.7011165*	*0.7709344*	0.1111207	0.1221862	5.4700113	6.0464051
29	*0.7192603*	*0.7906461*	0.1067382	0.1173318	5.5767495	6.1637369
30	*0.7378737*	*0.8108619*	0.1025285	0.1126703	5.679278	6.2764072
31	*0.7569687*	*0.8315946*	0.0984848	0.1081939	5.7777627	6.3846011
32	*0.7765579*	*0.8528574*	0.0946006	0.1038954	5.8723633	6.4884965
33	*0.796654*	*0.8746639*	0.0908696	0.0997677	5.9632328	6.5882642
34	*0.8172701*	*0.8970279*	0.0872857	0.0958039	6.0505185	6.6840681
35	*0.8384198*	*0.9199637*	0.0838432	0.0919977	6.1343617	6.7760658
36	*0.8601168*	*0.943486*	0.0805364	0.0883426	6.2148981	6.8644084
37	*0.8823753*	*0.9676097*	0.0773601	0.0848328	6.2922582	6.9492413
38	*0.9052098*	*0.9923502*	0.074309	0.0814624	6.3665673	7.0307037
39	*0.9286352*	*1.0177233*	0.0713783	0.078226	6.4379456	7.1089296
40	*0.9526669*	*1.0437452*	0.0685632	0.0751181	6.5065088	7.1840477
41	*0.9773204*	*1.0704324*	0.0658591	0.0721336	6.5723678	7.2561813
42	*1.002612*	*1.0978019*	0.0632616	0.0692678	6.6356295	7.3254491
43	*1.028558*	*1.1258713*	0.0607666	0.0665158	6.696396	7.391965
44	*1.0551755*	*1.1546584*	0.05837	0.0638732	6.754766	7.4558381
45	*1.0824818*	*1.1841815*	0.0560679	0.0613355	6.8108339	7.5171736

46	*1.1104947*	*1.2144595*	0.0538566	0.0588987	6.8646905	7.5760723
47	*1.1392326*	*1.2455116*	0.0517325	0.0565586	6.916423	7.6326309
48	*1.1687142*	*1.2773577*	0.0496922	0.0543116	6.9661152	7.6869425
49	*1.1989587*	*1.3100181*	0.0477324	0.0521538	7.0138476	7.7390963
50	*1.2299859*	*1.3435136*	0.0458498	0.0500817	7.0596974	7.789178

Tom's Acs

	Real Tom annual AC	Real Tom winter AC	Real Tom PV of annual AC	Real Tom PV of winter AC	Real Tom cum PV of annual AC	Real Tom cum PV of winter AC
1	0.2688549	0.284731	0.2517368	0.2666021	0.2517368	0.2666021
2	0.3556507	0.3535255	0.3118036	0.3099405	0.5635404	0.5765426
3	0.3851229	0.4004271	0.3161445	0.3287076	0.8796849	0.9052501
4	0.4018703	0.4149033	0.3088879	0.3189054	1.1885728	1.2241555
5	0.4189726	0.431194	0.3015292	0.3103248	1.490102	1.5344803
6	0.4365558	0.4500206	0.2941794	0.3032528	1.7842814	1.8377331
7	0.4586277	0.4732905	0.2893753	0.298627	2.0736567	2.1363601
8	0.4758938	0.4933247	0.2811512	0.2914492	2.354808	2.4278093
9	0.4831795	0.4981516	0.2672805	0.2755626	2.6220884	2.7033719
10	0.4936246	0.5093612	0.2556726	0.2638234	2.8777611	2.9671953
11	0.4864447	0.5039011	0.2359118	0.2443777	3.1136729	3.2115729
12	0.4981226	0.5091891	0.2261941	0.2312193	3.339867	3.4427922
13	0.4893378	0.504854	0.2080571	0.2146543	3.547924	3.6574465
14	0.4933326	0.5043036	0.1964004	0.200768	3.7443244	3.8582145
15	0.5036301	0.521906	0.187734	0.1945465	3.9320584	4.052761
16	0.4996357	0.5210532	0.1743867	0.181862	4.1064451	4.2346231
17	0.5012652	0.5185186	0.163816	0.1694545	4.2702611	4.4040775
18	0.5047716	0.5218004	0.1544587	0.1596695	4.4247198	4.563747
19	0.5040157	0.5215996	0.1444077	0.1494457	4.5691274	4.7131927
20	0.5153792	0.5341336	0.1382617	0.143293	4.7073891	4.8564857
21	*0.5177617*	*0.5366133*	0.130057	0.1347923	4.8374461	4.991278
22	*0.5201552*	*0.5391045*	0.1223391	0.1267959	4.9597852	5.1180739
23	*0.5225598*	*0.5416072*	0.1150793	0.119274	5.0748645	5.2373479
24	*0.5249755*	*0.5441216*	0.1082503	0.1121982	5.1831148	5.3495461
25	*0.5274024*	*0.5466477*	0.1018265	0.1055422	5.2849413	5.4550883
26	*0.5298405*	*0.5491855*	0.0957839	0.0992811	5.3807252	5.5543694
27	*0.5322898*	*0.551735*	0.0900999	0.0933914	5.4708251	5.6477607
28	*0.5347505*	*0.5542964*	0.0847532	0.0878511	5.5555783	5.7356118
29	*0.5372226*	*0.5568697*	0.0797238	0.0826394	5.6353021	5.8182512
30	*0.5397061*	*0.559455*	0.0749928	0.077737	5.7102949	5.8959882
31	*0.542201*	*0.5620522*	0.0705426	0.0731253	5.7808375	5.9691135
32	*0.5447075*	*0.5646615*	0.0663565	0.0687873	5.847194	6.0379008
33	*0.5472256*	*0.5672829*	0.0624188	0.0647066	5.9096127	6.1026074
34	*0.5497554*	*0.5699165*	0.0587147	0.0608679	5.9683274	6.1634753
35	*0.5522968*	*0.5725623*	0.0552305	0.057257	6.0235579	6.2207324
36	*0.55485*	*0.5752204*	0.051953	0.0538604	6.0755109	6.2745927
37	*0.5574149*	*0.5778908*	0.04887	0.0506652	6.1243809	6.3252579
38	*0.5599918*	*0.5805737*	0.04597	0.0476595	6.1703508	6.3729174
39	*0.5625805*	*0.5832689*	0.043242	0.0448322	6.2135928	6.4177496
40	*0.5651812*	*0.5859767*	0.0406759	0.0421726	6.2542688	6.4599222
41	*0.567794*	*0.5886971*	0.0382622	0.0396708	6.2925309	6.4995929
42	*0.5704188*	*0.5914301*	0.0359916	0.0373174	6.3285225	6.5369103
43	*0.5730557*	*0.5941758*	0.0338558	0.0351036	6.3623783	6.5720138
44	*0.5757049*	*0.5969342*	0.0318467	0.0330211	6.394225	6.6050349
45	*0.5783662*	*0.5997055*	0.0299569	0.0310622	6.4241819	6.6360971

46	*0.5810399*	*0.6024896*	0.0281792	0.0292194	6.4523611	6.6653165
47	*0.583726*	*0.6052866*	0.026507	0.027486	6.4788681	6.6928026
48	*0.5864245*	*0.6080966*	0.024934	0.0258555	6.5038021	6.718658
49	*0.5891354*	*0.6109197*	0.0234544	0.0243216	6.5272564	6.7429797
50	*0.5918589*	*0.6137558*	0.0220625	0.0228788	6.549319	6.7658585


Avoided costs used for analysis of gas DSM pc
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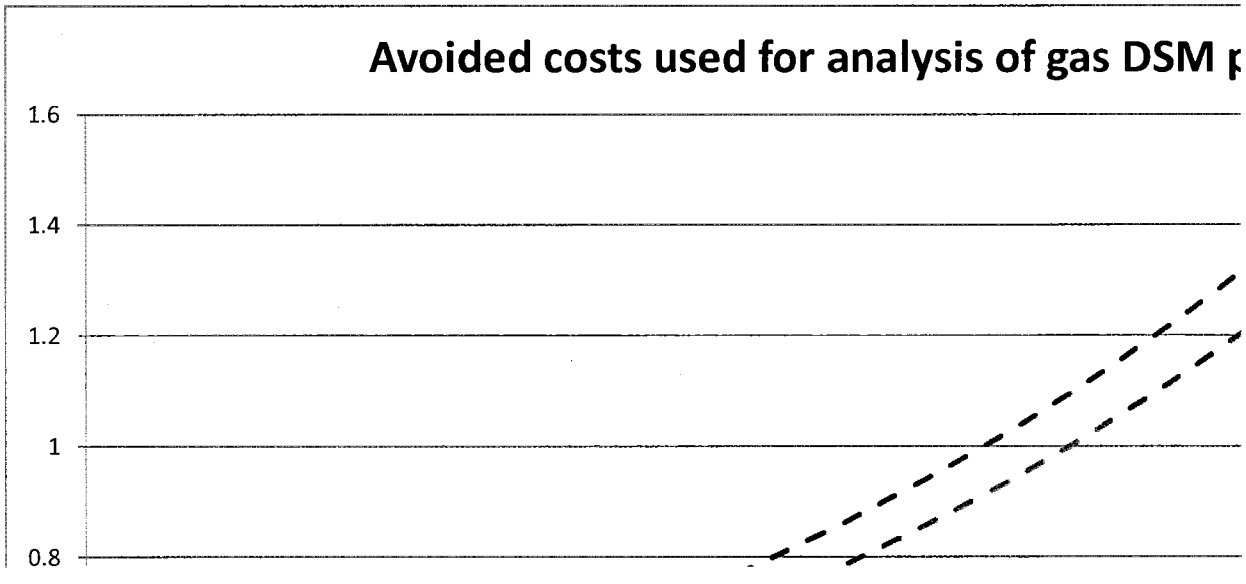
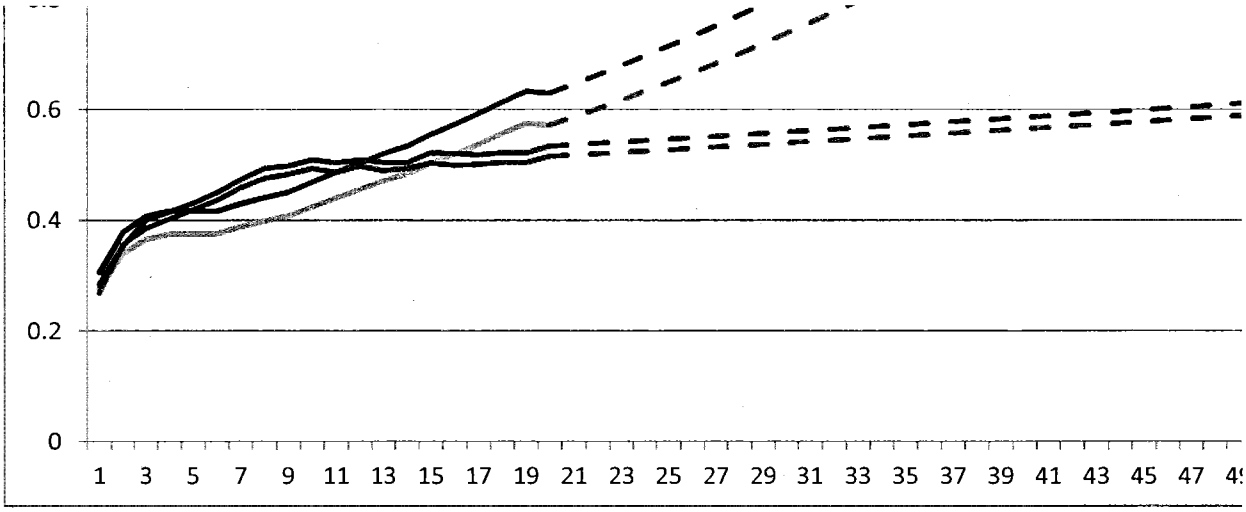
0.6
0.5
0.4
0.3
0.2
0.1
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19


Avoided costs used for analysis of gas DSM p
1.6
1.4
1.2
1
0.8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0
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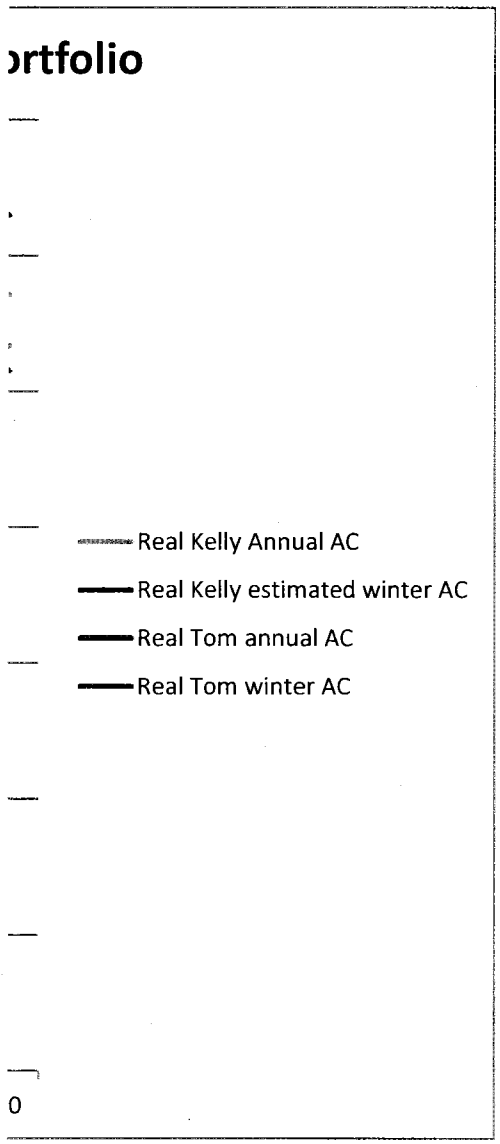
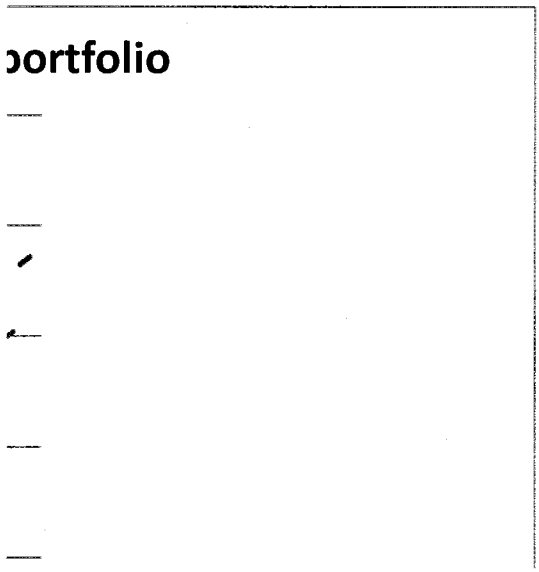
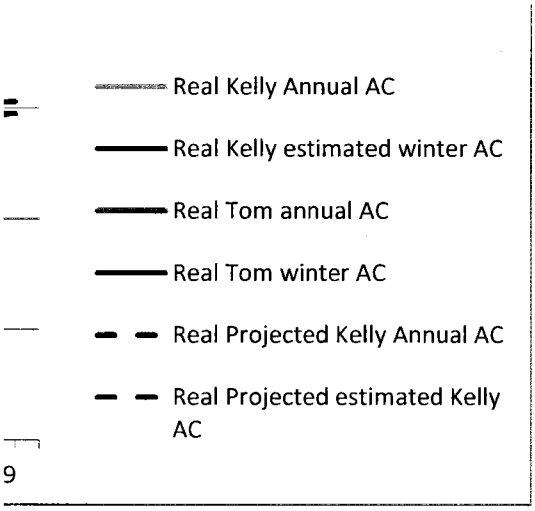




6.80%
1.50%

Year	Real annual AC	Real winter AC	Nominal annual AC
1	$ 0.2689	$ 0.2847	$ 0.2729
2	$ 0.3557	$ 0.3535	$ 0.3664
3	$ 0.3851	$ 0.4004	$ 0.4027
4	$ 0.4019	$ 0.4149	$ 0.4265
5	$ 0.4190	$ 0.4312	$ 0.4514
6	$ 0.4366	$ 0.4500	$ 0.4773
7	$ 0.4586	$ 0.4733	$ 0.5090
8	$ 0.4759	$ 0.4933	$ 0.5361
9	$ 0.4832	$ 0.4982	$ 0.5525
10	$ 0.4936	$ 0.5094	$ 0.5729
11	$ 0.4864	$ 0.5039	$ 0.5730
12	$ 0.4981	$ 0.5092	$ 0.5956
13	$ 0.4893	$ 0.5049	$ 0.5938
14	$ 0.4933	$ 0.5043	$ 0.6077
15	$ 0.5036	$ 0.5219	$ 0.6297
16	$ 0.4996	$ 0.5211	$ 0.6340
17	$ 0.5013	$ 0.5185	$ 0.6456
18	$ 0.5048	$ 0.5218	$ 0.6599
19	$ 0.5040	$ 0.5216	$ 0.6688
20	$ 0.5154	$ 0.5341	$ 0.6941
21			*$ 0.7078*
22			*$ 0.7217*
23			*$ 0.7360*
24			*$ 0.7505*
25			*$ 0.7652*
26			*$ 0.7803*
27			*$ 0.7957*
28			*$ 0.8113*
29			*$ 0.8273*
30			*$ 0.8436*
31			*$ 0.8602*
32			*$ 0.8772*
33			*$ 0.8944*
34			*$ 0.9120*
35			*$ 0.9300*
36			*$ 0.9483*
37			*$ 0.9670*
38			*$ 0.9860*
39			*$ 1.0054*
40			*$ 1.0252*
41			*$ 1.0454*
42			*$ 1.0660*
43			*$ 1.0870*
44			*$ 1.1084*
45			*$ 1.1303*


Real Kelly Annual AC
Real Kelly estimated winter AC
Real Tom annual AC
Real Tom winter AC
Real Projected Kelly Annual AC
Real Projected estimated Kelly AC
9

Nominal discount rate
GDP deflator

Nominal winter AC	Cum PV of annual therm AC	Cum PV of winter therm AC	Levelized 20 yr. distribution capacity adder	Cumulative PV of dist adder	Cum PV of annual therm w dist adder	Cum PV of winter therm w dist adder	110% of cum PV of annual therm w dist adder
$ 0.2890	$ 0.2555	$ 0.2706	$ 0.0091	$ 0.0085	$ 0.2641	$ 0.2791	$ 0.2905
$ 0.3642	$ 0.5767	$ 0.5899	$ 0.0091	$ 0.0165	$ 0.5933	$ 0.6064	$ 0.6526
$ 0.4187	$ 0.9073	$ 0.9336	$ 0.0091	$ 0.0240	$ 0.9314	$ 0.9577	$ 1.0245
$ 0.4404	$ 1.2352	$ 1.2721	$ 0.0091	$ 0.0310	$ 1.2662	$ 1.3031	$ 1.3928
$ 0.4645	$ 1.5600	$ 1.6064	$ 0.0091	$ 0.0376	$ 1.5976	$ 1.6440	$ 1.7574
$ 0.4921	$ 1.8817	$ 1.9380	$ 0.0091	$ 0.0438	$ 1.9254	$ 1.9818	$ 2.1180
$ 0.5253	$ 2.2028	$ 2.2694	$ 0.0091	$ 0.0495	$ 2.2523	$ 2.3189	$ 2.4776
$ 0.5557	$ 2.5195	$ 2.5977	$ 0.0091	$ 0.0549	$ 2.5744	$ 2.6526	$ 2.8319
$ 0.5696	$ 2.8252	$ 2.9128	$ 0.0091	$ 0.0599	$ 2.8851	$ 2.9728	$ 3.1736
$ 0.5911	$ 3.1219	$ 3.2190	$ 0.0091	$ 0.0647	$ 3.1865	$ 3.2837	$ 3.5052
$ 0.5936	$ 3.3998	$ 3.5069	$ 0.0091	$ 0.0691	$ 3.4689	$ 3.5760	$ 3.8157
$ 0.6088	$ 3.6702	$ 3.7833	$ 0.0091	$ 0.0732	$ 3.7434	$ 3.8565	$ 4.1178
$ 0.6127	$ 3.9227	$ 4.0438	$ 0.0091	$ 0.0771	$ 3.9998	$ 4.1209	$ 4.3998
$ 0.6212	$ 4.1646	$ 4.2911	$ 0.0091	$ 0.0807	$ 4.2454	$ 4.3719	$ 4.6699
$ 0.6525	$ 4.3993	$ 4.5343	$ 0.0091	$ 0.0841	$ 4.4835	$ 4.6185	$ 4.9318
$ 0.6612	$ 4.6206	$ 4.7651	$ 0.0091	$ 0.0873	$ 4.7079	$ 4.8524	$ 5.1787
$ 0.6679	$ 4.8316	$ 4.9834	$ 0.0091	$ 0.0903	$ 4.9219	$ 5.0737	$ 5.4141
$ 0.6822	$ 5.0335	$ 5.1921	$ 0.0091	$ 0.0931	$ 5.1266	$ 5.2852	$ 5.6393
$ 0.6921	$ 5.2252	$ 5.3904	$ 0.0091	$ 0.0957	$ 5.3209	$ 5.4861	$ 5.8530
$ 0.7194	$ 5.4114	$ 5.5834	$ 0.0091	$ 0.0982	$ 5.5095	$ 5.6816	$ 6.0605
$ 0.7336	*$ 5.5892*	*$ 5.7677*	*$ 0.0091*	*$ 0.1005*	*$ 5.6896*	*$ 5.8681*	*$ 6.2586*
$ 0.7480	*$ 5.7589*	*$ 5.9436*	*$ 0.0091*	*$ 0.1026*	*$ 5.8615*	*$ 6.0462*	*$ 6.4477*
$ 0.7628	*$ 5.9210*	*$ 6.1116*	*$ 0.0091*	*$ 0.1046*	*$ 6.0256*	*$ 6.2162*	*$ 6.6282*
$ 0.7778	*$ 6.0758*	*$ 6.2720*	*$ 0.0091*	*$ 0.1065*	*$ 6.1822*	*$ 6.3785*	*$ 6.8005*
$ 0.7932	*$ 6.2235*	*$ 6.4251*	*$ 0.0091*	*$ 0.1082*	*$ 6.3317*	*$ 6.5334*	*$ 6.9649*
$ 0.8088	*$ 6.3646*	*$ 6.5713*	*$ 0.0091*	*$ 0.1099*	*$ 6.4745*	*$ 6.6812*	*$ 7.1219*
$ 0.8247	*$ 6.4992*	*$ 6.7109*	*$ 0.0091*	*$ 0.1114*	*$ 6.6107*	*$ 6.8224*	*$ 7.2717*
$ 0.8410	*$ 6.6278*	*$ 6.8442*	*$ 0.0091*	*$ 0.1129*	*$ 6.7407*	*$ 6.9571*	*$ 7.4148*
$ 0.8576	*$ 6.7506*	*$ 6.9715*	*$ 0.0091*	*$ 0.1142*	*$ 6.8648*	*$ 7.0857*	*$ 7.5513*
$ 0.8745	*$ 6.8678*	*$ 7.0930*	*$ 0.0091*	*$ 0.1155*	*$ 6.9833*	*$ 7.2085*	*$ 7.6817*
$ 0.8917	*$ 6.9797*	*$ 7.2090*	*$ 0.0091*	*$ 0.1167*	*$ 7.0964*	*$ 7.3257*	*$ 7.8061*
$ 0.9093	*$ 7.0866*	*$ 7.3198*	*$ 0.0091*	*$ 0.1178*	*$ 7.2044*	*$ 7.4376*	*$ 7.9248*
$ 0.9272	*$ 7.1886*	*$ 7.4256*	*$ 0.0091*	*$ 0.1188*	*$ 7.3075*	*$ 7.5444*	*$ 8.0382*
$ 0.9455	*$ 7.2860*	*$ 7.5265*	*$ 0.0091*	*$ 0.1198*	*$ 7.4058*	*$ 7.6464*	*$ 8.1464*
$ 0.9641	*$ 7.3790*	*$ 7.6230*	*$ 0.0091*	*$ 0.1207*	*$ 7.4998*	*$ 7.7437*	*$ 8.2497*
$ 0.9831	*$ 7.4678*	*$ 7.7150*	*$ 0.0091*	*$ 0.1216*	*$ 7.5894*	*$ 7.8366*	*$ 8.3483*
$ 1.0025	*$ 7.5526*	*$ 7.8029*	*$ 0.0091*	*$ 0.1224*	*$ 7.6750*	*$ 7.9253*	*$ 8.4425*
$ 1.0223	*$ 7.6335*	*$ 7.8868*	*$ 0.0091*	*$ 0.1231*	*$ 7.7567*	*$ 8.0100*	*$ 8.5323*
$ 1.0424	*$ 7.7108*	*$ 7.9669*	*$ 0.0091*	*$ 0.1238*	*$ 7.8347*	*$ 8.0908*	*$ 8.6181*
$ 1.0630	*$ 7.7846*	*$ 8.0434*	*$ 0.0091*	*$ 0.1245*	*$ 7.9091*	*$ 8.1679*	*$ 8.7000*
$ 1.0839	*$ 7.8551*	*$ 8.1165*	*$ 0.0091*	*$ 0.1251*	*$ 7.9802*	*$ 8.2416*	*$ 8.7782*
$ 1.1053	*$ 7.9223*	*$ 8.1862*	*$ 0.0091*	*$ 0.1257*	*$ 8.0480*	*$ 8.3119*	*$ 8.8528*
$ 1.1271	*$ 7.9865*	*$ 8.2528*	*$ 0.0091*	*$ 0.1262*	*$ 8.1128*	*$ 8.3790*	*$ 8.9240*
$ 1.1493	*$ 8.0479*	*$ 8.3164*	*$ 0.0091*	*$ 0.1267*	*$ 8.1746*	*$ 8.4431*	*$ 8.9920*
$ 1.1720	*$ 8.1064*	*$ 8.3771*	*$ 0.0091*	*$ 0.1272*	*$ 8.2336*	*$ 8.5043*	*$ 9.0570*

Previous AC's

Measure life	Cum PV of an annual therm	Cum PV of a winter therm	% reduction in AC (annual cum PV)	% reduction in AC (winter cum PV)	110% of cum PV of winter therm w dist adder
1	$ 0.7064	$ 0.7777	59%	61%	$ 0.3071
2	$ 1.3277	$ 1.4778	51%	55%	$ 0.6671
3	$ 1.8726	$ 2.0858	45%	49%	$ 1.0534
4	$ 2.3544	$ 2.6149	41%	45%	$ 1.4335
5	$ 2.7813	$ 3.0858	37%	41%	$ 1.8084
6	$ 3.1750	$ 3.5194	33%	38%	$ 2.1799
7	$ 3.5515	$ 3.9310	30%	35%	$ 2.5508
8	$ 3.9116	$ 4.3248	28%	33%	$ 2.9179
9	$ 4.2502	$ 4.6971	25%	30%	$ 3.2700
10	$ 4.5645	$ 5.0464	23%	28%	$ 3.6120
11	$ 4.8628	$ 5.3759	22%	27%	$ 3.9336
12	$ 5.1494	$ 5.6899	20%	25%	$ 4.2422
13	$ 5.4229	$ 5.9903	19%	24%	$ 4.5330
14	$ 5.6839	$ 6.2768	18%	23%	$ 4.8090
15	$ 5.9325	$ 6.5489	17%	22%	$ 5.0803
16	$ 6.1685	$ 6.8068	16%	22%	$ 5.3377
17	$ 6.3927	$ 7.0519	15%	21%	$ 5.5811
18	$ 6.6058	$ 7.2847	15%	20%	$ 5.8137
19	$ 6.8081	$ 7.5059	14%	20%	$ 6.0348
20	$ 6.9998	$ 7.7155	13%	19%	$ 6.2497
					$ 6.4550
					$ 6.6508
					$ 6.8378
					$ 7.0163
					$ 7.1867
					$ 7.3494
					$ 7.5046
					$ 7.6528
					$ 7.7943
					$ 7.9294
					$ 8.0583
					$ 8.1814
					$ 8.2988
					$ 8.4110
					$ 8.5181
					$ 8.6203
					$ 8.7178
					$ 8.8109
					$ 8.8999
					$ 8.9847
					$ 9.0658
					$ 9.1431
					$ 9.2169
					$ 9.2874
					$ 9.3547