

KENTUCKY PUBLIC SERVICE COMMISSION

Docket Nos. 2011-00161 and 2011-00162

Environmental Intervenors' Responses and Supporting
Attachments to September 30, 2011 Data Requests by
Louisville Gas and Electric Company and Kentucky
Utilities Company

Enclosed: Attachments in Response to Question 11
(Binder 2 of 2 for Question 11)

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BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION

PUBLIC SERVICE
COMMISSION

Docket Nos. 2011-00161 and 2011-00162

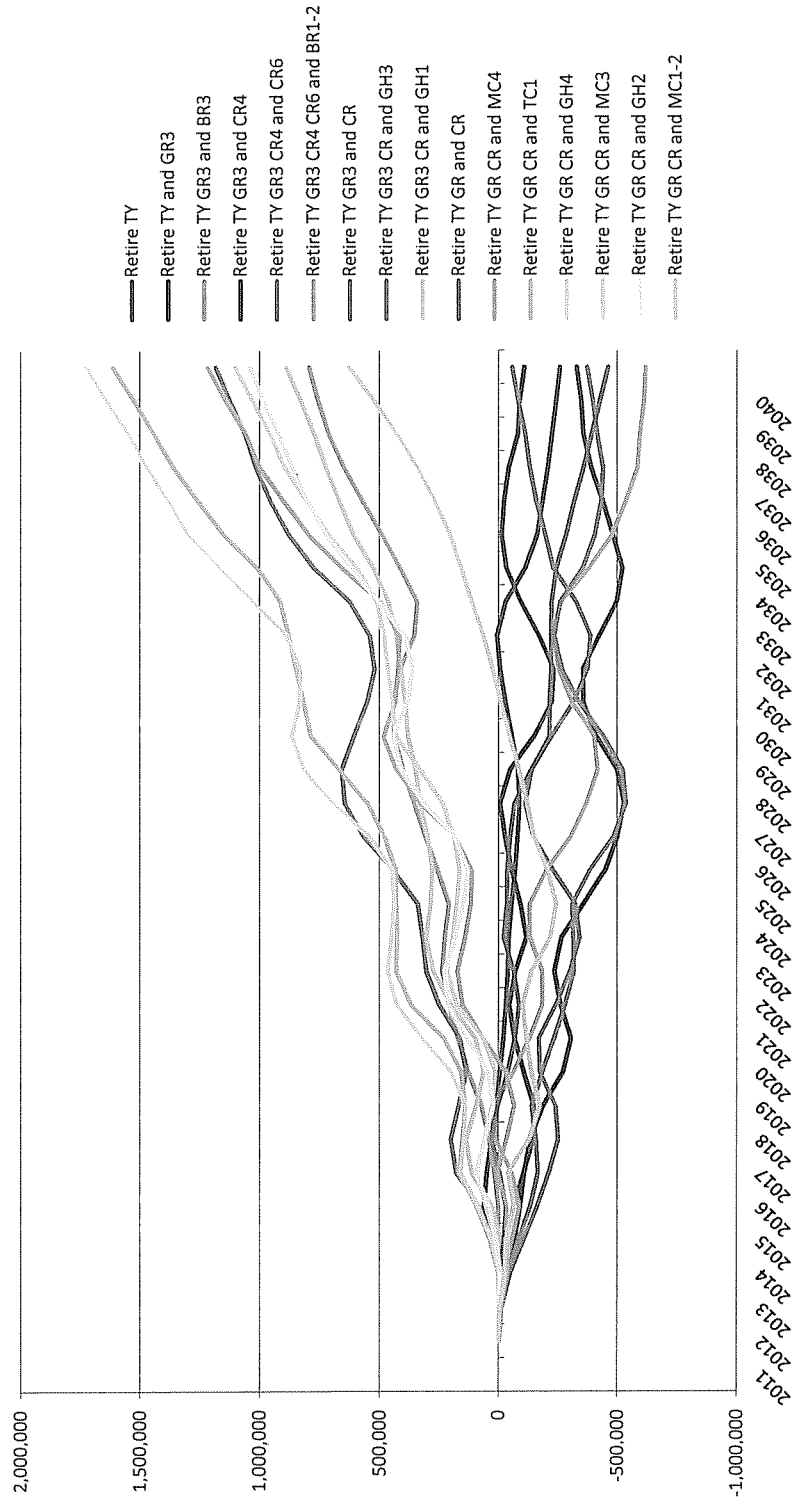
Environmental Intervenors' Responses and Supporting Attachments to September 30, 2011
Data Requests by Louisville Gas and Electric Company and Kentucky Utilities Company

**Attachments in Response to Question 11
(2nd of 2 Binders for Question 11)**

	Delta NPVRR \$M
	Install Controls / (Retire)
Tyrone 3	(60)
Brown 3	(76)
Cane Run 6	270
Brown 1-2	(245)
Cane Run 4-5	(159)
Green River 3-4	(222)
Ghent 1-4	(243)
Trimble County 1	427
Mill Creek 3-4	300
Mill Creek 1-2	(132)

Cumulative Difference in Revenue Requirements

Install Controls vs. Retire/Replace Capacity



Retirement Savings (Deltas)	Capital	O&M	Total
Retire TY	-22	-3	-26
Retire TY and GR3	-13	-50	-62
Retire TY GR3 and BR3	-98	-174	-272
Retire TY GR3 and CR4	-46	-140	-186
Retire TY GR3 CR4 and CR6	-84	-118	-202
Retire TY GR3 CR4 CR6 and BR1-2	-63	-129	-192
Retire TY GR3 and CR	-50	-149	-199
Retire TY GR3 CR and GH3	-203	-145	-348
Retire TY GR3 CR and GH1	-201	-210	-411
Retire TY GR and CR	-18	-100	-118
Retire TY GR CR and MC4	-105	-201	-306
Retire TY GR CR and TC1	-68	-203	-271
Retire TY GR CR and GH4	-203	-141	-343
Retire TY GR CR and MC3	-86	-201	-287
Retire TY GR CR and GH2	-205	-156	-361
Retire TY GR CR and MC1-2	-133	-325	-457

Revenue Requirement Deltas	Prod Cost	Capital	Total	Check
Retire TY	9	-69	-60	0
Retire TY and GR3	-17	-59	-76	0
Retire TY GR3 and BR3	478	-208	270	0
Retire TY GR3 and CR4	106	-350	-245	0
Retire TY GR3 CR4 and CR6	337	-496	-159	0
Retire TY GR3 CR4 CR6 and BR1-2	209	-431	-222	0
Retire TY GR3 and CR	127	-370	-243	0
Retire TY GR3 CR and GH3	814	-387	427	0
Retire TY GR3 CR and GH1	674	-373	300	0
Retire TY GR and CR	-46	-85	-132	0
Retire TY GR CR and MC4	843	-522	321	0
Retire TY GR CR and TC1	734	-185	549	0
Retire TY GR CR and GH4	971	-376	595	0
Retire TY GR CR and MC3	639	-316	324	0
Retire TY GR CR and GH2	888	-574	314	0
Retire TY GR CR and MC1-2	1,041	-985	55	0

1 2 3 4 5 6

Retire:

	<u>No</u>					<u>TY GR3 CR4</u>	<u>TY GR3 CR4</u>
	<u>Retirements</u>	<u>TY</u>	<u>TY GR3</u>	<u>TY GR3 BR3</u>	<u>TY GR3 CR4</u>	<u>CR6</u>	<u>CR6 BR1-2</u>
2010							
2011							
2012							
2013							
2014							
2015							
2016		3x1C(1)	2x1C(1)	3x1C(1)	3x1C(1)	3x1C(1)	3x1C(1)
2017	3x1C(1)						
2018							3x1C(1)
2019							
2020			2x1C(1)	3x1C(1)		3x1C(1)	
2021							
2022					2x1C(1)		
2023							
2024	3x1C(1)	3x1C(1)					3x1C(1)
2025			3x1C(1)				
2026				3x1C(1)	3x1C(1)	3x1C(1)	
2027							
2028							
2029							
2030	2x1C(1)	3x1C(1)					
2031			SCCT(1)				3x1C(1)
2032					SCCT(1)		
2033			3x1C(1)	3x1C(1)		3x1C(1)	
2034					3x1C(1)		
2035	2x1C(1)						
2036		2x1C(1)					
2037							SCCT(1)
2038							
2039	SCCT(1)						SCCT(1)
2040			SCCT(1)	SCCT(1)		SCCT(1)	
30 Yr PVRR (\$B)	23.6	23.7	23.8	24.7	24.2	24.8	25.5

7 8 9 10 11 12 13 14

<u>TY GR3 CR</u>	<u>TY GR3 CR</u> <u>GH3</u>	<u>TY GR3 CR</u> <u>GH1</u>	<u>TY GR CR</u>	<u>TY GR CR</u> <u>MC4</u>	<u>TY GR CR</u> <u>TC1</u>	<u>TY GR CR</u> <u>GH4</u>	<u>TY GR CR</u> <u>MC3</u>
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3x1C(1)	3x1C(1) 2x1C(1)	3x1C(2)	3x1C(1)	3x1C(2)	3x1C(2)	3x1C(2)	3x1C(2)
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3x1C(1)			3x1C(1)				
	3x1C(1)						
		3x1C(1)		3x1C(1)		3x1C(1)	3x1C(1)

3x1C(1)			3x1C(1)				
	3x1C(1)						
		3x1C(1)		3x1C(1)	3x1C(1)	3x1C(1)	3x1C(1)

2x1C(1)			3x1C(1)				
	3x1C(1)						
		2x1C(1)		3x1C(1)	2x1C(1)	3x1C(1)	2x1C(1)

2x1C(1)			SCCT(1)				
			SCCT(1)				
	SCCT(1)	SCCT(1)			SCCT(1)		SCCT(1)

25.3	26.6	26.6	25.4	26.9	26.7	26.9	26.6
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15

16

TY GR CR
GH2

TY GR CR
MC1-2

3x1C(2) 3x1C(2)

3x1C(1) 3x1C(1)

3x1C(1) 2x1C(1)

3x1C(1)

3x1C(1)

SCCT(1)

SCCT(1)

27.0

27.5

Breakeven RR by Year (\$M)
Year \$

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
TY	-60	-64	-68	-73	-78	-83	-88	-94	-101	-107
GR3	-76	-81	-87	-92	-99	-105	-112	-120	-128	-137
BR3	270	288	307	328	350	373	398	425	454	484
CR4	-245	-261	-278	-297	-317	-338	-361	-385	-411	-439
CR6	-159	-169	-181	-193	-206	-220	-234	-250	-267	-285
BR1-2	-222	-237	-253	-270	-288	-308	-328	-350	-374	-399
CR5	-243	-259	-276	-295	-315	-336	-359	-383	-408	-436
GH3	427	456	486	519	554	591	630	673	718	766
GH1	300	320	342	365	389	415	443	473	505	539
GR4	-132	-141	-150	-160	-171	-182	-195	-208	-221	-236
MC4	321	343	366	391	417	445	475	506	540	577
TC1	549	586	625	667	712	760	811	865	923	985
GH4	595	635	677	723	771	823	878	937	1,000	1,067
MC3	324	345	368	393	419	448	478	510	544	580
GH2	314	335	358	382	407	435	464	495	528	564
MC1-2	55	59	63	67	72	76	82	87	93	99

Breakeven Year

	<u>Must Op Thru</u>
BR3	2019
BR1-2	2021
GH3	2020
GH1	2021
MC4	2023
TC1	2018
GH4	2018
MC3	2021
GH2	2018
MC1-2	2024

Station	Unit		2010	2011	2012	2013	2014	2015
BR	BR1	BR1FFP 0	0	238	3,127	7,278	12,105	12,775
BR	BR1	BR1SAM 0	0	0	0	231	521	550
BR	BR2	BR2FFP 0	0	252	3,379	7,865	13,414	13,865
BR	BR2	BR2SAM 0	0	0	0	231	534	553
BR	BR3	BR3FFP 0	0	0	204	2,854	7,595	13,437
GH	GH1	GH1FFP 0	0	64	4,332	10,157	17,736	19,154
GH	GH1	GH1SAM 0	0	122	562	1,006	1,964	2,121
GH	GH2	GH2FFP 0	0	0	2,787	7,280	15,016	18,298
GH	GH2	GH2SAM 0	0	11	724	984	935	891
GH	GH3	GH3FFP 0	0	0	0	3,571	8,804	18,270
GH	GH3	GH3SAM 0	0	115	565	1,578	1,935	1,853
GH	GH4	GH4FFP 0	0	0	0	2,843	7,668	14,952
GH	GH4	GH4SAM 0	0	122	527	974	1,948	1,967
MC	MC1	MC1FGD 0	0	0	2,360	7,268	12,372	21,934
MC	MC1	MC1FFP 0	0	0	1,271	5,238	9,364	17,796
MC	MC1	MC1SAM 0	0	0	0	42	560	1,131
MC	MC2	MC2FGD 0	0	0	2,361	7,270	12,377	23,214
MC	MC2	MC2FFP 0	0	0	1,215	5,051	9,134	18,426
MC	MC2	MC2SAM 0	0	0	0	42	560	1,197
MC	MC3	MC3FGDU 0	0	0	646	3,668	6,975	9,472
MC	MC3	MC3FGDR 0	0	0	0	0	39	175
MC	MC3	MC3FFP 0	0	0	0	3,730	8,326	13,896
MC	MC3	MC3SAM 0	0	0	734	1,992	2,100	1,997
MC	MC4	MC4FGD 0	0	379	6,987	15,193	21,072	28,573
MC	MC4	MC4SCR 0	0	105	667	724	688	655
MC	MC4	MC4FFP 0	0	377	5,055	10,178	14,629	19,836
MC	MC4	MC4SAM 0	0	0	0	578	1,620	2,201
TC	TC1	TC1FFP 0	0	0	0	2,200	5,745	11,967
CR	CR4	CR4FGD 0	0	394	3,222	13,574	27,295	25,773
CR	CR4	CR4SCR 0	64	390	2,395	6,163	10,786	10,183
CR	CR4	CR4FF 0	0	280	1,715	3,329	5,526	5,216
CR	CR4	CR4PAC 0	0	0	0	235	386	365
CR	CR4	CR4LIME 0	0	0	0	259	427	403
CR	CR5	CR5FGD 0	0	359	3,311	14,658	29,304	27,663
CR	CR5	CR5SCR 0	63	388	2,719	6,475	11,557	10,908
CR	CR5	CR5FF 0	0	300	1,823	3,531	5,992	5,654
CR	CR5	CR5PAC 0	0	0	0	251	423	399
CR	CR5	CR5LIME 0	0	0	0	278	468	441
CR	CR6	CR6FGD 0	0	346	3,887	18,407	35,115	33,170
CR	CR6	CR6SCR 0	79	1,294	4,201	8,457	14,206	13,414
CR	CR6	CR6FF 0	0	394	2,364	4,540	7,252	6,848
CR	CR6	CR6PAC 0	0	0	0	352	558	527
CR	CR6	CR6LIME 0	0	0	0	391	619	585
GR	GR3	GR3SFF 0	0	0	1,323	4,035	5,553	5,254
GR	GR3	GR3PAC 0	0	0	0	112	154	145
GR	GR4	GR4SFF 0	0	0	1,885	5,750	8,517	8,050

Station	Unit		2010	2011	2012	2013	2014	2015
GR	GR4	GR4PAC 0	0	0	0	160	235	223

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Tab GH2MC1-2, Lines 13-15

Capital RR - CER Output

GH	GH2	GH2SCR 0		0	0	0	1,583	8,073
MC	MC1	MC1SCR 0		0	0	0	80	899
MC	MC2	MC2SCR 0		0	0	87	534	3,281

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Tab BR 1-2, Lines 13-14

Capital RR - CER Output

BR	BR1	BR1 SCR		0	0	0	76	469
BR	BR2	BR2 SCR		0	0	0	123	756

Station	Unit		2016	2017	2018	2019	2020	2021
BR	BR1	BR1FFP 0	12,123	11,534	10,999	10,472	9,946	9,420
BR	BR1	BR1SAM 0	522	497	474	452	429	407
BR	BR2	BR2FFP 0	13,156	12,514	11,931	11,357	10,783	10,210
BR	BR2	BR2SAM 0	525	499	476	453	431	408
BR	BR3	BR3FFP 0	14,120	13,404	12,757	12,171	11,595	11,019
GH	GH1	GH1FFP 0	18,156	17,246	16,412	15,591	14,769	13,948
GH	GH1	GH1SAM 0	2,010	1,909	1,817	1,726	1,635	1,544
GH	GH2	GH2FFP 0	17,569	16,777	16,056	15,369	14,684	13,998
GH	GH2	GH2SAM 0	851	814	779	744	709	674
GH	GH3	GH3FFP 0	21,813	20,853	19,901	19,030	18,199	17,369
GH	GH3	GH3SAM 0	1,769	1,691	1,618	1,544	1,471	1,397
GH	GH4	GH4FFP 0	21,319	20,238	19,257	18,361	17,541	16,757
GH	GH4	GH4SAM 0	1,872	1,786	1,707	1,631	1,555	1,479
MC	MC1	MC1FGD 0	23,856	22,601	21,453	20,399	19,360	18,320
MC	MC1	MC1FFP 0	19,361	18,343	17,414	16,559	15,717	14,875
MC	MC1	MC1SAM 0	1,232	1,168	1,109	1,055	1,001	948
MC	MC2	MC2FGD 0	24,770	23,450	22,238	21,119	20,015	18,911
MC	MC2	MC2FFP 0	19,666	18,620	17,659	16,772	15,896	15,021
MC	MC2	MC2SAM 0	1,279	1,211	1,149	1,092	1,035	978
MC	MC3	MC3FGDU 0	9,135	8,699	8,295	7,908	7,522	7,135
MC	MC3	MC3FGDR 0	207	197	187	179	170	162
MC	MC3	MC3FFP 0	18,276	17,601	16,757	15,977	15,228	14,480
MC	MC3	MC3SAM 0	1,901	1,813	1,728	1,642	1,557	1,472
MC	MC4	MC4FGD 0	27,555	26,231	25,008	23,834	22,662	21,491
MC	MC4	MC4SCR 0	625	596	566	537	508	479
MC	MC4	MC4FFP 0	19,129	18,210	17,361	16,546	15,733	14,919
MC	MC4	MC4SAM 0	2,123	2,022	1,929	1,839	1,749	1,660
TC	TC1	TC1FFP 0	15,834	15,223	14,502	13,838	13,200	12,564
CR	CR4	CR4FGD 0	24,370	23,071	21,861	20,666	19,471	18,276
CR	CR4	CR4SCR 0	9,627	9,112	8,633	8,160	7,687	7,214
CR	CR4	CR4FF 0	4,930	4,666	4,421	4,178	3,935	3,692
CR	CR4	CR4PAC 0	345	327	310	293	276	259
CR	CR4	CR4LIME 0	381	361	342	323	305	286
CR	CR5	CR5FGD 0	26,148	24,742	23,429	22,132	20,835	19,538
CR	CR5	CR5SCR 0	10,308	9,752	9,234	8,721	8,208	7,696
CR	CR5	CR5FF 0	5,343	5,054	4,785	4,519	4,253	3,987
CR	CR5	CR5PAC 0	378	357	338	320	301	282
CR	CR5	CR5LIME 0	417	395	374	353	333	312
CR	CR6	CR6FGD 0	31,385	29,739	28,213	26,706	25,199	23,692
CR	CR6	CR6SCR 0	12,689	12,019	11,399	10,787	10,175	9,563
CR	CR6	CR6FF 0	6,477	6,136	5,819	5,507	5,194	4,882
CR	CR6	CR6PAC 0	499	473	448	424	401	377
CR	CR6	CR6LIME 0	553	525	498	471	445	418
GR	GR3	GR3SFF 0	4,983	4,739	4,516	4,297	4,078	3,859
GR	GR3	GR3PAC 0	138	131	125	119	113	107
GR	GR4	GR4SFF 0	7,626	7,237	6,881	6,529	6,177	5,825

Station	Unit		2016	2017	2018	2019	2020	2021
GR	GR4	GR4PAC 0	211	200	190	181	171	161

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Tab GH2MC1-

Capital RR - CE

GH	GH2	GH2SCR 0	18,880	31,130	29,577	28,171	26,896	25,733
MC	MC1	MC1SCR 0	6,779	14,933	14,119	13,378	12,700	12,077
MC	MC2	MC2SCR 0	7,972	15,832	14,959	14,160	13,427	12,749

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Tab BR 1-2, Lir

Capital RR - CE

BR	BR1	BR1 SCR	2,884	6,101	8,312	7,863	7,459	7,094
BR	BR2	BR2 SCR	4,643	9,824	13,471	12,743	12,087	11,494

Station	Unit		2022	2023	2024	2025	2026	2027
BR	BR1	BR1FFP 0	8,894	8,368	7,842	7,483	7,291	7,099
BR	BR1	BR1SAM 0	384	362	339	324	315	307
BR	BR2	BR2FFP 0	9,636	9,062	8,488	8,095	7,881	7,668
BR	BR2	BR2SAM 0	385	362	340	324	315	307
BR	BR3	BR3FFP 0	10,443	9,867	9,290	8,714	8,325	8,122
GH	GH1	GH1FFP 0	13,127	12,305	11,484	10,897	10,545	10,193
GH	GH1	GH1SAM 0	1,453	1,362	1,271	1,206	1,167	1,128
GH	GH2	GH2FFP 0	13,313	12,627	11,942	11,257	10,791	10,556
GH	GH2	GH2SAM 0	639	605	570	546	535	523
GH	GH3	GH3FFP 0	16,538	15,708	14,877	14,047	13,216	12,647
GH	GH3	GH3SAM 0	1,324	1,250	1,177	1,126	1,099	1,073
GH	GH4	GH4FFP 0	15,973	15,188	14,404	13,619	12,835	12,050
GH	GH4	GH4SAM 0	1,403	1,328	1,252	1,176	1,124	1,096
MC	MC1	MC1FGD 0	17,281	16,242	15,203	14,164	13,412	12,949
MC	MC1	MC1FFP 0	14,032	13,190	12,348	11,506	10,896	10,520
MC	MC1	MC1SAM 0	895	841	788	735	696	672
MC	MC2	MC2FGD 0	17,806	16,702	15,598	14,494	13,677	13,148
MC	MC2	MC2FFP 0	14,145	13,270	12,395	11,519	10,871	10,450
MC	MC2	MC2SAM 0	922	865	808	752	710	682
MC	MC3	MC3FGDU 0	6,748	6,362	5,975	5,589	5,303	5,124
MC	MC3	MC3FGDR 0	154	145	137	128	121	115
MC	MC3	MC3FFP 0	13,732	12,985	12,237	11,489	10,742	10,190
MC	MC3	MC3SAM 0	1,387	1,302	1,217	1,155	1,116	1,077
MC	MC4	MC4FGD 0	20,319	19,147	17,976	16,804	15,940	15,402
MC	MC4	MC4SCR 0	449	420	399	386	372	359
MC	MC4	MC4FFP 0	14,106	13,293	12,479	11,666	11,066	10,692
MC	MC4	MC4SAM 0	1,570	1,480	1,391	1,301	1,235	1,193
TC	TC1	TC1FFP 0	11,927	11,291	10,654	10,018	9,381	8,918
CR	CR4	CR4FGD 0	17,081	15,886	14,691	13,773	13,130	12,488
CR	CR4	CR4SCR 0	6,740	6,267	5,794	5,431	5,177	4,924
CR	CR4	CR4FF 0	3,450	3,207	2,964	2,778	2,648	2,519
CR	CR4	CR4PAC 0	242	225	208	195	186	177
CR	CR4	CR4LIME 0	267	249	230	216	206	195
CR	CR5	CR5FGD 0	18,241	16,944	15,647	14,641	13,924	13,207
CR	CR5	CR5SCR 0	7,183	6,670	6,158	5,760	5,478	5,196
CR	CR5	CR5FF 0	3,721	3,455	3,189	2,983	2,837	2,691
CR	CR5	CR5PAC 0	263	245	226	212	201	191
CR	CR5	CR5LIME 0	291	271	250	234	222	211
CR	CR6	CR6FGD 0	22,185	20,678	19,171	18,033	17,265	16,496
CR	CR6	CR6SCR 0	8,951	8,339	7,727	7,266	6,956	6,646
CR	CR6	CR6FF 0	4,569	4,257	3,944	3,709	3,551	3,393
CR	CR6	CR6PAC 0	353	329	305	287	275	262
CR	CR6	CR6LIME 0	391	365	338	318	305	291
GR	GR3	GR3SFF 0	3,640	3,421	3,202	3,050	2,967	2,884
GR	GR3	GR3PAC 0	101	95	89	85	82	80
GR	GR4	GR4SFF 0	5,473	5,122	4,770	4,515	4,356	4,198

Station	Unit		2022	2023	2024	2025	2026	2027
GR	GR4	GR4PAC 0	152	142	132	125	121	116

G:\11-051 Sierrults-BR1-2_GH2_MC1-2SCRs.xlsx

Tab GH2MC1-

Capital RR - CE

GH	GH2	GH2SCR 0	24,624	23,514	22,404	21,295	20,185	19,076
MC	MC1	MC1SCR 0	11,462	10,848	10,233	9,619	9,004	8,390
MC	MC2	MC2SCR 0	12,080	11,412	10,743	10,075	9,406	8,737

G:\11-051 Sierrults-BR1-2_GH2_MC1-2SCRs.xlsx

Tab BR 1-2, Lir

Capital RR - CE

BR	BR1	BR1 SCR	6,763	6,437	6,111	5,786	5,460	5,134
BR	BR2	BR2 SCR	10,955	10,424	9,894	9,363	8,833	8,303

Station	Unit		2028	2029	2030	2031	2032	2033
BR	BR1	BR1FFP 0	6,908	6,716	6,525	6,333	6,141	5,950
BR	BR1	BR1SAM 0	299	291	282	274	266	257
BR	BR2	BR2FFP 0	7,455	7,242	7,028	6,815	6,602	6,388
BR	BR2	BR2SAM 0	298	290	281	273	264	256
BR	BR3	BR3FFP 0	7,920	7,717	7,514	7,311	7,109	6,906
GH	GH1	GH1FFP 0	9,841	9,489	9,137	8,785	8,433	8,081
GH	GH1	GH1SAM 0	1,089	1,050	1,011	972	933	894
GH	GH2	GH2FFP 0	10,330	10,104	9,878	9,652	9,425	9,199
GH	GH2	GH2SAM 0	511	500	488	476	464	453
GH	GH3	GH3FFP 0	12,344	12,047	11,750	11,452	11,155	10,858
GH	GH3	GH3SAM 0	1,047	1,020	994	967	941	915
GH	GH4	GH4FFP 0	11,513	11,223	10,932	10,642	10,352	10,061
GH	GH4	GH4SAM 0	1,068	1,039	1,011	983	955	927
MC	MC1	MC1FGD 0	12,485	12,022	11,558	11,095	10,631	10,167
MC	MC1	MC1FFP 0	10,143	9,767	9,390	9,013	8,637	8,260
MC	MC1	MC1SAM 0	648	624	600	576	552	528
MC	MC2	MC2FGD 0	12,618	12,088	11,558	11,028	10,499	9,969
MC	MC2	MC2FFP 0	10,029	9,608	9,187	8,766	8,344	7,923
MC	MC2	MC2SAM 0	655	627	600	572	545	517
MC	MC3	MC3FGDU 0	4,950	4,777	4,603	4,429	4,256	4,082
MC	MC3	MC3FGDR 0	111	107	104	100	96	92
MC	MC3	MC3FFP 0	9,844	9,510	9,175	8,841	8,506	8,172
MC	MC3	MC3SAM 0	1,039	1,000	961	923	884	846
MC	MC4	MC4FGD 0	14,880	14,358	13,836	13,314	12,792	12,270
MC	MC4	MC4SCR 0	346	332	319	306	292	279
MC	MC4	MC4FFP 0	10,330	9,968	9,605	9,243	8,881	8,518
MC	MC4	MC4SAM 0	1,153	1,112	1,072	1,031	991	951
TC	TC1	TC1FFP 0	8,637	8,363	8,089	7,815	7,541	7,267
CR	CR4	CR4FGD 0	11,845	11,203	10,560	0	0	0
CR	CR4	CR4SCR 0	4,671	4,417	4,164	0	0	0
CR	CR4	CR4FF 0	2,389	2,260	2,130	0	0	0
CR	CR4	CR4PAC 0	168	159	150	0	0	0
CR	CR4	CR4LIME 0	185	175	165	0	0	0
CR	CR5	CR5FGD 0	12,490	11,774	0	0	0	0
CR	CR5	CR5SCR 0	4,914	4,632	0	0	0	0
CR	CR5	CR5FF 0	2,545	2,399	0	0	0	0
CR	CR5	CR5PAC 0	180	170	0	0	0	0
CR	CR5	CR5LIME 0	199	188	0	0	0	0
CR	CR6	CR6FGD 0	15,727	14,959	14,190	13,421	12,653	0
CR	CR6	CR6SCR 0	6,337	6,027	5,717	5,408	5,098	0
CR	CR6	CR6FF 0	3,235	3,077	2,919	2,761	2,602	0
CR	CR6	CR6PAC 0	250	238	226	213	201	0
CR	CR6	CR6LIME 0	278	264	250	237	223	0
GR	GR3	GR3SFF 0	2,800	2,717	2,634	2,550	2,467	2,384
GR	GR3	GR3PAC 0	78	75	73	71	68	66
GR	GR4	GR4SFF 0	4,040	3,881	3,723	3,565	3,407	3,248

Station	Unit		2028	2029	2030	2031	2032	2033
GR	GR4	GR4PAC 0	112	108	103	99	94	90

G:\11-051 Sier Tab GH2MC1- Capital RR - CE								
GH	GH2	GH2SCR 0	17,966	17,227	16,859	16,490	16,121	15,753
MC	MC1	MC1SCR 0	7,943	7,665	7,386	7,108	6,829	6,551
MC	MC2	MC2SCR 0	8,241	7,918	7,595	7,271	6,948	6,624

G:\11-051 Sier Tab BR 1-2, Lir Capital RR - CE								
BR	BR1	BR1 SCR	4,808	4,586	4,467	4,348	4,230	4,111
BR	BR2	BR2 SCR	7,772	7,408	7,211	7,015	6,818	6,621

Station	Unit		2034	2035	2036	2037	2038	2039
BR	BR1	BR1FFP 0	5,758	5,566	5,375	5,183	4,991	4,800
BR	BR1	BR1SAM 0	249	241	232	224	216	208
BR	BR2	BR2FFP 0	6,175	5,962	5,749	5,535	5,322	5,109
BR	BR2	BR2SAM 0	247	239	230	222	213	205
BR	BR3	BR3FFP 0	6,703	6,501	6,298	6,095	5,893	5,690
GH	GH1	GH1FFP 0	7,729	7,377	7,025	6,673	6,321	5,969
GH	GH1	GH1SAM 0	855	816	777	738	699	661
GH	GH2	GH2FFP 0	8,973	8,747	8,521	8,295	8,069	7,843
GH	GH2	GH2SAM 0	441	429	418	406	394	383
GH	GH3	GH3FFP 0	10,561	10,263	9,966	9,669	9,372	9,075
GH	GH3	GH3SAM 0	888	862	835	809	782	756
GH	GH4	GH4FFP 0	9,771	9,481	9,190	8,900	8,610	8,319
GH	GH4	GH4SAM 0	899	870	842	814	786	758
MC	MC1	MC1FGD 0	9,704	9,240	8,777	8,313	7,850	3,188
MC	MC1	MC1FFP 0	7,884	7,507	7,130	6,754	6,377	2,590
MC	MC1	MC1SAM 0	504	480	455	431	407	165
MC	MC2	MC2FGD 0	9,439	8,909	2,908	0	0	0
MC	MC2	MC2FFP 0	7,502	7,081	2,311	0	0	0
MC	MC2	MC2SAM 0	490	462	151	0	0	0
MC	MC3	MC3FGDU 0	3,909	3,735	3,561	3,388	3,214	3,040
MC	MC3	MC3FGDR 0	88	85	81	77	73	69
MC	MC3	MC3FFP 0	7,837	7,503	7,168	6,834	6,499	6,165
MC	MC3	MC3SAM 0	807	768	730	691	652	213
MC	MC4	MC4FGD 0	11,748	11,226	10,705	10,183	9,661	9,139
MC	MC4	MC4SCR 0	266	252	239	226	92	0
MC	MC4	MC4FFP 0	8,156	7,794	7,431	7,069	6,707	6,344
MC	MC4	MC4SAM 0	910	870	829	789	748	708
TC	TC1	TC1FFP 0	6,993	6,719	6,445	6,171	5,897	5,623
CR	CR4	CR4FGD 0	0	0	0	0	0	0
CR	CR4	CR4SCR 0	0	0	0	0	0	0
CR	CR4	CR4FF 0	0	0	0	0	0	0
CR	CR4	CR4PAC 0	0	0	0	0	0	0
CR	CR4	CR4LIME 0	0	0	0	0	0	0
CR	CR5	CR5FGD 0	0	0	0	0	0	0
CR	CR5	CR5SCR 0	0	0	0	0	0	0
CR	CR5	CR5FF 0	0	0	0	0	0	0
CR	CR5	CR5PAC 0	0	0	0	0	0	0
CR	CR5	CR5LIME 0	0	0	0	0	0	0
CR	CR6	CR6FGD 0	0	0	0	0	0	0
CR	CR6	CR6SCR 0	0	0	0	0	0	0
CR	CR6	CR6FF 0	0	0	0	0	0	0
CR	CR6	CR6PAC 0	0	0	0	0	0	0
CR	CR6	CR6LIME 0	0	0	0	0	0	0
GR	GR3	GR3SFF 0	2,300	2,217	2,134	2,050	1,967	1,884
GR	GR3	GR3PAC 0	64	62	59	57	55	52
GR	GR4	GR4SFF 0	3,090	2,932	2,773	2,615	0	0

Station	Unit		2034	2035	2036	2037	2038	2039
GR	GR4	GR4PAC 0	86	81	77	73	0	0

G:\11-051 Sier Tab GH2MC1- Capital RR - CE								
GH	GH2	GH2SCR 0	15,384	15,015	14,647	14,278	13,910	13,541
MC	MC1	MC1SCR 0	6,272	5,993	5,715	5,436	5,158	4,879
MC	MC2	MC2SCR 0	6,301	5,978	5,654	5,331	0	0

G:\11-051 Sier Tab BR 1-2, Lir Capital RR - CE								
BR	BR1	BR1 SCR	3,992	3,873	3,755	3,636	3,517	3,399
BR	BR2	BR2 SCR	6,424	6,227	6,030	5,833	5,636	5,439

Station	Unit		2040	2041	2042	2043	2044	2045
BR	BR1	BR1FFP 0	4,608	4,417	4,225	4,033	3,842	3,650
BR	BR1	BR1SAM 0	199	191	183	174	166	158
BR	BR2	BR2FFP 0	4,895	4,682	4,469	4,256	4,042	3,829
BR	BR2	BR2SAM 0	196	187	179	170	162	153
BR	BR3	BR3FFP 0	5,487	5,284	5,082	4,879	4,676	4,474
GH	GH1	GH1FFP 0	2,424	0	0	0	0	0
GH	GH1	GH1SAM 0	268	0	0	0	0	0
GH	GH2	GH2FFP 0	7,617	7,391	7,165	6,939	6,713	6,486
GH	GH2	GH2SAM 0	371	359	348	336	324	312
GH	GH3	GH3FFP 0	8,777	8,480	8,183	7,886	7,588	7,291
GH	GH3	GH3SAM 0	730	703	677	650	624	598
GH	GH4	GH4FFP 0	8,029	7,739	7,448	7,158	6,867	6,577
GH	GH4	GH4SAM 0	730	701	673	645	617	589
MC	MC1	MC1FGD 0	0	0	0	0	0	0
MC	MC1	MC1FFP 0	0	0	0	0	0	0
MC	MC1	MC1SAM 0	0	0	0	0	0	0
MC	MC2	MC2FGD 0	0	0	0	0	0	0
MC	MC2	MC2FFP 0	0	0	0	0	0	0
MC	MC2	MC2SAM 0	0	0	0	0	0	0
MC	MC3	MC3FGDU 0	2,653	188	0	0	0	0
MC	MC3	MC3FGDR 0	64	44	0	0	0	0
MC	MC3	MC3FFP 0	5,830	4,673	341	0	0	0
MC	MC3	MC3SAM 0	0	0	0	0	0	0
MC	MC4	MC4FGD 0	7,976	573	0	0	0	0
MC	MC4	MC4SCR 0	0	0	0	0	0	0
MC	MC4	MC4FFP 0	5,537	398	0	0	0	0
MC	MC4	MC4SAM 0	618	44	0	0	0	0
TC	TC1	TC1FFP 0	5,349	5,075	4,801	4,186	261	0
CR	CR4	CR4FGD 0	0	0	0	0	0	0
CR	CR4	CR4SCR 0	0	0	0	0	0	0
CR	CR4	CR4FF 0	0	0	0	0	0	0
CR	CR4	CR4PAC 0	0	0	0	0	0	0
CR	CR4	CR4LIME 0	0	0	0	0	0	0
CR	CR5	CR5FGD 0	0	0	0	0	0	0
CR	CR5	CR5SCR 0	0	0	0	0	0	0
CR	CR5	CR5FF 0	0	0	0	0	0	0
CR	CR5	CR5PAC 0	0	0	0	0	0	0
CR	CR5	CR5LIME 0	0	0	0	0	0	0
CR	CR6	CR6FGD 0	0	0	0	0	0	0
CR	CR6	CR6SCR 0	0	0	0	0	0	0
CR	CR6	CR6FF 0	0	0	0	0	0	0
CR	CR6	CR6PAC 0	0	0	0	0	0	0
CR	CR6	CR6LIME 0	0	0	0	0	0	0
GR	GR3	GR3SFF 0	1,800	1,717	1,634	1,550	1,467	1,384
GR	GR3	GR3PAC 0	50	48	45	43	41	38
GR	GR4	GR4SFF 0	0	0	0	0	0	0

Station	Unit		2040	2041	2042	2043	2044	2045
GR	GR4	GR4PAC 0	0	0	0	0	0	0

			G:\11-051 Sier Tab GH2MC1- Capital RR - CE					
GH	GH2	GH2SCR 0	13,172	12,804	12,435	12,066	11,698	11,329
MC	MC1	MC1SCR 0	4,601	0	0	0	0	0
MC	MC2	MC2SCR 0	0	0	0	0	0	0

			G:\11-051 Sier Tab BR 1-2, Lir Capital RR - CE					
BR	BR1	BR1 SCR	3,280	3,161	3,043	2,924	2,805	2,686
BR	BR2	BR2 SCR	5,242	5,045	4,848	4,651	4,454	4,258

Station	Unit		2046	2047	2048	2049	2050	2051
BR	BR1	BR1FFP 0	3,458	3,267	1,327	0	0	0
BR	BR1	BR1SAM 0	150	141	57	0	0	0
BR	BR2	BR2FFP 0	3,616	1,180	0	0	0	0
BR	BR2	BR2SAM 0	145	47	0	0	0	0
BR	BR3	BR3FFP 0	4,271	4,068	3,865	3,663	3,460	1,405
GH	GH1	GH1FFP 0	0	0	0	0	0	0
GH	GH1	GH1SAM 0	0	0	0	0	0	0
GH	GH2	GH2FFP 0	6,260	6,034	5,808	5,582	5,356	5,130
GH	GH2	GH2SAM 0	301	289	277	266	254	242
GH	GH3	GH3FFP 0	6,994	6,697	6,400	6,102	5,805	5,508
GH	GH3	GH3SAM 0	571	545	518	492	465	405
GH	GH4	GH4FFP 0	6,287	5,996	5,706	5,416	5,125	4,835
GH	GH4	GH4SAM 0	561	532	504	476	117	0
MC	MC1	MC1FGD 0	0	0	0	0	0	0
MC	MC1	MC1FFP 0	0	0	0	0	0	0
MC	MC1	MC1SAM 0	0	0	0	0	0	0
MC	MC2	MC2FGD 0	0	0	0	0	0	0
MC	MC2	MC2FFP 0	0	0	0	0	0	0
MC	MC2	MC2SAM 0	0	0	0	0	0	0
MC	MC3	MC3FGDU 0	0	0	0	0	0	0
MC	MC3	MC3FGDR 0	0	0	0	0	0	0
MC	MC3	MC3FFP 0	0	0	0	0	0	0
MC	MC3	MC3SAM 0	0	0	0	0	0	0
MC	MC4	MC4FGD 0	0	0	0	0	0	0
MC	MC4	MC4SCR 0	0	0	0	0	0	0
MC	MC4	MC4FFP 0	0	0	0	0	0	0
MC	MC4	MC4SAM 0	0	0	0	0	0	0
TC	TC1	TC1FFP 0	0	0	0	0	0	0
CR	CR4	CR4FGD 0	0	0	0	0	0	0
CR	CR4	CR4SCR 0	0	0	0	0	0	0
CR	CR4	CR4FF 0	0	0	0	0	0	0
CR	CR4	CR4PAC 0	0	0	0	0	0	0
CR	CR4	CR4LIME 0	0	0	0	0	0	0
CR	CR5	CR5FGD 0	0	0	0	0	0	0
CR	CR5	CR5SCR 0	0	0	0	0	0	0
CR	CR5	CR5FF 0	0	0	0	0	0	0
CR	CR5	CR5PAC 0	0	0	0	0	0	0
CR	CR5	CR5LIME 0	0	0	0	0	0	0
CR	CR6	CR6FGD 0	0	0	0	0	0	0
CR	CR6	CR6SCR 0	0	0	0	0	0	0
CR	CR6	CR6FF 0	0	0	0	0	0	0
CR	CR6	CR6PAC 0	0	0	0	0	0	0
CR	CR6	CR6LIME 0	0	0	0	0	0	0
GR	GR3	GR3SFF 0	0	0	0	0	0	0
GR	GR3	GR3PAC 0	0	0	0	0	0	0
GR	GR4	GR4SFF 0	0	0	0	0	0	0

Station	Unit		2046	2047	2048	2049	2050	2051
GR	GR4	GR4PAC 0	0	0	0	0	0	0

			G:\11-051 Sier Tab GH2MC1-: Capital RR - CE					
GH	GH2	GH2SCR 0	10,960	10,592	10,223	9,855	9,486	9,117
MC	MC1	MC1SCR 0	0	0	0	0	0	0
MC	MC2	MC2SCR 0	0	0	0	0	0	0

			G:\11-051 Sier Tab BR 1-2, Lir Capital RR - CE					
BR	BR1	BR1 SCR	2,568	2,449	2,330	2,212	2,093	1,974
BR	BR2	BR2 SCR	4,061	3,864	3,667	3,470	3,273	0

Station	Unit		2052	2053	2054	2055	2056	2057
BR	BR1	BR1FFP 0	0	0	0	0	0	0
BR	BR1	BR1SAM 0	0	0	0	0	0	0
BR	BR2	BR2FFP 0	0	0	0	0	0	0
BR	BR2	BR2SAM 0	0	0	0	0	0	0
BR	BR3	BR3FFP 0	0	0	0	0	0	0
GH	GH1	GH1FFP 0	0	0	0	0	0	0
GH	GH1	GH1SAM 0	0	0	0	0	0	0
GH	GH2	GH2FFP 0	4,904	4,678	4,452	4,226	4,000	3,489
GH	GH2	GH2SAM 0	231	219	207	196	0	0
GH	GH3	GH3FFP 0	5,211	4,152	214	0	0	0
GH	GH3	GH3SAM 0	21	0	0	0	0	0
GH	GH4	GH4FFP 0	0	0	0	0	0	0
GH	GH4	GH4SAM 0	0	0	0	0	0	0
MC	MC1	MC1FGD 0	0	0	0	0	0	0
MC	MC1	MC1FFP 0	0	0	0	0	0	0
MC	MC1	MC1SAM 0	0	0	0	0	0	0
MC	MC2	MC2FGD 0	0	0	0	0	0	0
MC	MC2	MC2FFP 0	0	0	0	0	0	0
MC	MC2	MC2SAM 0	0	0	0	0	0	0
MC	MC3	MC3FGDU 0	0	0	0	0	0	0
MC	MC3	MC3FGDR 0	0	0	0	0	0	0
MC	MC3	MC3FFP 0	0	0	0	0	0	0
MC	MC3	MC3SAM 0	0	0	0	0	0	0
MC	MC4	MC4FGD 0	0	0	0	0	0	0
MC	MC4	MC4SCR 0	0	0	0	0	0	0
MC	MC4	MC4FFP 0	0	0	0	0	0	0
MC	MC4	MC4SAM 0	0	0	0	0	0	0
TC	TC1	TC1FFP 0	0	0	0	0	0	0
CR	CR4	CR4FGD 0	0	0	0	0	0	0
CR	CR4	CR4SCR 0	0	0	0	0	0	0
CR	CR4	CR4FF 0	0	0	0	0	0	0
CR	CR4	CR4PAC 0	0	0	0	0	0	0
CR	CR4	CR4LIME 0	0	0	0	0	0	0
CR	CR5	CR5FGD 0	0	0	0	0	0	0
CR	CR5	CR5SCR 0	0	0	0	0	0	0
CR	CR5	CR5FF 0	0	0	0	0	0	0
CR	CR5	CR5PAC 0	0	0	0	0	0	0
CR	CR5	CR5LIME 0	0	0	0	0	0	0
CR	CR6	CR6FGD 0	0	0	0	0	0	0
CR	CR6	CR6SCR 0	0	0	0	0	0	0
CR	CR6	CR6FF 0	0	0	0	0	0	0
CR	CR6	CR6PAC 0	0	0	0	0	0	0
CR	CR6	CR6LIME 0	0	0	0	0	0	0
GR	GR3	GR3SFF 0	0	0	0	0	0	0
GR	GR3	GR3PAC 0	0	0	0	0	0	0
GR	GR4	GR4SFF 0	0	0	0	0	0	0

Station	Unit		2052	2053	2054	2055	2056	2057
GR	GR4	GR4PAC 0	0	0	0	0	0	0

G:\11-051 Sier Tab GH2MC1- Capital RR - CE								
GH	GH2	GH2SCR 0	8,749	8,380	8,011	7,643	7,274	6,906
MC	MC1	MC1SCR 0	0	0	0	0	0	0
MC	MC2	MC2SCR 0	0	0	0	0	0	0

G:\11-051 Sier Tab BR 1-2, Lir Capital RR - CE								
BR	BR1	BR1 SCR	0	0	0	0	0	0
BR	BR2	BR2 SCR	0	0	0	0	0	0

Station	Unit		2058	2059
BR	BR1	BR1FFP 0	0	0
BR	BR1	BR1SAM 0	0	0
BR	BR2	BR2FFP 0	0	0
BR	BR2	BR2SAM 0	0	0
BR	BR3	BR3FFP 0	0	0
GH	GH1	GH1FFP 0	0	0
GH	GH1	GH1SAM 0	0	0
GH	GH2	GH2FFP 0	253	0
GH	GH2	GH2SAM 0	0	0
GH	GH3	GH3FFP 0	0	0
GH	GH3	GH3SAM 0	0	0
GH	GH4	GH4FFP 0	0	0
GH	GH4	GH4SAM 0	0	0
MC	MC1	MC1FGD 0	0	0
MC	MC1	MC1FFP 0	0	0
MC	MC1	MC1SAM 0	0	0
MC	MC2	MC2FGD 0	0	0
MC	MC2	MC2FFP 0	0	0
MC	MC2	MC2SAM 0	0	0
MC	MC3	MC3FGDU 0	0	0
MC	MC3	MC3FGDR 0	0	0
MC	MC3	MC3FFP 0	0	0
MC	MC3	MC3SAM 0	0	0
MC	MC4	MC4FGD 0	0	0
MC	MC4	MC4SCR 0	0	0
MC	MC4	MC4FFP 0	0	0
MC	MC4	MC4SAM 0	0	0
TC	TC1	TC1FFP 0	0	0
CR	CR4	CR4FGD 0	0	0
CR	CR4	CR4SCR 0	0	0
CR	CR4	CR4FF 0	0	0
CR	CR4	CR4PAC 0	0	0
CR	CR4	CR4LIME 0	0	0
CR	CR5	CR5FGD 0	0	0
CR	CR5	CR5SCR 0	0	0
CR	CR5	CR5FF 0	0	0
CR	CR5	CR5PAC 0	0	0
CR	CR5	CR5LIME 0	0	0
CR	CR6	CR6FGD 0	0	0
CR	CR6	CR6SCR 0	0	0
CR	CR6	CR6FF 0	0	0
CR	CR6	CR6PAC 0	0	0
CR	CR6	CR6LIME 0	0	0
GR	GR3	GR3SFF 0	0	0
GR	GR3	GR3PAC 0	0	0
GR	GR4	GR4SFF 0	0	0

Station	Unit		2058	2059
GR	GR4	GR4PAC 0	0	0

		G:\11-051 Sier Tab GH2MC1-: Capital RR - CE		
GH	GH2	GH2SCR 0	6,537	6,168
MC	MC1	MC1SCR 0	0	0
MC	MC2	MC2SCR 0	0	0

		G:\11-051 Sier Tab BR 1-2, Lir Capital RR - CE		
BR	BR1	BR1 SCR	0	0
BR	BR2	BR2 SCR	0	0

	2010	2011	2012	2013	2014	2015
Retirement Cost						
All Units	0	0	0	0	0	0

2% Escalation Rate

Unit Costs (\$000)						
BR	BR1	3,816	4,811	3,969	4,049	4,130
BR	BR2	6,633	7,160	7,253	7,398	7,546
BR	BR3	15,885	20,876	14,904	15,202	15,506
CR	CR4	14,372	9,218	12,029	12,269	12,515
CR	CR5	11,842	9,889	12,791	13,047	13,308
CR	CR6	10,666	11,619	10,173	10,376	10,584
GH	GH1	17,829	19,141	17,966	18,325	18,691
GH	GH2	12,225	18,498	13,429	13,698	13,972
GH	GH3	17,961	13,501	12,475	12,724	12,979
GH	GH4	11,533	13,496	12,105	12,347	12,594
GR	GR3	4,270	5,792	4,360	4,447	4,536
GR	GR4	7,338	6,924	8,633	8,805	8,982
MC	MC1	11,892	17,333	12,669	12,923	13,181
MC	MC2	16,179	11,941	15,201	15,505	15,815
MC	MC3	18,313	14,238	17,221	17,566	17,917
MC	MC4	16,531	18,981	17,245	17,590	17,942
TC	TC1	17,205	15,170	17,403	17,751	18,106
TY	TY3	410	416	418	427	435

	2016	2017	2018	2019	2020	2021	2022
Retirement Cost							
All Units	2100	0	0	0	0	0	0

Escalation Rate

Unit Costs (\$000)							
BR1	4,212	4,296	4,382	4,470	4,559	4,651	4,744
BR2	7,697	7,851	8,008	8,168	8,331	8,498	8,668
BR3	15,816	16,132	16,455	16,784	17,120	17,462	17,811
CR4	12,765	13,020	13,281	13,546	13,817	14,094	14,375
CR5	13,574	13,845	14,122	14,405	14,693	14,987	15,286
CR6	10,795	11,011	11,231	11,456	11,685	11,919	12,157
GH1	19,065	19,447	19,835	20,232	20,637	21,050	21,471
GH2	14,251	14,536	14,827	15,124	15,426	15,735	16,049
GH3	13,238	13,503	13,773	14,049	14,330	14,616	14,909
GH4	12,846	13,103	13,365	13,632	13,905	14,183	14,467
GR3	4,627	4,719	4,813	4,910	5,008	5,108	5,210
GR4	9,161	9,344	9,531	9,722	9,916	10,115	10,317
MC1	13,445	13,714	13,988	14,268	14,553	14,844	15,141
MC2	16,131	16,454	16,783	17,118	17,461	17,810	18,166
MC3	18,275	18,641	19,014	19,394	19,782	20,177	20,581
MC4	18,300	18,666	19,040	19,421	19,809	20,205	20,609
TC1	18,468	18,837	19,214	19,598	19,990	20,390	20,798
TY3	444	453	462	471	480	490	500

	2023	2024	2025	2026	2027	2028	2029
Retirement Cost							
All Units	0	0	0	0	0	0	0

Escalation Rate

Unit Costs (\$000)							
BR1	4,838	4,935	5,034	5,135	5,237	5,342	5,449
BR2	8,841	9,018	9,199	9,383	9,570	9,762	9,957
BR3	18,167	18,531	18,901	19,279	19,665	20,058	20,460
CR4	14,663	14,956	15,255	15,560	15,872	16,189	16,513
CR5	15,592	15,904	16,222	16,546	16,877	17,215	17,559
CR6	12,400	12,648	12,901	13,159	13,423	13,691	13,965
GH1	21,900	22,338	22,785	23,240	23,705	24,179	24,663
GH2	16,370	16,698	17,032	17,372	17,720	18,074	18,436
GH3	15,207	15,511	15,821	16,138	16,460	16,790	17,125
GH4	14,756	15,051	15,352	15,659	15,973	16,292	16,618
GR3	5,314	5,421	5,529	5,640	5,753	5,868	5,985
GR4	10,523	10,734	10,949	11,167	11,391	11,619	11,851
MC1	15,444	15,753	16,068	16,389	16,717	17,051	17,392
MC2	18,530	18,900	19,278	19,664	20,057	20,458	20,867
MC3	20,993	21,412	21,841	22,278	22,723	23,178	23,641
MC4	21,021	21,442	21,871	22,308	22,754	23,209	23,674
TC1	21,214	21,638	22,071	22,512	22,962	23,422	23,890
TY3	510	520	530	541	552	563	574

	2030	2031	2032	2033	2034	2035	2036
Retirement Cost							
All Units	0	0	0	0	0	0	0

Escalation Rate

Unit Costs (\$000)	2030	2031	2032	2033	2034	2035	2036
BR1	5,558	5,669	5,782	5,898	6,016	6,136	6,259
BR2	10,156	10,359	10,566	10,778	10,993	11,213	11,437
BR3	20,869	21,286	21,712	22,146	22,589	23,041	23,502
CR4	16,843	17,180	17,524	17,874	18,232	18,596	18,968
CR5	17,910	18,269	18,634	19,007	19,387	19,775	20,170
CR6	14,244	14,529	14,820	15,116	15,418	15,727	16,041
GH1	25,156	25,659	26,172	26,696	27,230	27,774	28,330
GH2	18,804	19,181	19,564	19,955	20,355	20,762	21,177
GH3	17,468	17,817	18,174	18,537	18,908	19,286	19,672
GH4	16,950	17,289	17,635	17,988	18,347	18,714	19,089
GR3	6,105	6,227	6,351	6,478	6,608	6,740	6,875
GR4	12,088	12,330	12,576	12,828	13,084	13,346	13,613
MC1	17,740	18,095	18,457	18,826	19,202	19,586	19,978
MC2	21,285	21,710	22,145	22,587	23,039	23,500	23,970
MC3	24,114	24,596	25,088	25,590	26,102	26,624	27,156
MC4	24,147	24,630	25,123	25,625	26,138	26,660	27,194
TC1	24,368	24,855	25,352	25,859	26,377	26,904	27,442
TY3	586	597	609	622	634	647	660

	2037	2038	2039	2040
Retirement Cost				
All Units	0	0	0	0

Escalation Rate

Unit Costs (\$000)				
BR1	6,384	6,512	6,642	6,775
BR2	11,666	11,899	12,137	12,380
BR3	23,972	24,451	24,940	25,439
CR4	19,347	19,734	20,129	20,532
CR5	20,573	20,985	21,405	21,833
CR6	16,362	16,689	17,023	17,364
GH1	28,897	29,474	30,064	30,665
GH2	21,600	22,032	22,473	22,923
GH3	20,065	20,466	20,876	21,293
GH4	19,470	19,860	20,257	20,662
GR3	7,012	7,153	7,296	7,442
GR4	13,885	14,163	14,446	14,735
MC1	20,378	20,785	21,201	21,625
MC2	24,449	24,938	25,437	25,946
MC3	27,699	28,253	28,818	29,395
MC4	27,737	28,292	28,858	29,435
TC1	27,991	28,551	29,122	29,704
TY3	673	686	700	714

Escalation Rate: 2% Year \$: 2010
Fixed O&M

		<u>Month</u>	<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
BR	BR1	5	2014	PJFF/PAC		0	0	0
BR	BR1	5	2014	SAM Mitigation		0	0	0
BR	BR2	4	2014	PJFF/PAC		0	0	0
BR	BR2	4	2014	SAM Mitigation		0	0	0
BR	BR3	5	2015	PJFF/PAC		0	0	0
GH	GH1	5	2014	PJFF/PAC		0	0	0
GH	GH1	5	2014	SCR Turn-Down		0	0	0
GH	GH1	2	2013	SAM Mitigation		0	0	0
GH	GH2	11	2014	PJFF/PAC		0	0	0
GH	GH2	12	2012	Sorbent Injection		0	8,064	98,700
GH	GH3	10	2015	PJFF/PAC		0	0	0
GH	GH3	11	2013	SCR Turn-Down		0	0	0
GH	GH3	2	2013	SAM Mitigation		0	0	0
GH	GH4	12	2015	PJFF/PAC		0	0	0
GH	GH4	3	2014	SCR Turn-Down		0	0	0
GH	GH4	2	2013	SAM Mitigation		0	0	0
MC	MC1	5	2015	Combined 1&2 FGD		0	0	0
MC	MC1	5	2015	PJFF/PAC		0	0	0
MC	MC1	5	2015	SAM Mitigation		0	0	0
MC	MC2	4	2015	Combined 1&2 FGD		0	0	0
MC	MC2	4	2015	PJFF/PAC		0	0	0
MC	MC2	4	2015	SAM Mitigation		0	0	0
MC	MC3	11	2014	FGD		0	0	0
MC	MC3	10	2015	PJFF/PAC		0	0	0
MC	MC3	4	2013	SAM Mitigation		0	0	24,068
MC	MC3	4	2013	SCR Turn-Down		0	0	0
MC	MC4	11	2014	FGD		0	0	0
MC	MC4	11	2014	PJFF/PAC		0	0	0
MC	MC4	11	2014	SAM Mitigation		0	0	0
MC	MC4	11	2014	SCR Turn-Down		0	0	0
TC	TC1	11	2015	PJFF/PAC		0	0	0
CR	CR4	1	2016	SCR	1,871,000	0	0	0
CR	CR4	1	2016	WFGD		0	0	0
CR	CR4	1	2016	PJFF	1,191,000	0	0	0
CR	CR4	1	2016	SAM Mitigation	174,000	0	0	0
CR	CR4	1	2016	PAC Injection	169,000	0	0	0
CR	CR5	1	2016	SCR	1,993,000	0	0	0
CR	CR5	1	2016	WFGD		0	0	0
CR	CR5	1	2016	PJFF	1,251,000	0	0	0
CR	CR5	1	2016	SAM Mitigation	177,000	0	0	0
CR	CR5	1	2016	PAC Injection	172,000	0	0	0
CR	CR6	1	2016	SCR	2,392,000	0	0	0
CR	CR6	1	2016	WFGD		0	0	0
CR	CR6	1	2016	PJFF	1,632,000	0	0	0

		<u>Month</u>	<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
CR	CR6	1	2016	SAM Mitigation	198,000	0	0	0
CR	CR6	1	2016	PAC Injection	191,000	0	0	0
GR	GR3	1	2016	SCR	943,000	0	0	0
GR	GR3	1	2016	CDS-FF	3,322,000	0	0	0
GR	GR3	1	2016	PAC Injection	141,000	0	0	0
GR	GR4	1	2016	SCR	1,284,000	0	0	0
GR	GR4	1	2016	CDS-FF	4,309,000	0	0	0
GR	GR4	1	2016	PAC Injection	150,000	0	0	0
GH	GH2			SCR		0	0	0
MC	MC1			SCR		0	0	0
MC	MC2			SCR		0	0	0
BR	BR1			SCR		0	0	0
BR	BR2			SCR		0	0	0

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Tab BR 1-2, Lines 17-20

	2011	2012	2013
O&M			
BR1 SCR	0	0	0
BR2 SCR	0	0	0

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Tab GH2MC1-2, Lines 19-21

	2011	2012	2013
O&M			
GH2SCR 0	0	0	0
MC1SCR 0	0	0	0
MC2SCR 0	0	0	0

2% Year \$: 2010
 Fixed O&M

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
2014	PJFF/PAC		598,882	610,860	623,077	635,538	648,249	661,214
2014	SAM Mitigation		78,540	137,333	140,079	142,881	145,739	148,653
2014	PJFF/PAC		714,168	728,451	743,020	757,880	773,038	788,499
2014	SAM Mitigation		134,640	137,333	140,079	142,881	145,739	148,653
2015	PJFF/PAC		0	1,067,560	1,088,911	1,110,689	1,132,903	1,155,561
2014	PJFF/PAC		1,293,082	1,318,944	1,345,322	1,372,229	1,399,673	1,427,667
2014	SCR Turn-Down		0	0	0	0	0	0
2013	SAM Mitigation		4,899	0	0	0	0	0
2014	PJFF/PAC		777,600	1,586,304	1,618,030	1,650,391	1,683,399	1,717,067
2012	Sorbent Injection		100,674	102,687	104,741	106,836	108,973	111,152
2015	PJFF/PAC		0	652,436	1,330,969	1,357,589	1,384,741	1,412,435
2013	SCR Turn-Down		0	0	0	0	0	0
2013	SAM Mitigation		0	0	0	0	0	0
2015	PJFF/PAC		0	631,870	1,289,014	1,314,795	1,341,091	1,367,912
2014	SCR Turn-Down		0	0	0	0	0	0
2013	SAM Mitigation		0	0	0	0	0	0
2015	Combined 1&2 FGD		0	-238,642	-219,636	-200,250	-180,476	-160,306
2015	PJFF/PAC		0	1,446,222	1,475,147	1,504,650	1,534,743	1,565,438
2015	SAM Mitigation		0	22,100	38,643	39,416	40,204	41,008
2015	Combined 1&2 FGD		0	186,506	205,512	224,899	244,673	264,842
2015	PJFF/PAC		0	1,418,867	1,447,245	1,476,189	1,505,713	1,535,828
2015	SAM Mitigation		0	25,257	38,643	39,416	40,204	41,008
2014	FGD		0	0	0	0	0	0
2015	PJFF/PAC		0	646,753	1,319,377	1,345,764	1,372,679	1,400,133
2013	SAM Mitigation		36,824	37,560	38,312	39,078	39,859	40,657
2013	SCR Turn-Down		0	0	0	0	0	0
2014	FGD		0	0	0	0	0	0
2014	PJFF/PAC		743,376	1,516,487	1,546,817	1,577,754	1,609,309	1,641,495
2014	SAM Mitigation		3,095	37,885	38,643	39,416	40,204	41,008
2014	SCR Turn-Down		0	0	0	0	0	0
2015	PJFF/PAC		0	493,761	1,007,273	1,027,418	1,047,966	1,068,926
2016	SCR	1,871,000	0	0	2,107,050	2,149,191	2,192,175	2,236,018
2016	WFGD		0	0	0	0	0	0
2016	PJFF	1,191,000	0	0	1,341,259	1,368,085	1,395,446	1,423,355
2016	SAM Mitigation	174,000	0	0	195,952	199,871	203,869	207,946
2016	PAC Injection	169,000	0	0	190,321	194,128	198,010	201,971
2016	SCR	1,993,000	0	0	2,244,442	2,289,331	2,335,117	2,381,819
2016	WFGD		0	0	0	0	0	0
2016	PJFF	1,251,000	0	0	1,408,829	1,437,006	1,465,746	1,495,061
2016	SAM Mitigation	177,000	0	0	199,331	203,317	207,384	211,531
2016	PAC Injection	172,000	0	0	193,700	197,574	201,525	205,556
2016	SCR	2,392,000	0	0	2,693,781	2,747,656	2,802,609	2,858,661
2016	WFGD		0	0	0	0	0	0
2016	PJFF	1,632,000	0	0	1,837,897	1,874,655	1,912,148	1,950,391

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
2016	SAM Mitigation	198,000	0	0	222,980	227,440	231,989	236,628
2016	PAC Injection	191,000	0	0	215,097	219,399	223,787	228,263
2016	SCR	943,000	0	0	1,061,971	1,083,211	1,104,875	1,126,972
2016	CDS-FF	3,322,000	0	0	3,741,112	3,815,934	3,892,252	3,970,098
2016	PAC Injection	141,000	0	0	158,789	161,965	165,204	168,508
2016	SCR	1,284,000	0	0	1,445,993	1,474,912	1,504,411	1,534,499
2016	CDS-FF	4,309,000	0	0	4,852,634	4,949,687	5,048,680	5,149,654
2016	PAC Injection	150,000	0	0	168,924	172,303	175,749	179,264

SCR	0	0	0	0	8,475,784	8,645,300
SCR	0	0	0	0	3,943,805	4,022,682
SCR	0	0	0	0	3,984,814	4,064,510

SCR	0	0	0	0	2,431,193	2,479,817
SCR	0	0	0	0	3,952,007	4,031,047

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Tab BR 1-2, Lines 17-20

	2014	2015	2016	2017	2018	2019
O&M						
BR1 SCR	0	0	0	0	2,431	2,480
BR2 SCR	0	0	0	0	3,952	4,031

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Tab GH2MC1-2, Lines 19-21

	2014	2015	2016	2017	2018	2019
O&M						
GH2SCR 0	0	0	0	0	8,476	8,645
MC1SCR 0	0	0	0	0	3,944	4,023
MC2SCR 0	0	0	0	0	3984.8136	4064.5098

2% Year \$: 2010
 Fixed O&M

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>
2014	PJFF/PAC		674,439	687,927	701,686	715,720	730,034	744,635
2014	SAM Mitigation		151,627	154,659	157,752	160,907	164,125	167,408
2014	PJFF/PAC		804,269	820,354	836,761	853,496	870,566	887,978
2014	SAM Mitigation		151,627	154,659	157,752	160,907	164,125	167,408
2015	PJFF/PAC		1,178,672	1,202,245	1,226,290	1,250,816	1,275,832	1,301,349
2014	PJFF/PAC		1,456,220	1,485,345	1,515,052	1,545,353	1,576,260	1,607,785
2014	SCR Turn-Down		0	0	0	0	0	0
2013	SAM Mitigation		0	0	0	0	0	0
2014	PJFF/PAC		1,751,408	1,786,436	1,822,165	1,858,608	1,895,781	1,933,696
2012	Sorbent Injection		113,375	115,643	117,956	120,315	122,721	125,175
2015	PJFF/PAC		1,440,684	1,469,498	1,498,888	1,528,865	1,559,443	1,590,632
2013	SCR Turn-Down		0	0	0	0	0	0
2013	SAM Mitigation		0	0	0	0	0	0
2015	PJFF/PAC		1,395,271	1,423,176	1,451,640	1,480,672	1,510,286	1,540,491
2014	SCR Turn-Down		0	0	0	0	0	0
2013	SAM Mitigation		0	0	0	0	0	0
2015	Combined 1&2 FGD		-139,733	-118,749	-121,124	-123,546	-126,017	-128,537
2015	PJFF/PAC		1,596,746	1,628,681	1,661,255	1,694,480	1,728,370	1,762,937
2015	SAM Mitigation		41,828	42,665	43,518	44,388	45,276	46,182
2015	Combined 1&2 FGD		285,415	306,400	312,528	318,778	325,154	331,657
2015	PJFF/PAC		1,566,544	1,597,875	1,629,832	1,662,429	1,695,678	1,729,591
2015	SAM Mitigation		41,828	42,665	43,518	44,388	45,276	46,182
2014	FGD		0	0	0	0	0	0
2015	PJFF/PAC		1,428,136	1,456,698	1,485,832	1,515,549	1,545,860	1,576,777
2013	SAM Mitigation		41,470	42,299	43,145	44,008	44,888	45,786
2013	SCR Turn-Down		0	0	0	0	0	0
2014	FGD		0	0	0	0	0	0
2014	PJFF/PAC		1,674,325	1,707,811	1,741,967	1,776,807	1,812,343	1,848,590
2014	SAM Mitigation		41,828	42,665	43,518	44,388	45,276	46,182
2014	SCR Turn-Down		0	0	0	0	0	0
2015	PJFF/PAC		1,090,304	1,112,110	1,134,353	1,157,040	1,180,180	1,203,784
2016	SCR	1,871,000	2,280,739	2,326,353	2,372,880	2,420,338	2,468,745	2,518,120
2016	WFGD		0	0	0	0	0	0
2016	PJFF	1,191,000	1,451,822	1,480,859	1,510,476	1,540,685	1,571,499	1,602,929
2016	SAM Mitigation	174,000	212,105	216,347	220,674	225,088	229,589	234,181
2016	PAC Injection	169,000	206,010	210,130	214,333	218,620	222,992	227,452
2016	SCR	1,993,000	2,429,456	2,478,045	2,527,606	2,578,158	2,629,721	2,682,316
2016	WFGD		0	0	0	0	0	0
2016	PJFF	1,251,000	1,524,962	1,555,461	1,586,570	1,618,302	1,650,668	1,683,681
2016	SAM Mitigation	177,000	215,762	220,077	224,479	228,968	233,548	238,219
2016	PAC Injection	172,000	209,667	213,860	218,138	222,500	226,950	231,489
2016	SCR	2,392,000	2,915,835	2,974,151	3,033,634	3,094,307	3,156,193	3,219,317
2016	WFGD		0	0	0	0	0	0
2016	PJFF	1,632,000	1,989,399	2,029,187	2,069,771	2,111,166	2,153,389	2,196,457

Year	Equipment	\$/yr	2020	2021	2022	2023	2024	2025
2016	SAM Mitigation	198,000	241,361	246,188	251,112	256,134	261,257	266,482
2016	PAC Injection	191,000	232,828	237,484	242,234	247,079	252,020	257,061
2016	SCR	943,000	1,149,512	1,172,502	1,195,952	1,219,871	1,244,268	1,269,154
2016	CDS-FF	3,322,000	4,049,499	4,130,489	4,213,099	4,297,361	4,383,308	4,470,975
2016	PAC Injection	141,000	171,878	175,316	178,822	182,399	186,047	189,767
2016	SCR	1,284,000	1,565,189	1,596,493	1,628,422	1,660,991	1,694,211	1,728,095
2016	CDS-FF	4,309,000	5,252,647	5,357,700	5,464,854	5,574,151	5,685,634	5,799,347
2016	PAC Injection	150,000	182,849	186,506	190,236	194,041	197,922	201,880

SCR	8,818,206	8,994,570	9,174,461	9,357,950	9,545,109	9,736,012
SCR	4,103,135	4,185,198	4,268,902	4,354,280	4,441,366	4,530,193
SCR	4,145,800	4,228,716	4,313,290	4,399,556	4,487,547	4,577,298

SCR	2,529,413	2,580,002	2,631,602	2,684,234	2,737,918	2,792,677
SCR	4,111,668	4,193,902	4,277,780	4,363,335	4,450,602	4,539,614

G:\11-051 Sierra Club KY IRP CERResults-BR1-2_GH2_MC1-2SCRs.xlsx

Tab BR 1-2, Lines 17-20

	2020	2021	2022	2023	2024	2025
O&M						
BR1 SCR	2,529	2,580	2,632	2,684	2,738	2,793
BR2 SCR	4,112	4,194	4,278	4,363	4,451	4,540

G:\11-051 Sierra Club KY IRP CERResults-BR1-2_GH2_MC1-2SCRs.xlsx

Tab GH2MC1-2, Lines 19-21

	2020	2021	2022	2023	2024	2025
O&M						
GH2SCR 0	8,818	8,995	9,174	9,358	9,545	9,736
MC1SCR 0	4,103	4,185	4,269	4,354	4,441	4,530
MC2SCR 0	4145.8	4228.716	4313.2903	4399.5562	4487.5473	4577.2982

2% Year \$: 2010
 Fixed O&M

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>
2014	PJFF/PAC		759,527	774,718	790,212	806,016	822,137	838,580
2014	SAM Mitigation		170,756	174,171	177,655	181,208	184,832	188,529
2014	PJFF/PAC		905,737	923,852	942,329	961,175	980,399	1,000,007
2014	SAM Mitigation		170,756	174,171	177,655	181,208	184,832	188,529
2015	PJFF/PAC		1,327,376	1,353,924	1,381,002	1,408,622	1,436,795	1,465,530
2014	PJFF/PAC		1,639,941	1,672,739	1,706,194	1,740,318	1,775,124	1,810,627
2014	SCR Turn-Down		0	0	0	0	0	0
2013	SAM Mitigation		0	0	0	0	0	0
2014	PJFF/PAC		1,972,370	2,011,817	2,052,054	2,093,095	2,134,957	2,177,656
2012	Sorbent Injection		127,679	130,232	132,837	135,494	138,204	140,968
2015	PJFF/PAC		1,622,444	1,654,893	1,687,991	1,721,751	1,756,186	1,791,310
2013	SCR Turn-Down		0	0	0	0	0	0
2013	SAM Mitigation		0	0	0	0	0	0
2015	PJFF/PAC		1,571,301	1,602,727	1,634,782	1,667,477	1,700,827	1,734,844
2014	SCR Turn-Down		0	0	0	0	0	0
2013	SAM Mitigation		0	0	0	0	0	0
2015	Combined 1&2 FGD		-131,108	-133,730	-136,405	-139,133	-141,916	-144,754
2015	PJFF/PAC		1,798,196	1,834,160	1,870,843	1,908,260	1,946,425	1,985,354
2015	SAM Mitigation		47,105	48,047	49,008	49,989	50,988	52,008
2015	Combined 1&2 FGD		338,290	345,056	351,957	358,996	366,176	373,499
2015	PJFF/PAC		1,764,183	1,799,467	1,835,456	1,872,165	1,909,608	1,947,801
2015	SAM Mitigation		47,105	48,047	49,008	49,989	50,988	52,008
2014	FGD		0	0	0	0	0	0
2015	PJFF/PAC		1,608,313	1,640,479	1,673,288	1,706,754	1,740,889	1,775,707
2013	SAM Mitigation		46,702	47,636	48,588	49,560	50,551	51,562
2013	SCR Turn-Down		0	0	0	0	0	0
2014	FGD		0	0	0	0	0	0
2014	PJFF/PAC		1,885,562	1,923,273	1,961,738	2,000,973	2,040,992	2,081,812
2014	SAM Mitigation		47,105	48,047	49,008	49,989	50,988	52,008
2014	SCR Turn-Down		0	0	0	0	0	0
2015	PJFF/PAC		1,227,860	1,252,417	1,277,465	1,303,015	1,329,075	1,355,656
2016	SCR	1,871,000	2,568,482	2,619,852	2,672,249	2,725,694	2,780,208	2,835,812
2016	WFGD		0	0	0	0	0	0
2016	PJFF	1,191,000	1,634,988	1,667,688	1,701,041	1,735,062	1,769,763	1,805,159
2016	SAM Mitigation	174,000	238,865	243,642	248,515	253,485	258,555	263,726
2016	PAC Injection	169,000	232,001	236,641	241,374	246,201	251,125	256,148
2016	SCR	1,993,000	2,735,962	2,790,681	2,846,495	2,903,425	2,961,493	3,020,723
2016	WFGD		0	0	0	0	0	0
2016	PJFF	1,251,000	1,717,355	1,751,702	1,786,736	1,822,471	1,858,920	1,896,099
2016	SAM Mitigation	177,000	242,983	247,843	252,800	257,856	263,013	268,273
2016	PAC Injection	172,000	236,119	240,842	245,658	250,572	255,583	260,695
2016	SCR	2,392,000	3,283,703	3,349,377	3,416,365	3,484,692	3,554,386	3,625,474
2016	WFGD		0	0	0	0	0	0
2016	PJFF	1,632,000	2,240,386	2,285,194	2,330,898	2,377,516	2,425,066	2,473,567

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>
2016	SAM Mitigation	198,000	271,812	277,248	282,793	288,449	294,218	300,102
2016	PAC Injection	191,000	262,202	267,446	272,795	278,251	283,816	289,492
2016	SCR	943,000	1,294,537	1,320,428	1,346,836	1,373,773	1,401,248	1,429,273
2016	CDS-FF	3,322,000	4,560,394	4,651,602	4,744,634	4,839,527	4,936,317	5,035,044
2016	PAC Injection	141,000	193,563	197,434	201,383	205,410	209,519	213,709
2016	SCR	1,284,000	1,762,657	1,797,910	1,833,868	1,870,546	1,907,956	1,946,116
2016	CDS-FF	4,309,000	5,915,334	6,033,640	6,154,313	6,277,399	6,402,947	6,531,006
2016	PAC Injection	150,000	205,918	210,036	214,237	218,522	222,892	227,350

SCR	9,930,732	10,129,346	10,331,933	10,538,572	10,749,343	10,964,330
SCR	4,620,797	4,713,213	4,807,477	4,903,626	5,001,699	5,101,733
SCR	4,668,844	4,762,221	4,857,465	4,954,615	5,053,707	5,154,781

SCR	2,848,530	2,905,501	2,963,611	3,022,883	3,083,341	3,145,008
SCR	4,630,406	4,723,014	4,817,475	4,913,824	5,012,101	5,112,343

G:\11-051 Sierra Club KY IRP ;
Tab BR 1-2, Lines 17-20

	2026	2027	2028	2029	2030	2031
O&M						
BR1 SCR	2,849	2,906	2,964	3,023	3,083	3,145
BR2 SCR	4,630	4,723	4,817	4,914	5,012	5,112

G:\11-051 Sierra Club KY IRP ;
Tab GH2MC1-2, Lines 19-21

	2026	2027	2028	2029	2030	2031
O&M						
GH2SCR 0	9,931	10,129	10,332	10,539	10,749	10,964
MC1SCR 0	4,621	4,713	4,807	4,904	5,002	5,102
MC2SCR 0	4668.8442	4762.2211	4857.4655	4954.6148	5053.7071	5154.7812

2% Year \$: 2010
 Fixed O&M

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>
2014	PJFF/PAC		855,351	872,458	889,907	907,705	925,860	944,377
2014	SAM Mitigation		192,299	196,145	200,068	204,069	208,151	212,314
2014	PJFF/PAC		1,020,007	1,040,407	1,061,215	1,082,440	1,104,088	1,126,170
2014	SAM Mitigation		192,299	196,145	200,068	204,069	208,151	212,314
2015	PJFF/PAC		1,494,841	1,524,738	1,555,233	1,586,337	1,618,064	1,650,425
2014	PJFF/PAC		1,846,839	1,883,776	1,921,452	1,959,881	1,999,078	2,039,060
2014	SCR Turn-Down		0	0	0	0	0	0
2013	SAM Mitigation		0	0	0	0	0	0
2014	PJFF/PAC		2,221,209	2,265,633	2,310,946	2,357,165	2,404,308	2,452,394
2012	Sorbent Injection		143,787	146,663	149,596	152,588	155,640	158,753
2015	PJFF/PAC		1,827,136	1,863,678	1,900,952	1,938,971	1,977,751	2,017,306
2013	SCR Turn-Down		0	0	0	0	0	0
2013	SAM Mitigation		0	0	0	0	0	0
2015	PJFF/PAC		1,769,540	1,804,931	1,841,030	1,877,850	1,915,407	1,953,716
2014	SCR Turn-Down		0	0	0	0	0	0
2013	SAM Mitigation		0	0	0	0	0	0
2015	Combined 1&2 FGD		-147,649	-150,602	-153,614	-156,686	-159,820	-163,017
2015	PJFF/PAC		2,025,061	2,065,562	2,106,873	2,149,010	2,191,991	2,235,831
2015	SAM Mitigation		53,048	54,109	55,191	56,295	57,421	58,570
2015	Combined 1&2 FGD		380,969	388,589	396,361	404,288	412,374	420,621
2015	PJFF/PAC		1,986,757	2,026,492	2,067,022	2,108,362	2,150,529	2,193,540
2015	SAM Mitigation		53,048	54,109	55,191	56,295	57,421	58,570
2014	FGD		0	0	0	0	0	0
2015	PJFF/PAC		1,811,221	1,847,446	1,884,395	1,922,083	1,960,524	1,999,735
2013	SAM Mitigation		52,594	53,645	54,718	55,813	56,929	58,068
2013	SCR Turn-Down		0	0	0	0	0	0
2014	FGD		0	0	0	0	0	0
2014	PJFF/PAC		2,123,449	2,165,918	2,209,236	2,253,421	2,298,489	2,344,459
2014	SAM Mitigation		53,048	54,109	55,191	56,295	57,421	58,570
2014	SCR Turn-Down		0	0	0	0	0	0
2015	PJFF/PAC		1,382,769	1,410,425	1,438,633	1,467,406	1,496,754	1,526,689
2016	SCR	1,871,000	2,892,528	2,950,379	3,009,386	3,069,574	3,130,965	3,193,585
2016	WFGD		0	0	0	0	0	0
2016	PJFF	1,191,000	1,841,262	1,878,087	1,915,649	1,953,962	1,993,041	2,032,902
2016	SAM Mitigation	174,000	269,000	274,380	279,868	285,465	291,175	296,998
2016	PAC Injection	169,000	261,271	266,496	271,826	277,262	282,808	288,464
2016	SCR	1,993,000	3,081,137	3,142,760	3,205,615	3,269,728	3,335,122	3,401,825
2016	WFGD		0	0	0	0	0	0
2016	PJFF	1,251,000	1,934,021	1,972,701	2,012,155	2,052,398	2,093,446	2,135,315
2016	SAM Mitigation	177,000	273,638	279,111	284,693	290,387	296,195	302,119
2016	PAC Injection	172,000	265,909	271,227	276,651	282,184	287,828	293,584
2016	SCR	2,392,000	3,697,983	3,771,943	3,847,382	3,924,330	4,002,816	4,082,872
2016	WFGD		0	0	0	0	0	0
2016	PJFF	1,632,000	2,523,039	2,573,500	2,624,970	2,677,469	2,731,018	2,785,639

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>
2016	SAM Mitigation	198,000	306,104	312,226	318,471	324,840	331,337	337,964
2016	PAC Injection	191,000	295,282	301,188	307,212	313,356	319,623	326,015
2016	SCR	943,000	1,457,859	1,487,016	1,516,756	1,547,091	1,578,033	1,609,594
2016	CDS-FF	3,322,000	5,135,744	5,238,459	5,343,229	5,450,093	5,559,095	5,670,277
2016	PAC Injection	141,000	217,983	222,343	226,790	231,325	235,952	240,671
2016	SCR	1,284,000	1,985,038	2,024,739	2,065,233	2,106,538	2,148,669	2,191,642
2016	CDS-FF	4,309,000	6,661,626	6,794,859	6,930,756	7,069,371	7,210,759	7,354,974
2016	PAC Injection	150,000	231,897	236,535	241,266	246,091	251,013	256,033

SCR	11,183,617	11,407,289	11,635,435	11,868,144	12,105,507	12,347,617
SCR	5,203,768	5,307,843	5,414,000	5,522,280	5,632,725	5,745,380
SCR	5,257,877	5,363,034	5,470,295	5,579,701	5,691,295	5,805,121

SCR	3,207,908	3,272,066	3,337,507	3,404,257	3,472,343	3,541,789
SCR	5,214,589	5,318,881	5,425,259	5,533,764	5,644,439	5,757,328

G:\11-051 Sierra Club KY IRP
 Tab BR 1-2, Lines 17-20

	2032	2033	2034	2035	2036	2037
O&M						
BR1 SCR	3,208	3,272	3,338	3,404	3,472	3,542
BR2 SCR	5,215	5,319	5,425	5,534	5,644	5,757

G:\11-051 Sierra Club KY IRP
 Tab GH2MC1-2, Lines 19-21

	2032	2033	2034	2035	2036	2037
O&M						
GH2SCR 0	11,184	11,407	11,635	11,868	12,106	12,348
MC1SCR 0	5,204	5,308	5,414	5,522	5,633	5,745
MC2SCR 0	5257.8769	5363.0344	5470.2951	5579.701	5691.295	5805.1209

2% Year \$: 2010
 Fixed O&M

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>
2014	PJFF/PAC		963,264	982,530	1,002,180
2014	SAM Mitigation		216,560	220,891	225,309
2014	PJFF/PAC		1,148,694	1,171,668	1,195,101
2014	SAM Mitigation		216,560	220,891	225,309
2015	PJFF/PAC		1,683,434	1,717,103	1,751,445
2014	PJFF/PAC		2,079,841	2,121,438	2,163,867
2014	SCR Turn-Down		0	0	0
2013	SAM Mitigation		0	0	0
2014	PJFF/PAC		2,501,442	2,551,471	2,602,500
2012	Sorbent Injection		161,928	165,166	168,470
2015	PJFF/PAC		2,057,652	2,098,805	2,140,781
2013	SCR Turn-Down		0	0	0
2013	SAM Mitigation		0	0	0
2015	PJFF/PAC		1,992,790	2,032,646	2,073,299
2014	SCR Turn-Down		0	0	0
2013	SAM Mitigation		0	0	0
2015	Combined 1&2 FGD		-166,277	-169,602	-172,994
2015	PJFF/PAC		2,280,547	2,326,158	2,372,681
2015	SAM Mitigation		59,741	60,936	62,155
2015	Combined 1&2 FGD		429,033	437,614	446,366
2015	PJFF/PAC		2,237,411	2,282,159	2,327,802
2015	SAM Mitigation		59,741	60,936	62,155
2014	FGD		0	0	0
2015	PJFF/PAC		2,039,729	2,080,524	2,122,134
2013	SAM Mitigation		59,229	60,414	61,622
2013	SCR Turn-Down		0	0	0
2014	FGD		0	0	0
2014	PJFF/PAC		2,391,348	2,439,175	2,487,958
2014	SAM Mitigation		59,741	60,936	62,155
2014	SCR Turn-Down		0	0	0
2015	PJFF/PAC		1,557,223	1,588,367	1,620,135
2016	SCR	1,871,000	3,257,456	3,322,605	3,389,058
2016	WFGD		0	0	0
2016	PJFF	1,191,000	2,073,560	2,115,031	2,157,332
2016	SAM Mitigation	174,000	302,938	308,997	315,177
2016	PAC Injection	169,000	294,233	300,118	306,120
2016	SCR	1,993,000	3,469,861	3,539,258	3,610,044
2016	WFGD		0	0	0
2016	PJFF	1,251,000	2,178,021	2,221,582	2,266,013
2016	SAM Mitigation	177,000	308,161	314,325	320,611
2016	PAC Injection	172,000	299,456	305,445	311,554
2016	SCR	2,392,000	4,164,530	4,247,820	4,332,777
2016	WFGD		0	0	0
2016	PJFF	1,632,000	2,841,352	2,898,179	2,956,142

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>
2016	SAM Mitigation	198,000	344,723	351,617	358,650
2016	PAC Injection	191,000	332,536	339,186	345,970
2016	SCR	943,000	1,641,786	1,674,622	1,708,114
2016	CDS-FF	3,322,000	5,783,682	5,899,356	6,017,343
2016	PAC Injection	141,000	245,484	250,394	255,402
2016	SCR	1,284,000	2,235,475	2,280,185	2,325,788
2016	CDS-FF	4,309,000	7,502,073	7,652,115	7,805,157
2016	PAC Injection	150,000	261,154	266,377	271,704

SCR	12,594,569	12,846,460	13,103,390
SCR	5,860,287	5,977,493	6,097,043
SCR	5,921,223	6,039,648	6,160,441

SCR	3,612,625	3,684,878	3,758,575
SCR	5,872,475	5,989,924	6,109,723

G:\11-051 Sierra Club KY IRP ;
Tab BR 1-2, Lines 17-20

	2038	2039	2040	2041	2042	2043
O&M						
BR1 SCR	3,613	3,685	3,759	3833.747	3910.422	3988.63
BR2 SCR	5,872	5,990	6,110	6231.917	6356.555	6483.687

G:\11-051 Sierra Club KY IRP ;
Tab GH2MC1-2, Lines 19-21

	2038	2039	2040	2041	2042	2043
O&M						
GH2SCR 0	12,595	12,846	13,103	13365.46	13632.77	13905.42
MC1SCR 0	5,860	5,977	6,097	6218.984	6343.364	6470.231
MC2SCR 0	5921.2233	6039.6478	6160.4407	6283.65	6409.323	6537.509

2% Year \$: 2010
 Fixed O&M

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>
2014	PJFF/PAC	
2014	SAM Mitigation	
2014	PJFF/PAC	
2014	SAM Mitigation	
2015	PJFF/PAC	
2014	PJFF/PAC	
2014	SCR Turn-Down	
2013	SAM Mitigation	
2014	PJFF/PAC	
2012	Sorbent Injection	
2015	PJFF/PAC	
2013	SCR Turn-Down	
2013	SAM Mitigation	
2015	PJFF/PAC	
2014	SCR Turn-Down	
2013	SAM Mitigation	
2015	Combined 1&2 FGD	
2015	PJFF/PAC	
2015	SAM Mitigation	
2015	Combined 1&2 FGD	
2015	PJFF/PAC	
2015	SAM Mitigation	
2014	FGD	
2015	PJFF/PAC	
2013	SAM Mitigation	
2013	SCR Turn-Down	
2014	FGD	
2014	PJFF/PAC	
2014	SAM Mitigation	
2014	SCR Turn-Down	
2015	PJFF/PAC	
2016	SCR	1,871,000
2016	WFGD	
2016	PJFF	1,191,000
2016	SAM Mitigation	174,000
2016	PAC Injection	169,000
2016	SCR	1,993,000
2016	WFGD	
2016	PJFF	1,251,000
2016	SAM Mitigation	177,000
2016	PAC Injection	172,000
2016	SCR	2,392,000
2016	WFGD	
2016	PJFF	1,632,000

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>
2016	SAM Mitigation	198,000
2016	PAC Injection	191,000
2016	SCR	943,000
2016	CDS-FF	3,322,000
2016	PAC Injection	141,000
2016	SCR	1,284,000
2016	CDS-FF	4,309,000
2016	PAC Injection	150,000

SCR
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SCR
SCR

G:\11-051 Sierra Club KY IRP ;
Tab BR 1-2, Lines 17-20

	2044	2045	2046	2047	2048	2049
O&M						
BR1 SCR	4068.403	4149.771	4232.766	4317.422	4403.77	4491.845
BR2 SCR	6613.36	6745.627	6880.54	7018.151	7158.514	7301.684

G:\11-051 Sierra Club KY IRP ;
Tab GH2MC1-2, Lines 19-21

	2044	2045	2046	2047	2048	2049
O&M						
GH2SCR 0	14183.53	14467.2	14756.55	15051.68	15352.71	15659.76
MC1SCR 0	6599.636	6731.628	6866.261	7003.586	7143.658	7286.531
MC2SCR 0	6668.259	6801.624	6937.657	7076.41	7217.938	7362.297

2%	Year \$:	2010
		Fixed O&M
<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>
2014	PJFF/PAC	
2014	SAM Mitigation	
2014	PJFF/PAC	
2014	SAM Mitigation	
2015	PJFF/PAC	
2014	PJFF/PAC	
2014	SCR Turn-Down	
2013	SAM Mitigation	
2014	PJFF/PAC	
2012	Sorbent Injection	
2015	PJFF/PAC	
2013	SCR Turn-Down	
2013	SAM Mitigation	
2015	PJFF/PAC	
2014	SCR Turn-Down	
2013	SAM Mitigation	
2015	Combined 1&2 FGD	
2015	PJFF/PAC	
2015	SAM Mitigation	
2015	Combined 1&2 FGD	
2015	PJFF/PAC	
2015	SAM Mitigation	
2014	FGD	
2015	PJFF/PAC	
2013	SAM Mitigation	
2013	SCR Turn-Down	
2014	FGD	
2014	PJFF/PAC	
2014	SAM Mitigation	
2014	SCR Turn-Down	
2015	PJFF/PAC	
2016	SCR	1,871,000
2016	WFGD	
2016	PJFF	1,191,000
2016	SAM Mitigation	174,000
2016	PAC Injection	169,000
2016	SCR	1,993,000
2016	WFGD	
2016	PJFF	1,251,000
2016	SAM Mitigation	177,000
2016	PAC Injection	172,000
2016	SCR	2,392,000
2016	WFGD	
2016	PJFF	1,632,000

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>
2016	SAM Mitigation	198,000
2016	PAC Injection	191,000
2016	SCR	943,000
2016	CDS-FF	3,322,000
2016	PAC Injection	141,000
2016	SCR	1,284,000
2016	CDS-FF	4,309,000
2016	PAC Injection	150,000

SCR
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SCR

SCR
SCR

G:\11-051 Sierra Club KY IRP ;
Tab BR 1-2, Lines 17-20

	2050	2051	2052	2053	2054	2055
O&M						
BR1 SCR	4581.682	4673.316	4766.782	4862.118	4959.36	5058.547
BR2 SCR	7447.718	7596.672	7748.606	7903.578	8061.649	8222.882

G:\11-051 Sierra Club KY IRP ;
Tab GH2MC1-2, Lines 19-21

	2050	2051	2052	2053	2054	2055
O&M						
GH2SCR 0	15972.96	16292.42	16618.27	16950.63	17289.64	17635.44
MC1SCR 0	7432.262	7580.907	7732.525	7887.175	8044.919	8205.817
MC2SCR 0	7509.543	7659.734	7812.928	7969.187	8128.571	8291.142

2% Year \$: 2010
 Fixed O&M

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>
2014	PJFF/PAC	
2014	SAM Mitigation	
2014	PJFF/PAC	
2014	SAM Mitigation	
2015	PJFF/PAC	
2014	PJFF/PAC	
2014	SCR Turn-Down	
2013	SAM Mitigation	
2014	PJFF/PAC	
2012	Sorbent Injection	
2015	PJFF/PAC	
2013	SCR Turn-Down	
2013	SAM Mitigation	
2015	PJFF/PAC	
2014	SCR Turn-Down	
2013	SAM Mitigation	
2015	Combined 1&2 FGD	
2015	PJFF/PAC	
2015	SAM Mitigation	
2015	Combined 1&2 FGD	
2015	PJFF/PAC	
2015	SAM Mitigation	
2014	FGD	
2015	PJFF/PAC	
2013	SAM Mitigation	
2013	SCR Turn-Down	
2014	FGD	
2014	PJFF/PAC	
2014	SAM Mitigation	
2014	SCR Turn-Down	
2015	PJFF/PAC	
2016	SCR	1,871,000
2016	WFGD	
2016	PJFF	1,191,000
2016	SAM Mitigation	174,000
2016	PAC Injection	169,000
2016	SCR	1,993,000
2016	WFGD	
2016	PJFF	1,251,000
2016	SAM Mitigation	177,000
2016	PAC Injection	172,000
2016	SCR	2,392,000
2016	WFGD	
2016	PJFF	1,632,000

<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>
2016	SAM Mitigation	198,000
2016	PAC Injection	191,000
2016	SCR	943,000
2016	CDS-FF	3,322,000
2016	PAC Injection	141,000
2016	SCR	1,284,000
2016	CDS-FF	4,309,000
2016	PAC Injection	150,000

SCR
SCR
SCR

SCR
SCR

G:\11-051 Sierra Club KY IRP ;
Tab BR 1-2, Lines 17-20

	2056	2057	2058	2059
O&M				
BR1 SCR	5159.718	5262.913	5368.171	5475.534
BR2 SCR	8387.34	8555.087	8726.188	8900.712

G:\11-051 Sierra Club KY IRP ;
Tab GH2MC1-2, Lines 19-21

	2056	2057	2058	2059
O&M				
GH2SCR 0	17988.15	18347.91	18714.87	19089.16
MC1SCR 0	8369.934	8537.332	8708.079	8882.24
MC2SCR 0	8456.965	8626.104	8798.626	8974.599

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
BR	BR1	101	69	164	256	346	434	520	605	689	771	852
BR	BR2	167	114	271	423	571	717	860	1,001	1,139	1,275	1,408
BR	BR3	416	285	675	1,053	1,423	1,786	2,143	2,493	2,838	3,176	3,508
CR	CR4	155	77	204	327	447	564	678	790	899	1,006	1,109
CR	CR5	168	84	221	355	485	611	735	856	975	1,090	1,202
CR	CR6	240	120	316	507	692	873	1,050	1,223	1,392	1,557	1,718
GH	GH1	475	510	1,206	1,884	2,548	3,200	3,843	4,477	5,101	5,717	6,322
GH	GH2	484	520	1,228	1,920	2,596	3,261	3,916	4,562	5,198	5,825	6,442
GH	GH3	480	516	1,218	1,904	2,575	3,234	3,883	4,524	5,155	5,777	6,389
GH	GH4	479	515	1,216	1,900	2,570	3,227	3,875	4,514	5,144	5,765	6,376
GR	GR3	68	39	96	151	205	258	309	360	410	458	506
GR	GR4	95	55	134	211	286	360	432	503	572	640	707
MC	MC1	303	309	767	1,213	1,649	2,077	2,497	2,910	3,315	3,714	4,104
MC	MC2	301	307	762	1,205	1,639	2,063	2,480	2,891	3,294	3,689	4,077
MC	MC3	391	398	989	1,565	2,128	2,680	3,222	3,755	4,278	4,792	5,296
MC	MC4	477	486	1,207	1,910	2,597	3,270	3,931	4,581	5,219	5,846	6,461
TC	TC1	383	115	270	420	567	712	855	996	1,135	1,272	1,407
TC	TC2	549	166	386	602	813	1,021	1,225	1,427	1,626	1,823	2,016
TY	TY3	71	94	233	368	499	628	754	878	999	1,118	1,234

2.50% Capital Escalation Rate

2011 CR	281	454	428	405	384	364	344	325	305	285
2012 CR		288	465	439	415	394	373	353	333	313
2013 CR			295	477	450	426	403	382	362	341
2014 CR				303	489	461	436	413	392	371
2015 CR					310	501	473	447	424	402
2016 CR						318	513	485	459	434
2017 CR							326	526	497	470
2018 CR								334	539	509
2019 CR									342	553

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
		2020 CR										351
		2021 CR										
		2022 CR										
		2023 CR										
		2024 CR										
		2025 CR										
		2026 CR										
		2027 CR										
		2028 CR										
		2029 CR										
		2030 CR										
		2031 CR										
		2032 CR										
		2033 CR										
		2034 CR										
		2035 CR										
		2036 CR										
		2037 CR										
		2038 CR										
		2039 CR										
		2040 CR										
		2011 MC	1,499	2,188	2,076	1,972	1,877	1,788	1,703	1,617	1,532	1,447
		2012 MC		1,536	2,243	2,128	2,021	1,923	1,833	1,745	1,658	1,570
		2013 MC			1,575	2,299	2,181	2,072	1,972	1,878	1,789	1,699
		2014 MC				1,614	2,357	2,235	2,124	2,021	1,925	1,834
		2015 MC					1,655	2,416	2,291	2,177	2,071	1,974
		2016 MC						1,696	2,476	2,348	2,231	2,123
		2017 MC							1,738	2,538	2,407	2,287
		2018 MC								1,782	2,601	2,467
		2019 MC									1,826	2,666
		2020 MC										1,872
		2021 MC										
		2022 MC										

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2023 MC											
	2024 MC											
	2025 MC											
	2026 MC											
	2027 MC											
	2028 MC											
	2029 MC											
	2030 MC											
	2031 MC											
	2032 MC											
	2033 MC											
	2034 MC											
	2035 MC											
	2036 MC											
	2037 MC											
	2038 MC											
	2039 MC											
	2040 MC											
	2011 TC		281	368	350	333	318	304	291	278	264	251
	2012 TC			288	377	358	341	326	312	298	284	271
	2013 TC				295	387	367	350	334	319	305	292
	2014 TC					303	396	376	359	342	327	313
	2015 TC						310	406	386	368	351	336
	2016 TC							318	416	396	377	360
	2017 TC								326	427	405	386
	2018 TC									427	437	416
	2019 TC										342	448
	2020 TC											351
	2021 TC											
	2022 TC											
	2023 TC											
	2024 TC											
	2025 TC											

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2026 TC											
	2027 TC											
	2028 TC											
	2029 TC											
	2030 TC											
	2031 TC											
	2032 TC											
	2033 TC											
	2034 TC											
	2035 TC											
	2036 TC											
	2037 TC											
	2038 TC											
	2039 TC											
	2040 TC											
	2011 GH		2,061	2,756	2,617	2,492	2,377	2,272	2,171	2,070	1,970	1,869
	2012 GH			2,113	2,825	2,683	2,554	2,436	2,328	2,225	2,122	2,019
	2013 GH				2,165	2,895	2,750	2,618	2,497	2,387	2,281	2,175
	2014 GH					2,219	2,968	2,819	2,683	2,560	2,446	2,338
	2015 GH						2,275	3,042	2,889	2,750	2,623	2,507
	2016 GH							2,332	3,118	2,961	2,819	2,689
	2017 GH								2,390	3,196	3,035	2,889
	2018 GH									2,450	3,276	3,111
	2019 GH										2,511	3,358
	2020 GH											2,574
	2021 GH											
	2022 GH											
	2023 GH											
	2024 GH											
	2025 GH											
	2026 GH											
	2027 GH											
	2028 GH											

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2029	GH										
	2030	GH										
	2031	GH										
	2032	GH										
	2033	GH										
	2034	GH										
	2035	GH										
	2036	GH										
	2037	GH										
	2038	GH										
	2039	GH										
	2040	GH										
	2011	BR	468	629	595	565	538	513	489	464	440	415
	2012	BR		480	645	610	579	551	526	501	476	451
	2013	BR			492	661	625	594	565	539	513	488
	2014	BR				504	677	641	609	579	552	526
	2015	BR					517	694	657	624	594	566
	2016	BR						530	712	674	639	608
	2017	BR							543	729	690	655
	2018	BR								557	748	708
	2019	BR									571	766
	2020	BR										585
	2021	BR										
	2022	BR										
	2023	BR										
	2024	BR										
	2025	BR										
	2026	BR										
	2027	BR										
	2028	BR										
	2029	BR										
	2030	BR										
	2031	BR										

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2032 BR											
	2033 BR											
	2034 BR											
	2035 BR											
	2036 BR											
	2037 BR											
	2038 BR											
	2039 BR											
	2040 BR											
	2011 GR		94	134	127	120	114	108	103	98	92	87
	2012 GR			96	137	130	123	117	111	106	100	95
	2013 GR				98	141	133	126	120	114	108	103
	2014 GR					101	144	136	129	123	117	111
	2015 GR						103	148	140	132	126	120
	2016 GR							106	151	143	136	129
	2017 GR								109	155	147	139
	2018 GR									111	159	150
	2019 GR										114	163
	2020 GR											117
	2021 GR											
	2022 GR											
	2023 GR											
	2024 GR											
	2025 GR											
	2026 GR											
	2027 GR											
	2028 GR											
	2029 GR											
	2030 GR											
	2031 GR											
	2032 GR											
	2033 GR											
	2034 GR											

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2035 GR											
	2036 GR											
	2037 GR											
	2038 GR											
	2039 GR											
	2040 GR											
	2011 TY		94	137	129	122	116	111	105	99	94	88
	2012 TY			96	140	132	125	119	113	108	102	96
	2013 TY				98	143	136	129	122	116	110	104
	2014 TY					101	147	139	132	125	119	113
	2015 TY						103	151	143	135	128	122
	2016 TY							106	154	146	138	131
	2017 TY								109	158	150	142
	2018 TY									111	162	153
	2019 TY										114	166
	2020 TY											117
	2021 TY											
	2022 TY											
	2023 TY											
	2024 TY											
	2025 TY											
	2026 TY											
	2027 TY											
	2028 TY											
	2029 TY											
	2030 TY											
	2031 TY											
	2032 TY											
	2033 TY											
	2034 TY											
	2035 TY											
	2036 TY											
	2037 TY											

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
		2038 TY										
		2039 TY										
		2040 TY										

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
BR1	101	931	1,008	1,085	1,163	1,241	1,320	1,399	1,479	1,560	1,642	1,724
BR2	167	1,539	1,667	1,794	1,922	2,052	2,182	2,313	2,446	2,579	2,714	2,850
BR3	416	3,834	4,153	4,469	4,789	5,111	5,435	5,762	6,092	6,425	6,761	7,100
CR4	155	1,210	1,308	1,405	1,501	1,596	1,691	1,786	1,880	1,974	2,023	2,073
CR5	168	1,312	1,418	1,522	1,626	1,730	1,833	1,936	2,038	2,139	2,193	2,247
CR6	240	1,874	2,026	2,175	2,324	2,471	2,619	2,765	2,911	3,056	3,132	3,210
GH1	475	6,918	7,504	8,080	8,653	9,231	9,814	10,402	10,995	11,594	12,199	12,809
GH2	484	7,049	7,646	8,233	8,817	9,405	9,999	10,599	11,204	11,814	12,430	13,052
GH3	480	6,991	7,583	8,165	8,744	9,328	9,917	10,511	11,111	11,716	12,327	12,944
GH4	479	6,977	7,567	8,148	8,726	9,308	9,896	10,489	11,088	11,692	12,302	12,917
GR3	68	553	598	643	689	734	780	825	871	918	964	1,011
GR4	95	772	836	899	962	1,026	1,089	1,153	1,217	1,282	1,347	1,412
MC1	303	4,487	4,862	5,229	5,592	5,956	6,320	6,686	7,053	7,421	7,790	8,160
MC2	301	4,458	4,830	5,194	5,555	5,916	6,279	6,642	7,007	7,372	7,739	8,106
MC3	391	5,790	6,274	6,747	7,216	7,685	8,156	8,628	9,102	9,576	10,052	10,530
MC4	477	7,064	7,654	8,231	8,803	9,376	9,950	10,526	11,103	11,683	12,263	12,846
TC1	383	1,539	1,670	1,799	1,927	2,057	2,188	2,320	2,453	2,588	2,725	2,863
TC2	549	2,207	2,394	2,579	2,762	2,948	3,136	3,325	3,517	3,710	3,906	4,104
TY3	71	1,347	1,458	1,568	1,677	1,787	1,898	2,008	2,119	2,230	2,341	2,453

2.50%

2011 CR	266	246	231	221	200	190	180	169	0	0	0
2012 CR	293	272	252	237	216	205	195	184	174	174	0
2013 CR	321	300	279	259	232	221	210	200	189	189	178
2014 CR	350	329	307	286	249	238	227	216	205	205	194
2015 CR	380	358	337	315	272	255	244	232	221	221	210
2016 CR	412	390	367	345	301	279	262	250	238	238	227
2017 CR	445	422	399	377	331	308	286	268	256	256	244
2018 CR	482	456	433	409	363	339	316	293	275	275	263
2019 CR	522	494	468	444	396	372	348	324	300	300	282

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2020 CR		567	535	506	479	455	430	406	381	357	332	307
2021 CR		360	581	548	519	491	466	441	416	391	365	340
2022 CR			369	595	562	532	504	478	452	426	400	375
2023 CR				378	610	576	545	516	490	463	437	410
2024 CR					387	625	591	559	529	502	475	448
2025 CR						397	641	605	573	542	514	487
2026 CR							407	657	621	587	556	527
2027 CR								417	673	636	602	570
2028 CR									428	690	652	617
2029 CR										438	708	668
2030 CR											449	725
2031 CR												461
2032 CR												
2033 CR												
2034 CR												
2035 CR												
2036 CR												
2037 CR												
2038 CR												
2039 CR												
2040 CR												
2011 MC		1,361	1,276	1,191	1,128	1,089	1,049	1,010	970	931	891	851
2012 MC		1,483	1,395	1,308	1,221	1,157	1,116	1,075	1,035	994	954	913
2013 MC		1,610	1,520	1,430	1,341	1,251	1,185	1,144	1,102	1,061	1,019	978
2014 MC		1,742	1,650	1,558	1,466	1,374	1,282	1,215	1,173	1,130	1,087	1,045
2015 MC		1,879	1,785	1,691	1,597	1,503	1,409	1,314	1,245	1,202	1,158	1,115
2016 MC		2,023	1,926	1,830	1,733	1,637	1,540	1,444	1,347	1,277	1,232	1,187
2017 MC		2,176	2,073	1,975	1,876	1,777	1,678	1,579	1,480	1,381	1,309	1,263
2018 MC		2,344	2,231	2,125	2,024	1,922	1,821	1,720	1,618	1,517	1,415	1,341
2019 MC		2,529	2,403	2,286	2,178	2,075	1,971	1,867	1,763	1,659	1,555	1,451
2020 MC		2,733	2,592	2,463	2,344	2,233	2,126	2,020	1,913	1,807	1,700	1,594
2021 MC		1,919	2,801	2,657	2,524	2,402	2,289	2,180	2,070	1,961	1,852	1,743
2022 MC			1,967	2,871	2,723	2,588	2,462	2,346	2,234	2,122	2,010	1,898

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2023 MC				2,016	2,943	2,792	2,652	2,524	2,405	2,290	2,175	2,060
2024 MC					2,066	3,017	2,861	2,719	2,587	2,465	2,347	2,230
2025 MC						2,118	3,092	2,933	2,787	2,651	2,526	2,406
2026 MC							2,171	3,170	3,006	2,856	2,718	2,589
2027 MC								2,225	3,249	3,081	2,928	2,786
2028 MC									2,281	3,330	3,158	3,001
2029 MC										2,338	3,413	3,237
2030 MC											2,396	3,499
2031 MC												2,456
2032 MC												
2033 MC												
2034 MC												
2035 MC												
2036 MC												
2037 MC												
2038 MC												
2039 MC												
2040 MC												
2011 TC		238	225	211	203	198	193	189	184	179	175	170
2012 TC		257	244	230	217	208	203	198	193	189	184	179
2013 TC		278	264	250	236	222	213	208	203	198	193	188
2014 TC		299	285	270	256	242	228	218	213	208	203	198
2015 TC		321	306	292	277	263	248	233	224	218	213	208
2016 TC		344	329	314	299	284	269	254	239	229	224	219
2017 TC		369	353	337	322	307	291	276	261	245	235	230
2018 TC		396	378	361	346	330	314	298	283	267	251	241
2019 TC		426	406	387	370	354	338	322	306	290	274	258
2020 TC		460	437	416	397	380	363	347	330	314	297	281
2021 TC		360	471	447	426	407	389	372	355	338	321	305
2022 TC			369	483	459	437	417	399	381	364	347	329
2023 TC				378	495	470	448	427	409	391	373	355
2024 TC					387	507	482	459	438	419	401	383
2025 TC						397	520	494	470	449	429	411

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Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2026 TC							407	533	506	482	460	440
2027 TC								417	546	519	494	472
2028 TC									428	560	532	507
2029 TC										438	574	545
2030 TC											449	588
2031 TC												461
2032 TC												
2033 TC												
2034 TC												
2035 TC												
2036 TC												
2037 TC												
2038 TC												
2039 TC												
2040 TC												
2011 GH		1,768	1,667	1,567	1,498	1,460	1,422	1,384	1,346	1,309	1,271	1,233
2012 GH		1,916	1,812	1,709	1,606	1,535	1,496	1,458	1,419	1,380	1,341	1,303
2013 GH		2,069	1,963	1,858	1,752	1,646	1,573	1,534	1,494	1,454	1,415	1,375
2014 GH		2,229	2,121	2,013	1,904	1,796	1,687	1,613	1,572	1,531	1,491	1,450
2015 GH		2,396	2,285	2,174	2,063	1,952	1,841	1,729	1,653	1,611	1,570	1,528
2016 GH		2,570	2,456	2,342	2,228	2,114	2,001	1,887	1,773	1,694	1,652	1,609
2017 GH		2,756	2,634	2,518	2,401	2,284	2,167	2,051	1,934	1,817	1,737	1,693
2018 GH		2,962	2,825	2,700	2,581	2,461	2,341	2,221	2,102	1,982	1,862	1,780
2019 GH		3,189	3,036	2,896	2,768	2,645	2,522	2,400	2,277	2,154	2,032	1,909
2020 GH		3,442	3,269	3,112	2,968	2,837	2,711	2,585	2,460	2,334	2,208	2,082
2021 GH		2,638	3,528	3,350	3,189	3,042	2,908	2,779	2,650	2,521	2,392	2,263
2022 GH			2,704	3,616	3,434	3,269	3,119	2,981	2,848	2,716	2,584	2,452
2023 GH				2,772	3,706	3,520	3,351	3,196	3,055	2,920	2,784	2,649
2024 GH					2,841	3,799	3,608	3,435	3,276	3,131	2,993	2,854
2025 GH						2,912	3,894	3,698	3,521	3,358	3,210	3,067
2026 GH							2,985	3,991	3,791	3,609	3,442	3,290
2027 GH								3,060	4,091	3,886	3,699	3,528
2028 GH									3,136	4,193	3,983	3,791

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2029 GH										3,214	4,298	4,082
2030 GH											3,295	4,406
2031 GH												3,377
2032 GH												
2033 GH												
2034 GH												
2035 GH												
2036 GH												
2037 GH												
2038 GH												
2039 GH												
2040 GH												
2011 BR		391	367	350	341	332	323	315	306	297	288	279
2012 BR		426	401	376	359	350	341	332	323	313	304	295
2013 BR		462	436	411	385	368	358	349	340	331	321	312
2014 BR		500	474	447	421	395	377	367	358	348	339	329
2015 BR		539	512	485	458	432	405	386	377	367	357	347
2016 BR		580	553	525	498	470	442	415	396	386	376	366
2017 BR		624	595	567	538	510	482	453	425	406	396	385
2018 BR		672	639	610	581	552	523	494	465	436	416	406
2019 BR		725	688	655	625	595	566	536	506	476	447	426
2020 BR		785	743	706	672	641	610	580	549	519	488	458
2021 BR		600	805	762	723	688	657	625	594	563	532	500
2022 BR			615	825	781	741	706	673	641	609	577	545
2023 BR				630	846	801	760	723	690	657	624	591
2024 BR					646	867	821	779	741	707	673	640
2025 BR						662	889	841	798	760	725	690
2026 BR							678	911	862	818	779	743
2027 BR								695	934	884	839	798
2028 BR									713	957	906	860
2029 BR										731	981	928
2030 BR											749	1,005
2031 BR												768

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2032 BR												
2033 BR												
2034 BR												
2035 BR												
2036 BR												
2037 BR												
2038 BR												
2039 BR												
2040 BR												
2011 GR		81	76	72	70	68	65	63	61	58	56	54
2012 GR		89	83	78	74	72	69	67	65	62	60	58
2013 GR		97	91	86	80	76	73	71	69	66	64	61
2014 GR		105	99	94	88	82	78	75	73	70	68	65
2015 GR		114	108	102	96	90	84	80	77	75	72	70
2016 GR		123	117	111	104	98	92	86	82	79	77	74
2017 GR		132	126	120	113	107	101	94	88	84	81	78
2018 GR		143	135	129	123	116	110	103	97	90	86	83
2019 GR		154	146	139	132	126	119	112	106	99	93	88
2020 GR		167	158	150	142	135	129	122	115	108	102	95
2021 GR		120	171	162	154	146	139	132	125	118	111	104
2022 GR			123	176	166	157	150	142	135	128	121	114
2023 GR				126	180	170	161	153	146	139	131	124
2024 GR					129	184	174	165	157	150	142	135
2025 GR						132	189	179	169	161	153	146
2026 GR							136	194	183	174	165	157
2027 GR								139	199	188	178	169
2028 GR									143	204	193	183
2029 GR										146	209	197
2030 GR											150	214
2031 GR												154
2032 GR												
2033 GR												
2034 GR												

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2035 GR												
2036 GR												
2037 GR												
2038 GR												
2039 GR												
2040 GR												
2011 TY		83	77	73	71	68	66	63	61	58	56	53
2012 TY		90	85	79	75	72	70	67	65	62	60	57
2013 TY		99	93	87	81	77	74	71	69	66	64	61
2014 TY		107	101	95	89	83	79	76	73	71	68	65
2015 TY		116	110	104	97	91	85	81	78	75	72	70
2016 TY		125	119	112	106	100	93	87	83	80	77	74
2017 TY		135	128	122	115	109	102	96	89	85	82	79
2018 TY		145	138	131	125	118	111	105	98	92	87	84
2019 TY		157	149	142	135	128	121	114	107	101	94	89
2020 TY		171	161	153	145	138	131	124	117	110	103	96
2021 TY		120	175	165	157	149	141	134	127	120	113	106
2022 TY			123	179	169	161	152	145	138	130	123	116
2023 TY				126	184	174	165	156	149	141	134	126
2024 TY					129	188	178	169	160	152	145	137
2025 TY						132	193	182	173	164	156	148
2026 TY							136	198	187	177	168	160
2027 TY								139	203	192	182	172
2028 TY									143	208	196	186
2029 TY										146	213	201
2030 TY											150	218
2031 TY												154

2031

2030

2029

2028

2027

2026

2025

2024

2023

2022

2021

Unit Capacity

2038 TY

2039 TY

2040 TY

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
BR1	101	1,807	1,891	1,975	2,061	2,147	2,234	2,322	2,411	2,501	2,446	2,340
BR2	167	2,988	3,126	3,266	3,407	3,550	3,694	3,839	3,986	4,135	4,045	3,868
BR3	416	7,442	7,787	8,136	8,488	8,843	9,202	9,564	9,930	10,300	10,076	9,636
CR4	155	2,125	2,178	2,233	2,289	2,346	2,405	2,465	2,526	2,589	2,492	2,292
CR5	168	2,304	2,361	2,420	2,481	2,543	2,606	2,671	2,738	2,807	2,701	2,484
CR6	240	3,291	3,373	3,457	3,544	3,632	3,723	3,816	3,912	4,009	3,858	3,549
GH1	475	13,425	14,048	14,676	15,311	15,953	16,601	17,256	17,918	18,587	18,193	17,419
GH2	484	13,680	14,314	14,954	15,601	16,255	16,915	17,583	18,257	18,939	18,537	17,749
GH3	480	13,567	14,196	14,831	15,472	16,121	16,775	17,437	18,106	18,782	18,384	17,602
GH4	479	13,538	14,166	14,800	15,440	16,087	16,741	17,401	18,069	18,743	18,346	17,565
GR3	68	1,057	1,104	1,152	1,199	1,247	1,295	1,343	1,377	1,411	1,364	1,281
GR4	95	1,477	1,543	1,609	1,675	1,742	1,809	1,876	1,923	1,971	1,906	1,790
MC1	303	8,531	8,903	9,277	9,651	10,027	10,278	10,535	10,798	11,068	10,698	10,020
MC2	301	8,475	8,845	9,216	9,588	9,961	10,210	10,465	10,727	10,995	10,627	9,954
MC3	391	11,009	11,489	11,971	12,455	12,940	13,263	13,595	13,934	14,283	13,805	12,931
MC4	477	13,430	14,016	14,604	15,194	15,786	16,180	16,585	16,999	17,424	16,841	15,775
TC1	383	3,002	3,144	3,286	3,431	3,577	3,725	3,875	4,026	4,180	4,093	3,927
TC2	549	4,304	4,506	4,711	4,918	5,127	5,339	5,554	5,771	5,991	5,866	5,629
TY3	71	2,565	2,678	2,790	2,904	3,017	3,092	3,170	3,249	3,330	3,217	3,011

2.50%

2011 CR	0	0	0	0	0	0	0	0	0	0	0	0
2012 CR	0	0	0	0	0	0	0	0	0	0	0	0
2013 CR	0	0	0	0	0	0	0	0	0	0	0	0
2014 CR	182	0	0	0	0	0	0	0	0	0	0	0
2015 CR	198	187	0	0	0	0	0	0	0	0	0	0
2016 CR	215	203	192	0	0	0	0	0	0	0	0	0
2017 CR	232	220	208	196	0	0	0	0	0	0	0	0
2018 CR	250	238	226	214	201	0	0	0	0	0	0	0
2019 CR	269	257	244	232	219	206	0	0	0	0	0	0

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Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2020 CR		289	276	263	250	237	224	212	0	0	0	0
2021 CR		315	296	283	270	256	243	230	217	0	0	0
2022 CR		349	323	303	290	276	263	249	236	222	0	0
2023 CR		384	358	331	311	297	283	269	256	242	228	0
2024 CR		421	394	366	339	319	305	290	276	262	248	234
2025 CR		459	431	403	376	348	327	312	298	283	268	254
2026 CR		499	470	442	413	385	357	335	320	305	290	275
2027 CR		540	511	482	453	424	395	365	343	328	313	297
2028 CR		584	554	524	494	464	434	404	375	352	336	320
2029 CR		632	599	568	537	506	476	445	415	384	361	345
2030 CR		685	648	614	582	551	519	488	456	425	394	370
2031 CR		743	702	664	629	596	564	532	500	468	436	403
2032 CR		472	762	720	681	645	611	578	545	512	479	446
2033 CR			484	781	738	698	661	627	593	559	525	491
2034 CR				496	800	756	715	677	642	608	573	538
2035 CR					508	820	775	733	694	658	623	587
2036 CR						521	841	794	751	712	675	638
2037 CR							534	862	814	770	730	692
2038 CR								547	884	835	789	748
2039 CR									561	906	855	809
2040 CR										575	928	877
2011 MC		812	772	733	693	654	0	0	0	0	0	0
2012 MC		873	832	792	751	711	670	0	0	0	0	0
2013 MC		936	895	853	811	770	728	687	0	0	0	0
2014 MC		1,002	960	917	874	832	789	747	704	0	0	0
2015 MC		1,071	1,027	984	940	896	853	809	765	722	0	0
2016 MC		1,142	1,098	1,053	1,008	963	919	874	829	784	740	0
2017 MC		1,217	1,171	1,125	1,079	1,033	987	942	896	850	804	758
2018 MC		1,294	1,247	1,200	1,153	1,106	1,059	1,012	965	918	871	824
2019 MC		1,375	1,327	1,278	1,230	1,182	1,134	1,086	1,037	989	941	893
2020 MC		1,487	1,409	1,360	1,310	1,261	1,212	1,162	1,113	1,063	1,014	965
2021 MC		1,634	1,524	1,444	1,394	1,343	1,292	1,242	1,191	1,141	1,090	1,039
2022 MC		1,786	1,674	1,562	1,480	1,429	1,377	1,325	1,273	1,221	1,169	1,117

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Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2023 MC		1,946	1,831	1,716	1,601	1,518	1,464	1,411	1,358	1,305	1,252	1,198
2024 MC		2,112	1,994	1,877	1,759	1,642	1,555	1,501	1,446	1,392	1,337	1,283
2025 MC		2,285	2,165	2,044	1,924	1,803	1,683	1,594	1,538	1,483	1,427	1,371
2026 MC		2,466	2,342	2,219	2,095	1,972	1,848	1,725	1,634	1,577	1,520	1,462
2027 MC		2,654	2,528	2,401	2,274	2,148	2,021	1,894	1,768	1,675	1,616	1,558
2028 MC		2,855	2,721	2,591	2,461	2,331	2,201	2,072	1,942	1,812	1,717	1,657
2029 MC		3,076	2,927	2,789	2,656	2,522	2,389	2,256	2,123	1,990	1,857	1,760
2030 MC		3,318	3,153	3,000	2,858	2,722	2,586	2,449	2,313	2,176	2,040	1,904
2031 MC		3,586	3,401	3,232	3,075	2,930	2,790	2,650	2,510	2,371	2,231	2,091
2032 MC		2,518	3,676	3,486	3,312	3,152	3,003	2,860	2,716	2,573	2,430	2,287
2033 MC			2,580	3,768	3,573	3,395	3,231	3,078	2,931	2,784	2,637	2,491
2034 MC				2,645	3,862	3,663	3,480	3,311	3,155	3,004	2,854	2,703
2035 MC					2,711	3,958	3,754	3,567	3,394	3,234	3,080	2,925
2036 MC						2,779	4,057	3,848	3,656	3,479	3,315	3,157
2037 MC							2,848	4,159	3,944	3,748	3,566	3,398
2038 MC								2,920	4,263	4,043	3,841	3,655
2039 MC									2,993	4,369	4,144	3,937
2040 MC										3,067	4,478	4,248
2011 TC		165	161	156	152	147	142	138	133	128	124	119
2012 TC		174	170	165	160	155	151	146	141	136	132	127
2013 TC		184	179	174	169	164	159	154	149	145	140	135
2014 TC		193	188	183	178	173	168	163	158	153	148	143
2015 TC		203	198	193	188	183	178	172	167	162	157	152
2016 TC		213	208	203	198	192	187	182	177	171	166	161
2017 TC		224	219	213	208	203	197	192	187	181	176	170
2018 TC		235	230	224	219	213	208	202	197	191	186	180
2019 TC		247	241	235	230	224	219	213	207	202	196	190
2020 TC		264	253	247	241	236	230	224	218	212	207	201
2021 TC		288	271	259	253	247	241	236	230	224	218	212
2022 TC		312	295	277	266	260	254	248	241	235	229	223
2023 TC		338	320	302	284	272	266	260	254	247	241	235
2024 TC		364	346	328	310	292	279	273	266	260	254	247
2025 TC		392	373	355	336	317	299	286	280	273	267	260

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2026 TC		421	402	383	364	345	325	306	293	287	280	273
2027 TC		451	432	412	392	373	353	334	314	301	294	287
2028 TC		484	463	442	422	402	382	362	342	322	308	301
2029 TC		519	496	474	453	433	412	392	371	350	330	316
2030 TC		559	532	508	486	465	444	423	401	380	359	338
2031 TC		603	573	546	521	498	476	455	433	411	390	368
2032 TC		472	618	587	559	534	511	488	466	444	422	400
2033 TC		484	484	633	602	573	547	523	501	478	455	432
2034 TC				496	649	617	588	561	536	513	490	466
2035 TC					508	665	632	602	575	550	526	502
2036 TC						521	682	648	617	589	564	539
2037 TC							534	699	664	633	604	578
2038 TC								547	717	681	648	619
2039 TC									561	735	698	665
2040 TC										575	753	715
2011 GH		1,195	1,158	1,120	1,082	1,044	1,007	969	931	893	856	818
2012 GH		1,264	1,225	1,187	1,148	1,109	1,070	1,032	993	954	916	877
2013 GH		1,335	1,296	1,256	1,216	1,177	1,137	1,097	1,058	1,018	978	939
2014 GH		1,409	1,369	1,328	1,287	1,247	1,206	1,165	1,125	1,084	1,043	1,003
2015 GH		1,486	1,445	1,403	1,361	1,320	1,278	1,236	1,194	1,153	1,111	1,069
2016 GH		1,566	1,523	1,481	1,438	1,395	1,353	1,310	1,267	1,224	1,182	1,139
2017 GH		1,649	1,605	1,562	1,518	1,474	1,430	1,386	1,343	1,299	1,255	1,211
2018 GH		1,735	1,690	1,645	1,601	1,556	1,511	1,466	1,421	1,376	1,331	1,286
2019 GH		1,825	1,779	1,733	1,687	1,641	1,595	1,549	1,503	1,457	1,410	1,364
2020 GH		1,957	1,870	1,823	1,776	1,729	1,682	1,634	1,587	1,540	1,493	1,446
2021 GH		2,134	2,006	1,917	1,869	1,820	1,772	1,724	1,675	1,627	1,579	1,530
2022 GH		2,320	2,188	2,056	1,965	1,915	1,866	1,816	1,767	1,717	1,668	1,618
2023 GH		2,513	2,378	2,243	2,107	2,014	1,963	1,912	1,862	1,811	1,760	1,709
2024 GH		2,715	2,576	2,437	2,299	2,160	2,064	2,012	1,960	1,908	1,856	1,804
2025 GH		2,925	2,783	2,641	2,498	2,356	2,214	2,116	2,063	2,009	1,956	1,903
2026 GH		3,144	2,998	2,852	2,707	2,561	2,415	2,269	2,169	2,114	2,060	2,005
2027 GH		3,372	3,223	3,073	2,924	2,774	2,625	2,475	2,326	2,223	2,167	2,111
2028 GH		3,617	3,456	3,303	3,150	2,997	2,844	2,690	2,537	2,384	2,279	2,221

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2029 GH		3,886	3,707	3,543	3,386	3,229	3,072	2,915	2,758	2,601	2,444	2,336
2030 GH		4,184	3,983	3,800	3,631	3,470	3,310	3,149	2,988	2,827	2,666	2,505
2031 GH		4,516	4,289	4,083	3,895	3,722	3,557	3,392	3,227	3,062	2,897	2,732
2032 GH		3,462	4,629	4,396	4,185	3,992	3,815	3,646	3,477	3,308	3,139	2,970
2033 GH			3,548	4,744	4,506	4,289	4,092	3,911	3,737	3,564	3,391	3,217
2034 GH				3,637	4,863	4,619	4,397	4,194	4,008	3,831	3,653	3,475
2035 GH					3,728	4,984	4,734	4,507	4,299	4,109	3,927	3,744
2036 GH						3,821	5,109	4,852	4,619	4,406	4,211	4,025
2037 GH							3,917	5,237	4,974	4,735	4,517	4,317
2038 GH								4,014	5,368	5,098	4,853	4,629
2039 GH									4,115	5,502	5,226	4,974
2040 GH										4,218	5,639	5,356
2011 BR		271	262	253	244	235	226	218	209	200	191	182
2012 BR		286	277	268	259	250	241	232	223	214	205	196
2013 BR		303	293	284	275	266	256	247	238	229	219	210
2014 BR		320	310	301	291	282	272	263	253	244	234	225
2015 BR		338	328	318	308	299	289	279	269	260	250	240
2016 BR		356	346	336	326	316	306	296	286	276	266	256
2017 BR		375	365	355	344	334	324	314	303	293	283	273
2018 BR		395	385	374	364	353	343	332	322	311	301	290
2019 BR		416	405	394	383	373	362	351	340	330	319	308
2020 BR		437	426	415	404	393	382	371	360	349	338	327
2021 BR		469	448	437	425	414	403	391	380	369	358	346
2022 BR		513	481	459	448	436	424	413	401	390	378	367
2023 BR		559	526	493	471	459	447	435	423	411	399	388
2024 BR		606	573	539	505	482	470	458	446	434	422	409
2025 BR		656	621	587	552	518	495	482	470	457	445	432
2026 BR		708	672	637	602	566	531	507	494	481	469	456
2027 BR		761	725	689	653	617	580	544	520	506	493	480
2028 BR		818	781	743	706	669	632	595	558	533	519	506
2029 BR		881	839	800	762	724	686	648	610	572	546	532
2030 BR		952	903	860	820	781	742	703	664	625	586	559
2031 BR		1,031	975	926	881	841	801	761	721	681	641	601

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2032 BR	787											
2033 BR		1,056	1,000	949	903	862	821	780	739	698	657	
2034 BR		806	1,083	1,025	973	926	883	841	799	757	715	
2035 BR			827	1,110	1,050	997	949	905	862	819	776	
2036 BR				847	1,138	1,077	1,022	973	928	884	840	
2037 BR					868	1,166	1,104	1,048	997	951	906	
2038 BR					890	890	1,195	1,131	1,074	1,022	975	
2039 BR					912	1,225	1,160	1,101	1,047	1,000	953	
2040 BR					935	1,256	1,189	1,128	1,074	1,022	975	
2041 GR												
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Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2035 GR					169	242	229	217	206	196	186	177
2036 GR						174	248	235	222	211	201	191
2037 GR							178	254	240	228	217	206
2038 GR								182	261	246	234	222
2039 GR									187	267	253	239
2040 GR										192	274	259
2011 TY		51	48	46	43	41	0	0	0	0	0	0
2012 TY		55	52	49	47	44	42	0	0	0	0	0
2013 TY		59	56	53	51	48	46	43	0	0	0	0
2014 TY		63	60	57	55	52	49	47	44	0	0	0
2015 TY		67	64	61	59	56	53	51	48	45	0	0
2016 TY		71	69	66	63	60	57	55	52	49	46	0
2017 TY		76	73	70	67	65	62	59	56	53	50	47
2018 TY		81	78	75	72	69	66	63	60	57	54	52
2019 TY		86	83	80	77	74	71	68	65	62	59	56
2020 TY		91	88	85	82	79	76	73	70	66	63	60
2021 TY		99	93	90	87	84	81	78	74	71	68	65
2022 TY		108	101	96	93	89	86	83	80	76	73	70
2023 TY		119	111	104	98	95	92	88	85	82	78	75
2024 TY		129	122	114	106	101	97	94	90	87	84	80
2025 TY		140	133	125	117	109	103	100	96	93	89	86
2026 TY		152	144	136	128	120	112	106	102	99	95	91
2027 TY		164	156	148	139	131	123	114	108	105	101	97
2028 TY		177	168	160	151	143	134	126	117	111	107	104
2029 TY		191	181	172	164	155	146	138	129	120	114	110
2030 TY		206	196	186	177	168	159	150	141	132	123	117
2031 TY		224	212	201	190	181	172	163	154	145	135	126
2032 TY		157	229	217	206	195	186	176	167	158	148	139
2033 TY			161	235	222	211	200	190	181	171	161	152
2034 TY				165	241	228	216	205	195	185	175	165
2035 TY					169	247	234	221	210	200	190	180
2036 TY						174	253	239	227	215	205	195
2037 TY							178	259	245	233	221	210

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2038 TY								182	266	252	238	226
2039 TY								187		273	258	244
2040 TY										192	279	264

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
BR1	101	2,239	2,145	2,055	1,969	1,867	1,770	1,678	1,591	1,510	1,434	1,361
BR2	167	3,703	3,546	3,397	3,255	3,087	2,926	2,774	2,631	2,496	2,371	2,251
BR3	416	9,223	8,833	8,463	8,109	7,689	7,289	6,910	6,553	6,218	5,906	5,607
CR4	155	2,102	1,921	1,747	1,580	1,421	1,269	1,125	988	859	738	623
CR5	168	2,278	2,082	1,893	1,713	1,540	1,375	1,219	1,071	931	800	675
CR6	240	3,255	2,974	2,705	2,447	2,200	1,965	1,741	1,529	1,330	1,143	965
GH1	475	16,688	15,994	15,334	14,702	14,098	13,375	12,686	12,033	11,415	10,834	10,291
GH2	484	17,004	16,297	15,624	14,981	14,365	13,628	12,927	12,261	11,631	11,039	10,486
GH3	480	16,863	16,163	15,495	14,857	14,246	13,516	12,820	12,159	11,535	10,948	10,399
GH4	479	16,828	16,129	15,463	14,826	14,217	13,488	12,793	12,134	11,511	10,925	10,378
GR3	68	1,203	1,128	1,056	988	922	860	801	745	692	643	595
GR4	95	1,680	1,575	1,476	1,380	1,288	1,201	1,118	1,040	967	898	832
MC1	303	9,375	8,758	8,166	7,598	7,053	6,531	6,033	5,559	5,110	4,687	4,290
MC2	301	9,313	8,700	8,112	7,548	7,007	6,488	5,993	5,523	5,077	4,656	4,262
MC3	391	12,097	11,301	10,538	9,805	9,102	8,428	7,785	7,174	6,595	6,048	5,536
MC4	477	14,758	13,787	12,856	11,962	11,104	10,282	9,498	8,752	8,045	7,379	6,754
TC1	383	3,771	3,623	3,483	3,349	3,222	3,101	2,986	2,878	2,777	2,652	2,536
TC2	549	5,405	5,193	4,992	4,801	4,618	4,445	4,280	4,125	3,980	3,802	3,636
TY3	71	2,815	2,629	2,451	2,281	2,117	1,962	1,814	1,675	1,543	1,420	1,303

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2011 CR	0	0	0	0	0	0	0	0	0	0	0	0
2012 CR	0	0	0	0	0	0	0	0	0	0	0	0
2013 CR	0	0	0	0	0	0	0	0	0	0	0	0
2014 CR	0	0	0	0	0	0	0	0	0	0	0	0
2015 CR	0	0	0	0	0	0	0	0	0	0	0	0
2016 CR	0	0	0	0	0	0	0	0	0	0	0	0
2017 CR	0	0	0	0	0	0	0	0	0	0	0	0
2018 CR	0	0	0	0	0	0	0	0	0	0	0	0
2019 CR	0	0	0	0	0	0	0	0	0	0	0	0

MTPCapital

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2020 CR	0	0	0	0	0	0	0	0	0	0	0	0
2021 CR	0	0	0	0	0	0	0	0	0	0	0	0
2022 CR	0	0	0	0	0	0	0	0	0	0	0	0
2023 CR	0	0	0	0	0	0	0	0	0	0	0	0
2024 CR	0	0	0	0	0	0	0	0	0	0	0	0
2025 CR	239	0	0	0	0	0	0	0	0	0	0	0
2026 CR	260	245	0	0	0	0	0	0	0	0	0	0
2027 CR	282	267	252	0	0	0	0	0	0	0	0	0
2028 CR	305	289	273	258	0	0	0	0	0	0	0	0
2029 CR	329	312	296	280	264	0	0	0	0	0	0	0
2030 CR	353	337	320	304	287	271	0	0	0	0	0	0
2031 CR	379	362	345	328	311	294	278	0	0	0	0	0
2032 CR	414	388	371	354	336	319	302	302	285	0	0	0
2033 CR	458	424	398	380	363	345	327	327	309	292	0	0
2034 CR	504	469	434	408	390	372	353	353	335	317	299	0
2035 CR	552	516	481	445	418	400	381	381	362	344	325	306
2036 CR	602	566	529	493	456	429	410	410	390	371	352	333
2037 CR	654	617	580	542	505	468	439	439	420	400	381	361
2038 CR	709	671	633	594	556	518	480	480	450	430	410	390
2039 CR	766	727	688	648	609	570	531	531	492	462	441	421
2040 CR	829	786	745	705	665	624	584	584	544	504	473	452
2011 MC	0	0	0	0	0	0	0	0	0	0	0	0
2012 MC	0	0	0	0	0	0	0	0	0	0	0	0
2013 MC	0	0	0	0	0	0	0	0	0	0	0	0
2014 MC	0	0	0	0	0	0	0	0	0	0	0	0
2015 MC	0	0	0	0	0	0	0	0	0	0	0	0
2016 MC	0	0	0	0	0	0	0	0	0	0	0	0
2017 MC	0	0	0	0	0	0	0	0	0	0	0	0
2018 MC	777	0	0	0	0	0	0	0	0	0	0	0
2019 MC	845	797	0	0	0	0	0	0	0	0	0	0
2020 MC	915	866	816	0	0	0	0	0	0	0	0	0
2021 MC	989	938	887	837	0	0	0	0	0	0	0	0
2022 MC	1,065	1,013	962	910	858	0	0	0	0	0	0	0

MTPCapital

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2023 MC		1,145	1,092	1,039	986	932	879	0	0	0	0	0
2024 MC		1,228	1,174	1,119	1,065	1,010	956	901	0	0	0	0
2025 MC		1,315	1,259	1,203	1,147	1,091	1,035	980	924	0	0	0
2026 MC		1,405	1,348	1,290	1,233	1,176	1,119	1,061	1,004	947	0	0
2027 MC		1,499	1,440	1,381	1,323	1,264	1,205	1,147	1,088	1,029	970	0
2028 MC		1,597	1,536	1,476	1,416	1,356	1,296	1,235	1,175	1,115	1,055	995
2029 MC		1,698	1,636	1,575	1,513	1,451	1,390	1,328	1,266	1,205	1,143	1,081
2030 MC		1,804	1,741	1,677	1,614	1,551	1,488	1,424	1,361	1,298	1,235	1,172
2031 MC		1,951	1,849	1,784	1,719	1,655	1,590	1,525	1,460	1,395	1,330	1,266
2032 MC		2,143	2,000	1,895	1,829	1,762	1,696	1,629	1,563	1,497	1,430	1,364
2033 MC		2,344	2,197	2,050	1,943	1,874	1,806	1,738	1,670	1,602	1,534	1,466
2034 MC		2,553	2,402	2,252	2,101	1,991	1,921	1,852	1,782	1,712	1,642	1,572
2035 MC		2,771	2,617	2,462	2,308	2,154	2,041	1,969	1,898	1,826	1,755	1,683
2036 MC		2,998	2,840	2,682	2,524	2,366	2,208	2,092	2,019	1,945	1,872	1,799
2037 MC		3,236	3,073	2,911	2,749	2,587	2,425	2,263	2,144	2,069	1,994	1,919
2038 MC		3,483	3,316	3,150	2,984	2,818	2,652	2,486	2,319	2,198	2,121	2,044
2039 MC		3,746	3,570	3,399	3,229	3,059	2,888	2,718	2,548	2,377	2,253	2,174
2040 MC		4,036	3,840	3,659	3,484	3,310	3,135	2,961	2,786	2,611	2,437	2,309
2011 TC		114	110	105	101	96	91	87	82	77	0	0
2012 TC		122	117	113	108	103	98	94	89	84	79	0
2013 TC		130	125	120	115	111	106	101	96	91	86	81
2014 TC		138	133	128	123	118	113	108	103	98	93	88
2015 TC		147	142	137	131	126	121	116	111	106	101	96
2016 TC		156	150	145	140	135	130	124	119	114	109	103
2017 TC		165	160	154	149	144	138	133	127	122	117	111
2018 TC		175	169	164	158	153	147	142	136	131	125	120
2019 TC		185	179	173	168	162	156	151	145	139	134	128
2020 TC		195	189	183	178	172	166	160	155	149	143	137
2021 TC		206	200	194	188	182	176	170	164	158	152	147
2022 TC		217	211	205	199	193	187	181	175	168	162	156
2023 TC		229	223	216	210	204	198	191	185	179	173	166
2024 TC		241	234	228	222	215	209	203	196	190	183	177
2025 TC		253	247	240	234	227	221	214	208	201	194	188

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2026 TC	266	260	253	246	240	233	226	219	213	206	199	
2027 TC	280	273	266	259	253	246	239	232	225	218	211	
2028 TC	294	287	280	273	266	259	252	245	238	231	224	
2029 TC	309	301	294	287	280	273	265	258	251	244	236	
2030 TC	324	316	309	302	294	287	279	272	265	257	250	
2031 TC	347	332	324	317	309	302	294	286	279	271	264	
2032 TC	377	355	340	332	325	317	309	301	293	286	278	
2033 TC	410	387	364	349	341	333	325	317	309	301	293	
2034 TC	443	420	396	373	357	349	341	333	325	317	308	
2035 TC	478	454	430	406	382	366	358	350	341	333	324	
2036 TC	515	490	466	441	417	392	376	367	358	350	341	
2037 TC	553	527	502	477	452	427	402	385	376	367	358	
2038 TC	592	566	541	515	489	463	438	412	395	385	376	
2039 TC	634	607	580	554	528	501	475	449	422	404	395	
2040 TC	681	650	622	595	568	541	514	487	460	433	414	
2011 GH	780	742	704	667	629	0	0	0	0	0	0	
2012 GH	838	800	761	722	683	645	0	0	0	0	0	
2013 GH	899	859	819	780	740	700	661	0	0	0	0	
2014 GH	962	921	881	840	799	759	718	677	0	0	0	
2015 GH	1,028	986	944	903	861	819	778	736	694	0	0	
2016 GH	1,096	1,053	1,011	968	925	882	840	797	754	712	0	
2017 GH	1,167	1,124	1,080	1,036	992	948	905	861	817	773	729	
2018 GH	1,241	1,197	1,152	1,107	1,062	1,017	972	927	882	837	792	
2019 GH	1,318	1,272	1,226	1,180	1,134	1,088	1,042	996	950	904	858	
2020 GH	1,399	1,351	1,304	1,257	1,210	1,163	1,116	1,068	1,021	974	927	
2021 GH	1,482	1,434	1,385	1,337	1,289	1,240	1,192	1,143	1,095	1,047	998	
2022 GH	1,569	1,519	1,469	1,420	1,370	1,321	1,271	1,222	1,172	1,123	1,073	
2023 GH	1,659	1,608	1,557	1,506	1,455	1,405	1,354	1,303	1,252	1,201	1,151	
2024 GH	1,752	1,700	1,648	1,596	1,544	1,492	1,440	1,388	1,336	1,283	1,231	
2025 GH	1,849	1,796	1,742	1,689	1,636	1,582	1,529	1,476	1,422	1,369	1,316	
2026 GH	1,950	1,895	1,841	1,786	1,731	1,677	1,622	1,567	1,513	1,458	1,403	
2027 GH	2,055	1,999	1,943	1,887	1,831	1,775	1,719	1,662	1,606	1,550	1,494	
2028 GH	2,164	2,106	2,049	1,991	1,934	1,876	1,819	1,762	1,704	1,647	1,589	

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2029 GH		2,277	2,218	2,159	2,100	2,041	1,982	1,923	1,864	1,806	1,747	1,688
2030 GH		2,394	2,334	2,273	2,213	2,153	2,092	2,032	1,971	1,911	1,851	1,790
2031 GH		2,567	2,454	2,392	2,330	2,268	2,206	2,144	2,083	2,021	1,959	1,897
2032 GH		2,801	2,632	2,515	2,452	2,388	2,325	2,262	2,198	2,135	2,071	2,008
2033 GH		3,044	2,871	2,697	2,578	2,513	2,448	2,383	2,318	2,253	2,188	2,123
2034 GH		3,298	3,120	2,942	2,765	2,643	2,576	2,509	2,443	2,376	2,309	2,243
2035 GH		3,562	3,380	3,198	3,016	2,834	2,709	2,640	2,572	2,504	2,435	2,367
2036 GH		3,838	3,651	3,465	3,278	3,091	2,905	2,776	2,706	2,636	2,566	2,496
2037 GH		4,125	3,934	3,743	3,551	3,360	3,169	2,977	2,846	2,774	2,702	2,630
2038 GH		4,425	4,228	4,032	3,836	3,640	3,444	3,248	3,052	2,917	2,843	2,770
2039 GH		4,745	4,535	4,334	4,133	3,932	3,731	3,530	3,329	3,128	2,990	2,914
2040 GH		5,099	4,864	4,649	4,443	4,236	4,030	3,824	3,618	3,412	3,206	3,065
2011 BR		173	165	156	147	0	0	0	0	0	0	0
2012 BR		187	178	169	160	151	0	0	0	0	0	0
2013 BR		201	191	182	173	164	154	0	0	0	0	0
2014 BR		215	206	196	187	177	168	158	0	0	0	0
2015 BR		230	221	211	201	191	182	172	162	0	0	0
2016 BR		246	236	226	216	206	196	186	176	166	0	0
2017 BR		263	252	242	232	222	211	201	191	181	170	0
2018 BR		280	269	259	248	238	227	217	206	196	185	175
2019 BR		297	287	276	265	254	244	233	222	211	201	190
2020 BR		316	305	294	283	272	261	250	239	228	217	206
2021 BR		335	324	312	301	290	278	267	256	245	233	222
2022 BR		355	343	332	320	309	297	285	274	262	251	239
2023 BR		376	364	352	340	328	316	304	293	281	269	257
2024 BR		397	385	373	361	349	336	324	312	300	288	276
2025 BR		420	407	395	382	370	357	345	332	320	307	295
2026 BR		443	430	417	405	392	379	366	353	341	328	315
2027 BR		467	454	441	428	415	402	388	375	362	349	336
2028 BR		492	479	465	452	438	425	412	398	385	371	358
2029 BR		518	505	491	477	463	449	436	422	408	394	381
2030 BR		545	531	517	503	489	475	461	447	432	418	404
2031 BR		573	559	545	530	516	501	487	472	458	443	429

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2032 BR		616	588	573	558	543	529	514	499	484	469	454
2033 BR		673	631	603	587	572	557	542	527	511	496	481
2034 BR		733	690	647	618	602	586	571	555	540	524	509
2035 BR		795	751	707	663	633	617	601	585	569	553	537
2036 BR		861	815	770	725	680	649	632	616	600	583	567
2037 BR		928	882	836	789	743	697	665	648	632	615	598
2038 BR		999	952	904	857	809	762	714	682	664	647	630
2039 BR		1,074	1,024	975	927	878	829	781	732	699	681	663
2040 BR		1,156	1,100	1,050	1,000	950	900	850	800	750	716	698
2011 GR		0	0	0	0	0	0	0	0	0	0	0
2012 GR		0	0	0	0	0	0	0	0	0	0	0
2013 GR		0	0	0	0	0	0	0	0	0	0	0
2014 GR		0	0	0	0	0	0	0	0	0	0	0
2015 GR		0	0	0	0	0	0	0	0	0	0	0
2016 GR		43	0	0	0	0	0	0	0	0	0	0
2017 GR		47	44	0	0	0	0	0	0	0	0	0
2018 GR		50	48	45	0	0	0	0	0	0	0	0
2019 GR		55	52	49	46	0	0	0	0	0	0	0
2020 GR		59	56	53	50	47	0	0	0	0	0	0
2021 GR		63	60	57	54	51	48	0	0	0	0	0
2022 GR		68	65	62	59	56	53	50	0	0	0	0
2023 GR		72	69	66	63	60	57	54	51	0	0	0
2024 GR		77	74	71	68	65	62	59	55	52	0	0
2025 GR		83	79	76	73	70	66	63	60	57	54	0
2026 GR		88	85	81	78	75	71	68	65	61	58	55
2027 GR		94	90	87	83	80	77	73	70	66	63	60
2028 GR		99	96	92	89	86	82	79	75	72	68	65
2029 GR		105	102	98	95	91	88	84	81	77	73	70
2030 GR		112	108	104	101	97	93	90	86	83	79	75
2031 GR		118	115	111	107	103	100	96	92	88	85	81
2032 GR		128	121	117	114	110	106	102	98	94	91	87
2033 GR		140	131	124	120	116	113	109	105	101	97	93
2034 GR		153	144	134	127	123	119	115	111	107	103	99

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2035 GR		167	157	147	138	131	126	122	118	114	110	106
2036 GR		181	171	161	151	141	134	130	125	121	117	113
2037 GR		196	186	175	165	155	145	137	133	129	124	120
2038 GR		211	201	190	180	169	159	148	141	136	132	127
2039 GR		228	217	206	195	184	173	163	152	144	140	135
2040 GR		245	233	222	211	200	189	178	167	156	148	143
2011 TY		0	0	0	0	0	0	0	0	0	0	0
2012 TY		0	0	0	0	0	0	0	0	0	0	0
2013 TY		0	0	0	0	0	0	0	0	0	0	0
2014 TY		0	0	0	0	0	0	0	0	0	0	0
2015 TY		0	0	0	0	0	0	0	0	0	0	0
2016 TY		0	0	0	0	0	0	0	0	0	0	0
2017 TY		0	0	0	0	0	0	0	0	0	0	0
2018 TY		49	0	0	0	0	0	0	0	0	0	0
2019 TY		53	50	0	0	0	0	0	0	0	0	0
2020 TY		57	54	51	0	0	0	0	0	0	0	0
2021 TY		62	59	55	52	0	0	0	0	0	0	0
2022 TY		67	63	60	57	54	0	0	0	0	0	0
2023 TY		72	68	65	62	58	55	0	0	0	0	0
2024 TY		77	73	70	67	63	60	56	0	0	0	0
2025 TY		82	79	75	72	68	65	61	58	0	0	0
2026 TY		88	84	81	77	73	70	66	63	59	0	0
2027 TY		94	90	86	83	79	75	72	68	64	61	0
2028 TY		100	96	92	89	85	81	77	73	70	66	62
2029 TY		106	102	98	95	91	87	83	79	75	71	68
2030 TY		113	109	105	101	97	93	89	85	81	77	73
2031 TY		120	116	112	107	103	99	95	91	87	83	79
2032 TY		129	123	118	114	110	106	102	98	94	89	85
2033 TY		142	133	126	121	117	113	109	104	100	96	92
2034 TY		156	146	136	129	124	120	116	111	107	103	98
2035 TY		170	160	149	139	132	128	123	119	114	110	105
2036 TY		184	174	164	153	143	135	131	126	122	117	112
2037 TY		199	189	178	168	157	146	139	134	129	125	120

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2038 TY		215	204	194	183	172	161	150	142	137	133	128
2039 TY		232	221	210	198	187	176	165	154	146	141	136
2040 TY		250	238	226	215	203	192	180	169	158	149	144

Unit	Capacity	2054	2055	2056	2057	2058	2059
BR1	101	1,290	1,219	1,149	1,080	1,013	946
BR2	167	2,132	2,015	1,900	1,787	1,675	1,564
BR3	416	5,312	5,021	4,733	4,450	4,171	3,897
CR4	155	511	402	297	194	95	0
CR5	168	554	436	322	211	103	0
CR6	240	792	623	459	301	148	0
GH1	475	9,770	9,256	8,749	8,249	7,755	7,269
GH2	484	9,956	9,432	8,915	8,405	7,902	7,407
GH3	480	9,873	9,354	8,841	8,336	7,837	7,346
GH4	479	9,853	9,334	8,823	8,318	7,821	7,331
GR3	68	549	504	459	415	373	331
GR4	95	767	704	641	580	521	462
MC1	303	3,910	3,538	3,173	2,817	2,468	2,128
MC2	301	3,884	3,515	3,152	2,798	2,452	2,114
MC3	391	5,046	4,565	4,095	3,635	3,185	2,746
MC4	477	6,156	5,570	4,996	4,434	3,886	3,350
TC1	383	2,425	2,315	2,206	2,099	1,993	1,888
TC2	549	3,476	3,319	3,163	3,009	2,857	2,706
TY3	71	1,187	1,074	964	855	749	646

2.50%

2011 CR	0	0	0	0	0	0	0
2012 CR	0	0	0	0	0	0	0
2013 CR	0	0	0	0	0	0	0
2014 CR	0	0	0	0	0	0	0
2015 CR	0	0	0	0	0	0	0
2016 CR	0	0	0	0	0	0	0
2017 CR	0	0	0	0	0	0	0
2018 CR	0	0	0	0	0	0	0
2019 CR	0	0	0	0	0	0	0

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Unit	Capacity	2054	2055	2056	2057	2058	2059
2020 CR		0	0	0	0	0	0
2021 CR		0	0	0	0	0	0
2022 CR		0	0	0	0	0	0
2023 CR		0	0	0	0	0	0
2024 CR		0	0	0	0	0	0
2025 CR		0	0	0	0	0	0
2026 CR		0	0	0	0	0	0
2027 CR		0	0	0	0	0	0
2028 CR		0	0	0	0	0	0
2029 CR		0	0	0	0	0	0
2030 CR		0	0	0	0	0	0
2031 CR		0	0	0	0	0	0
2032 CR		0	0	0	0	0	0
2033 CR		0	0	0	0	0	0
2034 CR		0	0	0	0	0	0
2035 CR		0	0	0	0	0	0
2036 CR		314	0	0	0	0	0
2037 CR		342	322	0	0	0	0
2038 CR		370	350	330	0	0	0
2039 CR		400	379	359	338	0	0
2040 CR		431	410	389	368	347	0
2011 MC		0	0	0	0	0	0
2012 MC		0	0	0	0	0	0
2013 MC		0	0	0	0	0	0
2014 MC		0	0	0	0	0	0
2015 MC		0	0	0	0	0	0
2016 MC		0	0	0	0	0	0
2017 MC		0	0	0	0	0	0
2018 MC		0	0	0	0	0	0
2019 MC		0	0	0	0	0	0
2020 MC		0	0	0	0	0	0
2021 MC		0	0	0	0	0	0
2022 MC		0	0	0	0	0	0

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Unit	Capacity	2054	2055	2056	2057	2058	2059
2023 MC	0	0	0	0	0	0	0
2024 MC	0	0	0	0	0	0	0
2025 MC	0	0	0	0	0	0	0
2026 MC	0	0	0	0	0	0	0
2027 MC	0	0	0	0	0	0	0
2028 MC	0	0	0	0	0	0	0
2029 MC	1,020	0	0	0	0	0	0
2030 MC	1,108	1,045	0	0	0	0	0
2031 MC	1,201	1,136	1,071	0	0	0	0
2032 MC	1,297	1,231	1,164	1,098	0	0	0
2033 MC	1,398	1,330	1,262	1,194	1,125	0	0
2034 MC	1,503	1,433	1,363	1,293	1,223	1,154	0
2035 MC	1,612	1,540	1,469	1,397	1,325	1,254	0
2036 MC	1,725	1,652	1,579	1,505	1,432	1,359	0
2037 MC	1,844	1,768	1,693	1,618	1,543	1,468	0
2038 MC	1,967	1,890	1,813	1,736	1,659	1,581	0
2039 MC	2,095	2,016	1,937	1,858	1,779	1,700	0
2040 MC	2,228	2,147	2,066	1,985	1,904	1,823	0
2011 TC	0	0	0	0	0	0	0
2012 TC	0	0	0	0	0	0	0
2013 TC	0	0	0	0	0	0	0
2014 TC	83	0	0	0	0	0	0
2015 TC	91	85	0	0	0	0	0
2016 TC	98	93	88	0	0	0	0
2017 TC	106	101	95	90	90	0	0
2018 TC	114	109	103	98	98	92	0
2019 TC	123	117	111	106	106	100	94
2020 TC	131	126	120	114	114	108	102
2021 TC	141	135	129	123	123	117	111
2022 TC	150	144	138	132	132	126	120
2023 TC	160	154	148	141	141	135	129
2024 TC	171	164	158	151	151	145	139
2025 TC	181	175	168	162	162	155	149

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Unit	Capacity	2054	2055	2056	2057	2058	2059
2026 TC	193	186	179	173	166	159	170
2027 TC	204	197	191	184	177	170	181
2028 TC	217	209	202	195	188	181	193
2029 TC	229	222	215	207	200	193	205
2030 TC	242	235	227	220	213	205	218
2031 TC	256	248	241	233	226	218	231
2032 TC	270	262	255	247	239	231	245
2033 TC	285	277	269	261	253	245	259
2034 TC	300	292	284	276	267	259	274
2035 TC	316	308	299	291	283	274	290
2036 TC	333	324	315	307	298	290	306
2037 TC	350	341	332	323	314	306	322
2038 TC	367	358	349	340	331	322	340
2039 TC	386	377	367	358	349	340	358
2040 TC	405	396	386	377	367	358	376
2011 GH	0	0	0	0	0	0	0
2012 GH	0	0	0	0	0	0	0
2013 GH	0	0	0	0	0	0	0
2014 GH	0	0	0	0	0	0	0
2015 GH	0	0	0	0	0	0	0
2016 GH	0	0	0	0	0	0	0
2017 GH	0	0	0	0	0	0	0
2018 GH	748	0	0	0	0	0	0
2019 GH	812	766	0	0	0	0	0
2020 GH	880	833	785	0	0	0	0
2021 GH	950	902	853	805	0	0	0
2022 GH	1,023	974	924	875	825	0	0
2023 GH	1,100	1,049	998	947	897	846	897
2024 GH	1,179	1,127	1,075	1,023	971	919	919
2025 GH	1,262	1,209	1,155	1,102	1,049	995	995
2026 GH	1,348	1,294	1,239	1,184	1,130	1,075	1,075
2027 GH	1,438	1,382	1,326	1,270	1,214	1,158	1,158
2028 GH	1,532	1,474	1,417	1,359	1,302	1,244	1,244

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Unit	Capacity	2054	2055	2056	2057	2058	2059
2029 GH	1,629	1,570	1,511	1,452	1,393	1,334	
2030 GH	1,730	1,670	1,609	1,549	1,488	1,428	
2031 GH	1,835	1,773	1,711	1,649	1,588	1,526	
2032 GH	1,944	1,881	1,818	1,754	1,691	1,627	
2033 GH	2,058	1,993	1,928	1,863	1,798	1,733	
2034 GH	2,176	2,109	2,043	1,976	1,910	1,843	
2035 GH	2,299	2,231	2,162	2,094	2,026	1,957	
2036 GH	2,426	2,356	2,286	2,216	2,146	2,076	
2037 GH	2,559	2,487	2,415	2,343	2,272	2,200	
2038 GH	2,696	2,623	2,549	2,476	2,402	2,328	
2039 GH	2,839	2,764	2,688	2,613	2,537	2,462	
2040 GH	2,987	2,910	2,833	2,755	2,678	2,601	
2011 BR	0	0	0	0	0	0	
2012 BR	0	0	0	0	0	0	
2013 BR	0	0	0	0	0	0	
2014 BR	0	0	0	0	0	0	
2015 BR	0	0	0	0	0	0	
2016 BR	0	0	0	0	0	0	
2017 BR	0	0	0	0	0	0	
2018 BR	0	0	0	0	0	0	
2019 BR	179	0	0	0	0	0	
2020 BR	195	183	0	0	0	0	
2021 BR	211	199	188	0	0	0	
2022 BR	228	216	204	193	0	0	
2023 BR	245	233	221	209	198	0	
2024 BR	263	251	239	227	215	203	
2025 BR	282	270	257	245	233	220	
2026 BR	302	290	277	264	251	238	
2027 BR	323	310	297	284	271	257	
2028 BR	344	331	318	304	291	277	
2029 BR	367	353	339	326	312	298	
2030 BR	390	376	362	348	334	320	
2031 BR	414	400	385	371	356	342	

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Unit	Capacity	2054	2055	2056	2057	2058	2059
2032 BR		440	425	410	395	380	365
2033 BR		466	451	435	420	405	390
2034 BR		493	477	462	446	431	415
2035 BR		521	505	489	473	457	441
2036 BR		551	534	518	502	485	469
2037 BR		581	564	548	531	514	497
2038 BR		613	596	579	561	544	527
2039 BR		646	628	611	593	575	558
2040 BR		680	662	644	626	608	590
2011 GR		0	0	0	0	0	0
2012 GR		0	0	0	0	0	0
2013 GR		0	0	0	0	0	0
2014 GR		0	0	0	0	0	0
2015 GR		0	0	0	0	0	0
2016 GR		0	0	0	0	0	0
2017 GR		0	0	0	0	0	0
2018 GR		0	0	0	0	0	0
2019 GR		0	0	0	0	0	0
2020 GR		0	0	0	0	0	0
2021 GR		0	0	0	0	0	0
2022 GR		0	0	0	0	0	0
2023 GR		0	0	0	0	0	0
2024 GR		0	0	0	0	0	0
2025 GR		0	0	0	0	0	0
2026 GR		0	0	0	0	0	0
2027 GR		56	0	0	0	0	0
2028 GR		61	58	0	0	0	0
2029 GR		66	63	59	0	0	0
2030 GR		72	68	64	61	0	0
2031 GR		77	73	70	66	62	0
2032 GR		83	79	75	71	67	64
2033 GR		89	85	81	77	73	69
2034 GR		95	91	87	83	79	75

MTPCapital

Unit	Capacity	2054	2055	2056	2057	2058	2059
2035 GR		102	98	93	89	85	81
2036 GR		108	104	100	96	91	87
2037 GR		115	111	107	102	98	94
2038 GR		123	118	114	109	105	101
2039 GR		130	126	121	117	112	108
2040 GR		138	134	129	124	120	115
2011 TY		0	0	0	0	0	0
2012 TY		0	0	0	0	0	0
2013 TY		0	0	0	0	0	0
2014 TY		0	0	0	0	0	0
2015 TY		0	0	0	0	0	0
2016 TY		0	0	0	0	0	0
2017 TY		0	0	0	0	0	0
2018 TY		0	0	0	0	0	0
2019 TY		0	0	0	0	0	0
2020 TY		0	0	0	0	0	0
2021 TY		0	0	0	0	0	0
2022 TY		0	0	0	0	0	0
2023 TY		0	0	0	0	0	0
2024 TY		0	0	0	0	0	0
2025 TY		0	0	0	0	0	0
2026 TY		0	0	0	0	0	0
2027 TY		0	0	0	0	0	0
2028 TY		0	0	0	0	0	0
2029 TY		64	0	0	0	0	0
2030 TY		69	65	0	0	0	0
2031 TY		75	71	67	0	0	0
2032 TY		81	77	73	69	0	0
2033 TY		87	83	79	75	70	0
2034 TY		94	90	85	81	76	72
2035 TY		101	96	92	87	83	78
2036 TY		108	103	99	94	89	85
2037 TY		115	111	106	101	96	92

MTPCapital

Unit	Capacity	2054	2055	2056	2057	2058	2059
2038 TY		123	118	113	108	104	99
2039 TY		131	126	121	116	111	106
2040 TY		139	134	129	124	119	114

			\$000					
Station	Unit	Capacity	2011	2012	2013	2014	2015	2016
BR	BR1	101	0	0	0	0	0	441
BR	BR2	167	0	0	0	0	0	729
BR	BR3	416	0	0	0	0	0	1,816
CR	CR4	155	258	840	1,124	1,095	1,216	1,960
CR	CR5	168	279	910	1,219	1,187	1,318	2,124
CR	CR6	240	399	1,300	1,741	1,696	1,882	5,221
GH	GH1	475	0	0	0	0	0	5,620
GH	GH2	484	0	0	0	0	0	5,727
GH	GH3	480	0	0	0	0	0	5,680
GH	GH4	479	0	0	0	0	0	5,668
GR	GR3	68						
GR	GR4	95						
MC	MC1	303						
MC	MC2	301						
MC	MC3	391						
MC	MC4	477						
TC	TC1	383	0	0	0	0	0	1,965
TC	TC2	549	0	0	0	0	0	2,817
TY	TY3	71						

BR Landfill Phase 2 Savings	0	0	0	0	0	0	0
BR Landfill Phase 3 Savings	0	0	0	0	0	0	0
BR Landfill O&M Savings	0	0	0	0	0	0	2,985
CR Landfill Capital Savings	936	3,049	4,083	3,979	4,416	4,938	
CR Landfill O&M Savings	0	0	0	0	0	2,181	
CR6 Stator Rewind Savings	0	0	0	0	0	2,187	
GH Landfill Capital Savings	0	0	0	0	0	61	
GH Landfill O&M Savings	0	0	0	0	0	22,633	
TC Landfill Capital Savings	0	0	0	0	0	0	
TC Landfill O&M Savings	0	0	0	0	0	4,782	

Unit	Capacity	2017	2018	2019	2020	2021	2022	2023
BR1	101	454	590	616	785	787	789	1,035
BR2	167	751	975	1,018	1,299	1,301	1,305	1,711
BR3	416	1,870	2,430	2,536	3,235	3,242	3,252	4,261
CR4	155	1,949	1,644	1,927	2,572	2,560	2,096	2,059
CR5	168	2,112	1,782	2,089	2,788	2,774	2,272	2,232
CR6	240	5,152	4,566	4,899	5,799	5,682	4,867	4,712
GH1	475	5,988	6,566	7,371	8,085	8,761	9,219	9,707
GH2	484	6,101	6,691	7,510	8,238	8,927	9,394	9,891
GH3	480	6,051	6,635	7,448	8,170	8,854	9,316	9,809
GH4	479	6,038	6,622	7,433	8,153	8,835	9,297	9,789
GR3	68							
GR4	95							
MC1	303							
MC2	301							
MC3	391							
MC4	477							
TC1	383	2,066	2,172	2,216	2,260	2,305	2,351	2,398
TC2	549	2,961	3,114	3,176	3,240	3,304	3,371	3,438
TY3	71							
andfill Phase 2 Savings		0	828	908	1,960	1,870	1,782	1,697
andfill Phase 3 Savings		0	0	0	0	0	0	1,638
∞ Landfill O&M Savings		3,075	3,167	3,262	3,360	3,461	3,564	3,671
Landfill Capital Savings		4,772	3,579	4,464	6,617	6,353	4,493	4,170
∞ Landfill O&M Savings		2,307	2,393	2,537	2,726	2,944	3,121	3,308
Stator Rewind Savings		2,135	2,020	1,914	1,816	1,719	1,621	1,524
Landfill Capital Savings		188	1,083	2,805	4,044	4,399	4,388	4,387
∞ Landfill O&M Savings		23,991	25,431	26,957	28,601	30,979	32,838	34,808
Landfill Capital Savings		0	0	0	0	0	0	0
∞ Landfill O&M Savings		5,027	5,286	5,392	5,500	5,610	5,722	5,836

Unit	Capacity	2024	2025	2026	2027	2028	2029	2030
BR1	101	1,054	1,357	1,337	1,319	1,301	1,285	1,267
BR2	167	1,743	2,245	2,211	2,180	2,151	2,124	2,095
BR3	416	4,342	5,591	5,508	5,431	5,359	5,291	5,219
CR4	155	2,073	1,531	1,768	1,810	1,869	1,932	2,000
CR5	168	2,247	1,659	1,916	1,962	2,025	2,094	2,168
CR6	240	4,637	3,700	3,969	3,960	4,000	4,047	4,101
GH1	475	10,790	12,508	14,281	15,439	15,604	16,273	16,860
GH2	484	10,994	12,745	14,551	15,732	15,900	16,581	17,180
GH3	480	10,904	12,640	14,431	15,602	15,769	16,444	17,038
GH4	479	10,881	12,614	14,401	15,569	15,736	16,410	17,002
GR3	68							
GR4	95							
MC1	303							
MC2	301							
MC3	391							
MC4	477							
TC1	383	2,446	2,495	2,545	2,596	2,648	5,363	8,239
TC2	549	3,507	3,577	3,648	3,721	3,796	7,687	11,809
TY3	71							

andfill Phase 2 Savings	1,613	1,531	1,451	1,372	1,294	1,215	1,123
andfill Phase 3 Savings	1,745	3,767	3,594	3,426	3,261	3,101	2,943
Landfill O&M Savings	3,781	3,895	4,012	4,132	4,256	4,384	4,515
Landfill Capital Savings	4,023	1,844	2,496	2,513	2,483	2,455	2,429
Landfill O&M Savings	3,507	3,717	3,925	4,061	4,305	4,563	4,837
Stator Rewind Savings	1,427	1,329	1,232	1,158	1,106	1,055	1,004
Landfill Capital Savings	6,672	11,397	16,206	18,397	18,341	18,358	17,892
Landfill O&M Savings	36,897	39,110	41,457	43,944	44,668	47,348	50,189
Landfill Capital Savings	0	0	0	0	0	6,478	13,344
Landfill O&M Savings	5,953	6,072	6,194	6,318	6,444	6,573	6,704

Unit	Capacity	2031	2032	2033	2034	2035	2036	2037
BR1	101	1,122	410	385	360	331	54	46
BR2	167	1,855	678	636	595	547	89	76
BR3	416	4,620	1,688	1,585	1,482	1,363	222	189
CR4	155	1,861	1,810	1,778	1,748	1,719	1,692	1,708
CR5	168	2,017	1,962	1,927	1,895	1,864	1,834	1,851
CR6	240	3,833	3,704	3,602	2,777	2,662	2,620	2,645
GH1	475	17,332	17,856	18,548	19,372	20,254	21,186	21,692
GH2	484	17,660	18,195	18,899	19,739	20,637	21,587	22,103
GH3	480	17,514	18,044	18,743	19,576	20,467	21,409	21,921
GH4	479	17,478	18,007	18,704	19,535	20,424	21,364	21,875
GR3	68							
GR4	95							
MC1	303							
MC2	301							
MC3	391							
MC4	477							
TC1	383	8,294	12,354	12,003	11,666	11,343	11,031	10,731
TC2	549	11,888	17,709	17,206	16,723	16,259	15,812	15,382
TY3	71							
andfill Phase 2 Savings		156	138	120	101	83	64	46
andfill Phase 3 Savings		2,789	2,638	2,487	2,336	2,158	301	265
∩ Landfill O&M Savings		4,651						
Landfill Capital Savings		1,631	1,345	1,123	908	695	485	430
∩ Landfill O&M Savings		5,128	5,230	5,335	5,441	5,550	5,661	5,774
Stator Rewind Savings		952	901	850	70	0	0	0
Landfill Capital Savings		16,784	15,709	15,118	14,860	14,617	14,352	12,126
∩ Landfill O&M Savings		53,201	56,393	59,776	63,363	67,165	71,194	75,466
Landfill Capital Savings		13,344	23,088	22,094	21,132	20,199	19,293	18,412
∩ Landfill O&M Savings		6,838	6,975	7,115	7,257	7,402	7,550	7,701

Unit	Capacity	2038	2039	2040
BR1	101	38	30	23
BR2	167	63	50	39
BR3	416	157	124	97
CR4	155	1,727	1,747	1,771
CR5	168	1,872	1,894	1,919
CR6	240	2,674	2,705	2,742
GH1	475	2,492	1,854	1,700
GH2	484	2,539	1,889	1,733
GH3	480	2,518	1,874	1,718
GH4	479	2,513	1,870	1,715
GR3	68			
GR4	95			
MC1	303			
MC2	301			
MC3	391			
MC4	477			
TC1	383	10,442	10,162	9,886
TC2	549	14,967	14,567	14,170
TY3	71			

andfill Phase 2 Savings	28	9	0
andfill Phase 3 Savings	230	194	159
∞ Landfill O&M Savings			
Landfill Capital Savings	384	338	303
∞ Landfill O&M Savings	5,890	6,008	6,128
Stator Rewind Savings	0	0	0
Landfill Capital Savings	9,906	7,329	6,705
† Landfill O&M Savings	155	158	161
Landfill Capital Savings	17,554	16,717	15,883
∞ Landfill O&M Savings	7,855	8,012	8,172

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
BR	BR1	101	0	0	0	553	743	703	668	635	606	577
BR	BR2	167	0	0	0	915	1,228	1,163	1,104	1,050	1,002	954
BR	BR3	416	0	0	0	2,279	3,060	2,897	2,749	2,616	2,496	2,377
CR	CR4	155	0	0	0	980	1,582	1,494	1,413	1,339	1,269	1,201
CR	CR5	168	0	0	0	1,062	1,715	1,619	1,532	1,451	1,376	1,302
CR	CR6	240	0	0	0	1,518	2,449	2,313	2,188	2,073	1,966	1,860
GH	GH1	475	0	0	0	1,462	1,954	1,856	1,767	1,686	1,611	1,540
GH	GH2	484	0	0	0	1,489	1,991	1,891	1,800	1,718	1,642	1,569
GH	GH3	480	0	0	0	1,477	1,975	1,876	1,786	1,703	1,628	1,556
GH	GH4	479	0	0	0	1,474	1,971	1,872	1,782	1,700	1,625	1,553
GR	GR3	68	0	0	0	586	837	792	751	713	679	645
GR	GR4	95	0	0	0	819	1,169	1,106	1,049	996	948	901
MC	MC1	303	0	0	0	1,215	1,774	1,682	1,598	1,521	1,449	1,380
MC	MC2	301	0	0	0	1,207	1,762	1,671	1,588	1,511	1,440	1,371
MC	MC3	391	0	0	0	1,568	2,289	2,171	2,063	1,963	1,870	1,781
MC	MC4	477	0	0	0	1,913	2,792	2,648	2,516	2,394	2,281	2,172
TC	TC1	383	0	0	0	770	1,008	958	912	871	833	797
TC	TC2	549	0	0	0	1,104	1,445	1,373	1,307	1,248	1,194	1,142
TY	TY3	71	0	0	0	586	837	792	751	713	679	645
	BRWATER		0	0	0	3,747	5,032	4,763	4,521	4,302	4,104	3,908
	CRWATER		0	0	0	3,560	5,746	5,427	5,134	4,863	4,611	4,362
	MCWATER		0	0	0	5,902	8,617	8,173	7,765	7,389	7,040	6,704
	TCWATER		0	0	0	1,874	2,453	2,331	2,220	2,119	2,026	1,938
	GHWATER		0	0	0	5,902	7,892	7,495	7,135	6,806	6,505	6,217
	GRWATER		0	0	0	1,405	2,006	1,898	1,799	1,709	1,627	1,546

WaterCapital

Station	Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
BR	BR1	101	548	519	491	462	433	413	403	393	382	372
BR	BR2	167	907	859	811	764	716	684	666	649	632	615
BR	BR3	416	2,258	2,140	2,021	1,902	1,784	1,703	1,660	1,617	1,574	1,531
CR	CR4	155	1,132	1,064	996	927	859	806	770	735	699	663
CR	CR5	168	1,227	1,153	1,079	1,005	931	874	835	796	757	718
CR	CR6	240	1,754	1,647	1,541	1,435	1,329	1,249	1,193	1,137	1,082	1,026
GH	GH1	475	1,468	1,397	1,325	1,254	1,183	1,111	1,062	1,035	1,008	982
GH	GH2	484	1,496	1,423	1,350	1,278	1,205	1,132	1,082	1,055	1,028	1,000
GH	GH3	480	1,484	1,411	1,339	1,267	1,195	1,123	1,073	1,046	1,019	992
GH	GH4	479	1,481	1,409	1,337	1,265	1,193	1,121	1,071	1,044	1,017	990
GR	GR3	68	611	577	544	510	476	452	438	423	409	395
GR	GR4	95	854	807	759	712	665	631	611	591	571	551
MC	MC1	303	1,311	1,242	1,173	1,103	1,034	965	915	882	850	818
MC	MC2	301	1,302	1,234	1,165	1,096	1,027	959	908	877	845	813
MC	MC3	391	1,692	1,602	1,513	1,424	1,335	1,245	1,180	1,139	1,097	1,056
MC	MC4	477	2,064	1,955	1,846	1,737	1,628	1,519	1,440	1,389	1,339	1,288
TC	TC1	383	760	724	688	652	616	579	555	542	529	517
TC	TC2	549	1,090	1,038	986	934	882	830	795	777	759	741
TY	TY3	71	611	577	544	510	476	452	438	423	409	395
	BRWATER		3,713	3,518	3,323	3,128	2,933	2,800	2,729	2,659	2,588	2,517
	CRWATER		4,113	3,865	3,616	3,367	3,118	2,929	2,798	2,668	2,537	2,407
	MCWATER		6,368	6,032	5,696	5,361	5,025	4,689	4,443	4,287	4,131	3,976
	TCWATER		1,850	1,762	1,674	1,586	1,498	1,410	1,350	1,319	1,288	1,258
	GHWATER		5,928	5,640	5,352	5,063	4,775	4,487	4,288	4,180	4,072	3,964
	GRWATER		1,465	1,384	1,303	1,222	1,141	1,083	1,049	1,015	980	946

WaterCapital

Station	Unit	Capacity	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
BR	BR1	101	361	351	340	330	320	309	299	288	278	267
BR	BR2	167	597	580	563	546	528	511	494	477	459	442
BR	BR3	416	1,488	1,445	1,402	1,359	1,316	1,273	1,230	1,187	1,144	1,101
CR	CR4	155	627	591	0	0	0	0	0	0	0	0
CR	CR5	168	679	640	0	0	0	0	0	0	0	0
CR	CR6	240	970	915	0	0	0	0	0	0	0	0
GH	GH1	475	955	928	901	875	848	821	794	767	741	714
GH	GH2	484	973	946	918	891	864	837	809	782	755	727
GH	GH3	480	965	938	911	884	857	830	803	776	748	721
GH	GH4	479	963	936	909	882	855	828	801	774	747	720
GR	GR3	68	380	366	352	337	323	309	294	280	266	251
GR	GR4	95	531	511	491	471	451	431	411	391	371	351
MC	MC1	303	786	754	722	690	658	626	594	562	530	0
MC	MC2	301	781	749	717	686	654	622	590	558	526	0
MC	MC3	391	1,015	973	932	891	849	808	766	725	684	0
MC	MC4	477	1,238	1,187	1,137	1,086	1,036	986	935	885	834	0
TC	TC1	383	504	491	479	466	453	441	428	415	403	390
TC	TC2	549	723	704	686	668	650	632	613	595	577	559
TY	TY3	71	380	366	352	337	323	309	294	280	266	251

BRWATER	2,447	2,376	2,305	2,235	2,164	2,094	2,023	1,952	1,882	1,811
CRWATER	2,277	2,146	0	0	0	0	0	0	0	0
MCWATER	3,820	3,664	3,508	3,353	3,197	3,041	2,886	2,730	2,574	0
TCWATER	1,227	1,196	1,165	1,134	1,103	1,072	1,041	1,010	979	949
GHWATER	3,856	3,748	3,640	3,531	3,423	3,315	3,207	3,099	2,991	2,883
GRWATER	912	877	843	809	774	740	706	671	637	603

WaterCapital

Station	Unit	Capacity	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
BR	BR1	101	257	247	236	226	215	205	194	184	174	0
BR	BR2	167	425	408	390	373	356	339	321	304	287	0
BR	BR3	416	1,058	1,016	973	930	887	844	801	758	715	0
CR	CR4	155	0	0	0	0	0	0	0	0	0	0
CR	CR5	168	0	0	0	0	0	0	0	0	0	0
CR	CR6	240	0	0	0	0	0	0	0	0	0	0
GH	GH1	475	687	660	634	607	580	553	526	500	473	446
GH	GH2	484	700	673	646	618	591	564	536	509	482	454
GH	GH3	480	694	667	640	613	586	559	532	505	478	451
GH	GH4	479	693	666	639	612	585	558	531	504	477	450
GR	GR3	68	237	0	0	0	0	0	0	0	0	0
GR	GR4	95	331	0	0	0	0	0	0	0	0	0
MC	MC1	303	0	0	0	0	0	0	0	0	0	0
MC	MC2	301	0	0	0	0	0	0	0	0	0	0
MC	MC3	391	0	0	0	0	0	0	0	0	0	0
MC	MC4	477	0	0	0	0	0	0	0	0	0	0
TC	TC1	383	377	364	352	339	326	314	301	288	276	263
TC	TC2	549	541	522	504	486	468	450	431	413	395	377
TY	TY3	71	237	0	0	0	0	0	0	0	0	0
	BRWATER		1,740	1,670	1,599	1,529	1,458	1,387	1,317	1,246	1,175	0
	CRWATER		0	0	0	0	0	0	0	0	0	0
	MCWATER		0	0	0	0	0	0	0	0	0	0
	TCWATER		918	887	856	825	794	763	732	701	670	640
	GHWATER		2,774	2,666	2,558	2,450	2,342	2,234	2,125	2,017	1,909	1,801
	GRWATER		568	0	0	0	0	0	0	0	0	0

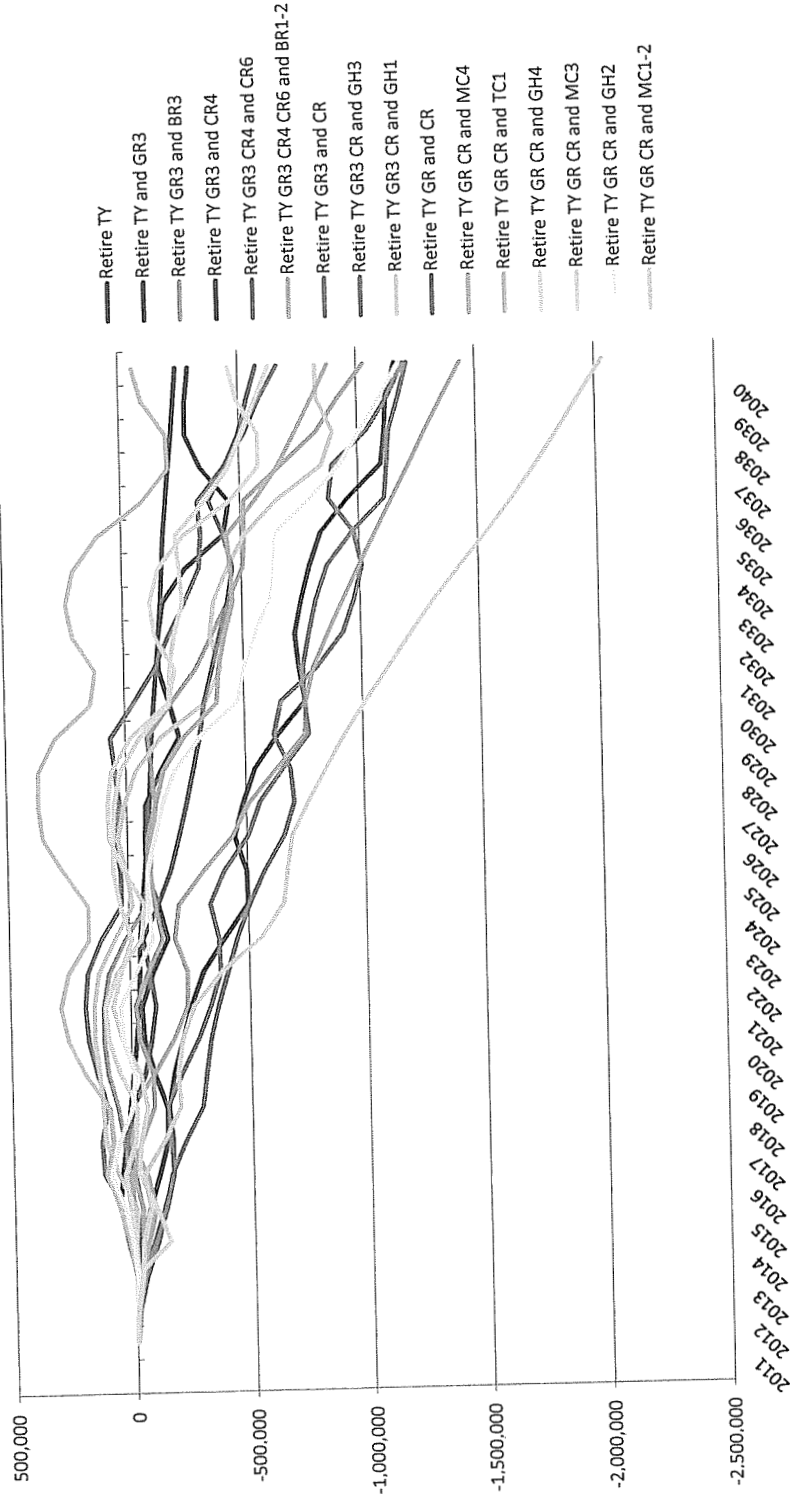
WaterCapital

Station	Unit	Capacity	2051	2052	2053	2054	2055	2056	2057	2058	2059
BR	BR1	101	0	0	0	0	0	0	0	0	0
BR	BR2	167	0	0	0	0	0	0	0	0	0
BR	BR3	416	0	0	0	0	0	0	0	0	0
CR	CR4	155	0	0	0	0	0	0	0	0	0
CR	CR5	168	0	0	0	0	0	0	0	0	0
CR	CR6	240	0	0	0	0	0	0	0	0	0
GH	GH1	475	0	0	0	0	0	0	0	0	0
GH	GH2	484	0	0	0	0	0	0	0	0	0
GH	GH3	480	0	0	0	0	0	0	0	0	0
GH	GH4	479	0	0	0	0	0	0	0	0	0
GR	GR3	68	0	0	0	0	0	0	0	0	0
GR	GR4	95	0	0	0	0	0	0	0	0	0
MC	MC1	303	0	0	0	0	0	0	0	0	0
MC	MC2	301	0	0	0	0	0	0	0	0	0
MC	MC3	391	0	0	0	0	0	0	0	0	0
MC	MC4	477	0	0	0	0	0	0	0	0	0
TC	TC1	383	250	237	225	212	0	0	0	0	0
TC	TC2	549	359	340	322	304	0	0	0	0	0
TY	TY3	71	0	0	0	0	0	0	0	0	0
	BRWATER		0	0	0	0	0	0	0	0	0
	CRWATER		0	0	0	0	0	0	0	0	0
	MCWATER		0	0	0	0	0	0	0	0	0
	TCWATER		609	578	547	516	0	0	0	0	0
	GHWATER		0	0	0	0	0	0	0	0	0
	GRWATER		0	0	0	0	0	0	0	0	0

	Delta NPVRR \$M Install Controls / (Retire)
Tyrone 3	(67)
Brown 3	(133)
Cane Run 6	(217)
Brown 1-2	(444)
Cane Run 4-5	(499)
Green River 3-4	(463)
Ghent 1-4	(469)
Trimble County 1	(89)
Mill Creek 3-4	(170)
Mill Creek 1-2	(191)

Cumulative Difference in Revenue Requirements

Install Controls vs. Retire/Replace Capacity



Retirement Savings (Deltas)	Capital	O&M	Total
Retire TY	-22	-3	-26
Retire TY and GR3	-13	-50	-62
Retire TY GR3 and BR3	-98	-174	-272
Retire TY GR3 and CR4	-46	-140	-186
Retire TY GR3 CR4 and CR6	-84	-118	-202
Retire TY GR3 CR4 CR6 and BR1-2	-63	-129	-192
Retire TY GR3 and CR	-50	-149	-199
Retire TY GR3 CR and GH3	-203	-145	-348
Retire TY GR3 CR and GH1	-201	-210	-411
Retire TY GR and CR	-18	-100	-118
Retire TY GR CR and MC4	-105	-201	-306
Retire TY GR CR and TC1	-68	-203	-271
Retire TY GR CR and GH4	-203	-141	-343
Retire TY GR CR and MC3	-86	-201	-287
Retire TY GR CR and GH2	-205	-156	-361
Retire TY GR CR and MC1-2	-133	-325	-457

Revenue Requirement Deltas	Prod Cost	Capital	Total	Check
Retire TY	1	-69	-67	0
Retire TY and GR3	-74	-59	-133	0
Retire TY GR3 and BR3	-9	-208	-217	0
Retire TY GR3 and CR4	-94	-350	-444	0
Retire TY GR3 CR4 and CR6	-3	-496	-499	0
Retire TY GR3 CR4 CR6 and BR1-2	-31	-431	-463	0
Retire TY GR3 and CR	-99	-370	-469	0
Retire TY GR3 CR and GH3	298	-387	-89	0
Retire TY GR3 CR and GH1	203	-373	-170	0
Retire TY GR and CR	-106	-85	-191	0
Retire TY GR CR and MC4	277	-522	-245	0
Retire TY GR CR and TC1	284	-185	98	0
Retire TY GR CR and GH4	231	-376	-145	0
Retire TY GR CR and MC3	219	-316	-97	0
Retire TY GR CR and GH2	286	-574	-288	0
Retire TY GR CR and MC1-2	301	-985	-685	0

		1	2	3	4	5	6
Retire:							
	<u>No</u>					<u>TY GR3 CR4</u>	<u>TY GR3 CR4</u>
	<u>Retirements</u>	<u>TY</u>	<u>TY GR3</u>	<u>TY GR3 BR3</u>	<u>TY GR3 CR4</u>	<u>CR6</u>	<u>CR6 BR1-2</u>
2010							
2011							
2012							
2013							
2014							
2015							
2016		3x1C(1)	2x1C(1)	3x1C(1)	3x1C(1)	3x1C(1)	3x1C(1)
2017	3x1C(1)						
2018							3x1C(1)
2019							
2020			2x1C(1)	3x1C(1)		3x1C(1)	
2021							
2022					2x1C(1)		
2023							
2024	3x1C(1)	3x1C(1)					3x1C(1)
2025			3x1C(1)				
2026				3x1C(1)	3x1C(1)	3x1C(1)	
2027							
2028							
2029							
2030	2x1C(1)	3x1C(1)					
2031			SCCT(1)				3x1C(1)
2032					SCCT(1)		
2033			3x1C(1)	3x1C(1)		3x1C(1)	
2034					3x1C(1)		
2035	2x1C(1)						
2036		2x1C(1)					
2037							SCCT(1)
2038							
2039	SCCT(1)						SCCT(1)
2040			SCCT(1)	SCCT(1)		SCCT(1)	
30 Yr PVRR (\$B)	23.6	23.7	23.8	24.7	24.2	24.8	25.5

	7	8	9	10	11	12	13
	<u>TY GR3 CR</u>	<u>TY GR3 CR</u> <u>GH3</u>	<u>TY GR3 CR</u> <u>GH1</u>	<u>TY GR CR</u>	<u>TY GR CR</u> <u>MC4</u>	<u>TY GR CR</u> <u>TC1</u>	<u>TY GR CR</u> <u>GH4</u>
2010							
2011							
2012							
2013							
2014							
2015							
2016	3x1C(1)	3x1C(1) 2x1C(1)	3x1C(2)	3x1C(1)	3x1C(2)	3x1C(2)	3x1C(2)
2017							
2018				3x1C(1)			
2019	3x1C(1)						
2020		3x1C(1)					
2021					3x1C(1)		3x1C(1)
2022			3x1C(1)			3x1C(1)	
2023							
2024				3x1C(1)			
2025	3x1C(1)						
2026		3x1C(1)					
2027							
2028			3x1C(1)		3x1C(1)	3x1C(1)	3x1C(1)
2029							
2030							
2031	2x1C(1)			3x1C(1)			
2032							
2033		3x1C(1)					
2034							3x1C(1)
2035			2x1C(1)		3x1C(1)	2x1C(1)	
2036	2x1C(1)						
2037				SCCT(1)			
2038							
2039				SCCT(1)			
2040		SCCT(1)	SCCT(1)			SCCT(1)	
30 Yr PVRR (\$B)	25.3	26.6	26.6	25.4	26.9	26.7	26.9

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	<u>TY GR CR</u>	<u>TY GR CR</u>	<u>TY GR CR</u>
	<u>MC3</u>	<u>GH2</u>	<u>MC1-2</u>
2010			
2011			
2012			
2013			
2014			
2015			
2016	3x1C(2)	3x1C(2)	3x1C(2)
2017			
2018			
2019			
2020			3x1C(1)
2021		3x1C(1)	
2022	3x1C(1)		
2023			
2024			
2025			
2026			2x1C(1)
2027			
2028	3x1C(1)	3x1C(1)	
2029			
2030			
2031			3x1C(1)
2032			
2033			
2034		3x1C(1)	
2035	2x1C(1)		
2036			
2037			SCCT(1)
2038			
2039			SCCT(1)
2040	SCCT(1)		
30 Yr PVRR (\$B)	26.6	27.0	27.5

Breakeven RR by Year (\$M)

Year \$	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
TY	-67	-72	-77	-82	-87	-93	-100	-106	-113	-121
GR3	-133	-142	-151	-161	-172	-184	-196	-209	-223	-238
BR3	-217	-232	-247	-264	-282	-301	-321	-342	-365	-390
CR4	-444	-474	-506	-540	-576	-615	-656	-700	-747	-797
CR6	-499	-532	-568	-606	-647	-690	-736	-786	-839	-895
BR1-2	-463	-494	-527	-562	-600	-640	-683	-729	-778	-830
CR5	-469	-501	-535	-570	-609	-650	-693	-740	-789	-842
GH3	-89	-95	-101	-108	-116	-123	-132	-140	-150	-160
GH1	-170	-182	-194	-207	-221	-236	-251	-268	-286	-306
GR4	-191	-204	-218	-232	-248	-264	-282	-301	-321	-343
MC4	-245	-262	-279	-298	-318	-339	-362	-386	-412	-440
TC1	98	105	112	120	128	136	145	155	166	177
GH4	-145	-155	-166	-177	-189	-201	-215	-229	-245	-261
MC3	-97	-103	-110	-117	-125	-134	-142	-152	-162	-173
GH2	-288	-307	-328	-350	-373	-398	-425	-453	-484	-516
MC1-2	-685	-731	-780	-832	-888	-947	-1,011	-1,079	-1,151	-1,228

Breakeven Year

	<u>Must Op Thru</u>
BR3	2019
BR1-2	2021
GH3	2020
GH1	2021
MC4	2023
TC1	2018
GH4	2018
MC3	2021
GH2	2018
MC1-2	2024

Station	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
BR	BR1FFP 0	0	238	3,127	7,278	12,105	12,775	12,123	11,534	10,999	10,472
BR	BR1SAM 0	0	0	0	231	521	550	522	497	474	452
BR	BR2FFP 0	0	252	3,379	7,865	13,414	13,865	13,156	12,514	11,931	11,357
BR	BR2SAM 0	0	0	0	231	534	553	525	499	476	453
BR	BR3FFP 0	0	0	204	2,854	7,595	13,437	14,120	13,404	12,757	12,171
GH	GH1FFP 0	0	64	4,332	10,157	17,736	19,154	18,156	17,246	16,412	15,591
GH	GH1SAM 0	0	122	562	1,006	1,964	2,121	2,010	1,909	1,817	1,726
GH	GH2FFP 0	0	0	2,787	7,280	15,016	18,298	17,569	16,777	16,056	15,369
GH	GH2SAM 0	0	11	724	984	935	891	851	814	779	744
GH	GH3FFP 0	0	0	0	3,571	8,804	18,270	21,813	20,853	19,901	19,030
GH	GH3SAM 0	0	115	565	1,578	1,935	1,853	1,769	1,691	1,618	1,544
GH	GH4FFP 0	0	0	0	2,843	7,668	14,952	21,319	20,238	19,257	18,361
GH	GH4SAM 0	0	122	527	974	1,948	1,967	1,872	1,786	1,707	1,631
MC	MC1FGD 0	0	0	2,360	7,268	12,372	21,934	23,856	22,601	21,453	20,399
MC	MC1FFP 0	0	0	1,271	5,238	9,364	17,796	19,361	18,343	17,414	16,559
MC	MC1SAM 0	0	0	0	42	560	1,131	1,232	1,168	1,109	1,055
MC	MC2FGD 0	0	0	2,361	7,270	12,377	23,214	24,770	23,450	22,238	21,119
MC	MC2FFP 0	0	0	1,215	5,051	9,134	18,426	19,666	18,620	17,659	16,772
MC	MC2SAM 0	0	0	0	42	560	1,197	1,279	1,211	1,149	1,092
MC	MC3FGDU 0	0	0	646	3,668	6,975	9,472	9,135	8,699	8,295	7,908
MC	MC3FGDR 0	0	0	0	0	39	175	207	197	187	179
MC	MC3FFP 0	0	0	0	3,730	8,326	13,896	18,276	17,601	16,757	15,977
MC	MC3SAM 0	0	0	734	1,992	2,100	1,997	1,901	1,813	1,728	1,642
MC	MC4FGD 0	0	379	6,987	15,193	21,072	28,573	27,555	26,231	25,008	23,834
MC	MC4SCR 0	0	105	667	724	688	655	625	596	566	537
MC	MC4FFP 0	0	377	5,055	10,178	14,629	19,836	19,129	18,210	17,361	16,546
MC	MC4SAM 0	0	0	0	578	1,620	2,201	2,123	2,022	1,929	1,839
TC	TC1FFP 0	0	0	0	2,200	5,745	11,967	15,834	15,223	14,502	13,838
CR	CR4FGD 0	0	394	3,222	13,574	27,295	25,773	24,370	23,071	21,861	20,666
CR	CR4SCR 0	64	390	2,395	6,163	10,786	10,183	9,627	9,112	8,633	8,160
CR	CR4FF 0	0	280	1,715	3,329	5,526	5,216	4,930	4,666	4,421	4,178
CR	CR4PAC 0	0	0	0	235	386	365	345	327	310	293
CR	CR4LIME 0	0	0	0	259	427	403	381	361	342	323

NewControlsCapital

Station	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CR	CR5FGD 0	0	359	3,311	14,658	29,304	27,663	26,148	24,742	23,429	22,132
CR	CR5SCR 0	63	388	2,719	6,475	11,557	10,908	10,308	9,752	9,234	8,721
CR	CR5FF 0	0	300	1,823	3,531	5,992	5,654	5,343	5,054	4,785	4,519
CR	CR5PAC 0	0	0	0	251	423	399	378	357	338	320
CR	CR5LIME 0	0	0	0	278	468	441	417	395	374	353
CR	CR6FGD 0	0	346	3,887	18,407	35,115	33,170	31,385	29,739	28,213	26,706
CR	CR6SCR 0	79	1,294	4,201	8,457	14,206	13,414	12,689	12,019	11,399	10,787
CR	CR6FF 0	0	394	2,364	4,540	7,252	6,848	6,477	6,136	5,819	5,507
CR	CR6PAC 0	0	0	0	352	558	527	499	473	448	424
CR	CR6LIME 0	0	0	0	391	619	585	553	525	498	471
GR	GR3SFF 0	0	0	1,323	4,035	5,553	5,254	4,983	4,739	4,516	4,297
GR	GR3PAC 0	0	0	0	112	154	145	138	131	125	119
GR	GR4SFF 0	0	0	1,885	5,750	8,517	8,050	7,626	7,237	6,881	6,529
GR	GR4PAC 0	0	0	0	160	235	223	211	200	190	181

Station	Unit	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
BR	BR1FFP 0	9,946	9,420	8,894	8,368	7,842	7,483	7,291	7,099	6,908	6,716
BR	BR1SAM 0	429	407	384	362	339	324	315	307	299	291
BR	BR2FFP 0	10,783	10,210	9,636	9,062	8,488	8,095	7,881	7,668	7,455	7,242
BR	BR2SAM 0	431	408	385	362	340	324	315	307	298	290
BR	BR3FFP 0	11,595	11,019	10,443	9,867	9,290	8,714	8,325	8,122	7,920	7,717
GH	GH1FFP 0	14,769	13,948	13,127	12,305	11,484	10,897	10,545	10,193	9,841	9,489
GH	GH1SAM 0	1,635	1,544	1,453	1,362	1,271	1,206	1,167	1,128	1,089	1,050
GH	GH2FFP 0	14,684	13,998	13,313	12,627	11,942	11,257	10,791	10,556	10,330	10,104
GH	GH2SAM 0	709	674	639	605	570	546	535	523	511	500
GH	GH3FFP 0	18,199	17,369	16,538	15,708	14,877	14,047	13,216	12,647	12,344	12,047
GH	GH3SAM 0	1,471	1,397	1,324	1,250	1,177	1,126	1,099	1,073	1,047	1,020
GH	GH4FFP 0	17,541	16,757	15,973	15,188	14,404	13,619	12,835	12,050	11,513	11,223
GH	GH4SAM 0	1,555	1,479	1,403	1,328	1,252	1,176	1,124	1,096	1,068	1,039
MC	MC1FGD 0	19,360	18,320	17,281	16,242	15,203	14,164	13,412	12,949	12,485	12,022
MC	MC1FFP 0	15,717	14,875	14,032	13,190	12,348	11,506	10,896	10,520	10,143	9,767
MC	MC1SAM 0	1,001	948	895	841	788	735	696	672	648	624
MC	MC2FGD 0	20,015	18,911	17,806	16,702	15,598	14,494	13,677	13,148	12,618	12,088
MC	MC2FFP 0	15,896	15,021	14,145	13,270	12,395	11,519	10,871	10,450	10,029	9,608
MC	MC2SAM 0	1,035	978	922	865	808	752	710	682	655	627
MC	MC3FGDU 0	7,522	7,135	6,748	6,362	5,975	5,589	5,303	5,124	4,950	4,777
MC	MC3FGDR 0	170	162	154	145	137	128	121	115	111	107
MC	MC3FFP 0	15,228	14,480	13,732	12,985	12,237	11,489	10,742	10,190	9,844	9,510
MC	MC3SAM 0	1,557	1,472	1,387	1,302	1,217	1,155	1,116	1,077	1,039	1,000
MC	MC4FGD 0	22,662	21,491	20,319	19,147	17,976	16,804	15,940	15,402	14,880	14,358
MC	MC4SCR 0	508	479	449	420	399	386	372	359	346	332
MC	MC4FFP 0	15,733	14,919	14,106	13,293	12,479	11,666	11,066	10,692	10,330	9,968
MC	MC4SAM 0	1,749	1,660	1,570	1,480	1,391	1,301	1,235	1,193	1,153	1,112
TC	TC1FFP 0	13,200	12,564	11,927	11,291	10,654	10,018	9,381	8,918	8,637	8,363
CR	CR4FGD 0	19,471	18,276	17,081	15,886	14,691	13,773	13,130	12,488	11,845	11,203
CR	CR4SCR 0	7,687	7,214	6,740	6,267	5,794	5,431	5,177	4,924	4,671	4,417
CR	CR4FF 0	3,935	3,692	3,450	3,207	2,964	2,778	2,648	2,519	2,389	2,260
CR	CR4PAC 0	276	259	242	225	208	195	186	177	168	159
CR	CR4LIME 0	305	286	267	249	230	216	206	195	185	175

NewControlsCapital

Station	Unit	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
CR	CR5FGD 0	20,835	19,538	18,241	16,944	15,647	14,641	13,924	13,207	12,490	11,774
CR	CR5SCR 0	8,208	7,696	7,183	6,670	6,158	5,760	5,478	5,196	4,914	4,632
CR	CR5FF 0	4,253	3,987	3,721	3,455	3,189	2,983	2,837	2,691	2,545	2,399
CR	CR5PAC 0	301	282	263	245	226	212	201	191	180	170
CR	CR5LIME 0	333	312	291	271	250	234	222	211	199	188
CR	CR6FGD 0	25,199	23,692	22,185	20,678	19,171	18,033	17,265	16,496	15,727	14,959
CR	CR6SCR 0	10,175	9,563	8,951	8,339	7,727	7,266	6,956	6,646	6,337	6,027
CR	CR6FF 0	5,194	4,882	4,569	4,257	3,944	3,709	3,551	3,393	3,235	3,077
CR	CR6PAC 0	401	377	353	329	305	287	275	262	250	238
CR	CR6LIME 0	445	418	391	365	338	318	305	291	278	264
GR	GR3SFF 0	4,078	3,859	3,640	3,421	3,202	3,050	2,967	2,884	2,800	2,717
GR	GR3PAC 0	113	107	101	95	89	85	82	80	78	75
GR	GR4SFF 0	6,177	5,825	5,473	5,122	4,770	4,515	4,356	4,198	4,040	3,881
GR	GR4PAC 0	171	161	152	142	132	125	121	116	112	108

Station	Unit	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
BR	BR1FFP 0	6,525	6,333	6,141	5,950	5,758	5,566	5,375	5,183	4,991	4,800
BR	BR1SAM 0	282	274	266	257	249	241	232	224	216	208
BR	BR2FFP 0	7,028	6,815	6,602	6,388	6,175	5,962	5,749	5,535	5,322	5,109
BR	BR2SAM 0	281	273	264	256	247	239	230	222	213	205
BR	BR3FFP 0	7,514	7,311	7,109	6,906	6,703	6,501	6,298	6,095	5,893	5,690
GH	GH1FFP 0	9,137	8,785	8,433	8,081	7,729	7,377	7,025	6,673	6,321	5,969
GH	GH1SAM 0	1,011	972	933	894	855	816	777	738	699	661
GH	GH2FFP 0	9,878	9,652	9,425	9,199	8,973	8,747	8,521	8,295	8,069	7,843
GH	GH2SAM 0	488	476	464	453	441	429	418	406	394	383
GH	GH3FFP 0	11,750	11,452	11,155	10,858	10,561	10,263	9,966	9,669	9,372	9,075
GH	GH3SAM 0	994	967	941	915	888	862	835	809	782	756
GH	GH4FFP 0	10,932	10,642	10,352	10,061	9,771	9,481	9,190	8,900	8,610	8,319
GH	GH4SAM 0	1,011	983	955	927	899	870	842	814	786	758
MC	MC1FGD 0	11,558	11,095	10,631	10,167	9,704	9,240	8,777	8,313	7,850	3,188
MC	MC1FFP 0	9,390	9,013	8,637	8,260	7,884	7,507	7,130	6,754	6,377	2,590
MC	MC1SAM 0	600	576	552	528	504	480	455	431	407	165
MC	MC2FGD 0	11,558	11,028	10,499	9,969	9,439	8,909	2,908	0	0	0
MC	MC2FFP 0	9,187	8,766	8,344	7,923	7,502	7,081	2,311	0	0	0
MC	MC2SAM 0	600	572	545	517	490	462	151	0	0	0
MC	MC3FGDU 0	4,603	4,429	4,256	4,082	3,909	3,735	3,561	3,388	3,214	3,040
MC	MC3FGDR 0	104	100	96	92	88	85	81	77	73	69
MC	MC3FFP 0	9,175	8,841	8,506	8,172	7,837	7,503	7,168	6,834	6,499	6,165
MC	MC3SAM 0	961	923	884	846	807	768	730	691	652	213
MC	MC4FGD 0	13,836	13,314	12,792	12,270	11,748	11,226	10,705	10,183	9,661	9,139
MC	MC4SCR 0	319	306	292	279	266	252	239	226	92	0
MC	MC4FFP 0	9,605	9,243	8,881	8,518	8,156	7,794	7,431	7,069	6,707	6,344
MC	MC4SAM 0	1,072	1,031	991	951	910	870	829	789	748	708
TC	TC1FFP 0	8,089	7,815	7,541	7,267	6,993	6,719	6,445	6,171	5,897	5,623
CR	CR4FGD 0	10,560	0	0	0	0	0	0	0	0	0
CR	CR4SCR 0	4,164	0	0	0	0	0	0	0	0	0
CR	CR4FF 0	2,130	0	0	0	0	0	0	0	0	0
CR	CR4PAC 0	150	0	0	0	0	0	0	0	0	0
CR	CR4LIME 0	165	0	0	0	0	0	0	0	0	0

NewControlsCapital

Station	Unit	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CR	CR5FGD 0	0	0	0	0	0	0	0	0	0	0
CR	CR5SCR 0	0	0	0	0	0	0	0	0	0	0
CR	CR5FF 0	0	0	0	0	0	0	0	0	0	0
CR	CR5PAC 0	0	0	0	0	0	0	0	0	0	0
CR	CR5LIME 0	0	0	0	0	0	0	0	0	0	0
CR	CR6FGD 0	14,190	13,421	12,653	0	0	0	0	0	0	0
CR	CR6SCR 0	5,717	5,408	5,098	0	0	0	0	0	0	0
CR	CR6FF 0	2,919	2,761	2,602	0	0	0	0	0	0	0
CR	CR6PAC 0	226	213	201	0	0	0	0	0	0	0
CR	CR6LIME 0	250	237	223	0	0	0	0	0	0	0
GR	GR3SFF 0	2,634	2,550	2,467	2,384	2,300	2,217	2,134	2,050	1,967	1,884
GR	GR3PAC 0	73	71	68	66	64	62	59	57	55	52
GR	GR4SFF 0	3,723	3,565	3,407	3,248	3,090	2,932	2,773	2,615	0	0
GR	GR4PAC 0	103	99	94	90	86	81	77	73	0	0

Station	Unit	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
BR	BR1FFP 0	4,608	4,417	4,225	4,033	3,842	3,650	3,458	3,267	1,327	0
BR	BR1SAM 0	199	191	183	174	166	158	150	141	57	0
BR	BR2FFP 0	4,895	4,682	4,469	4,256	4,042	3,829	3,616	1,180	0	0
BR	BR2SAM 0	196	187	179	170	162	153	145	47	0	0
BR	BR3FFP 0	5,487	5,284	5,082	4,879	4,676	4,474	4,271	4,068	3,865	3,663
GH	GH1FFP 0	2,424	0	0	0	0	0	0	0	0	0
GH	GH1SAM 0	268	0	0	0	0	0	0	0	0	0
GH	GH2FFP 0	7,617	7,391	7,165	6,939	6,713	6,486	6,260	6,034	5,808	5,582
GH	GH2SAM 0	371	359	348	336	324	312	301	289	277	266
GH	GH3FFP 0	8,777	8,480	8,183	7,886	7,588	7,291	6,994	6,697	6,400	6,102
GH	GH3SAM 0	730	703	677	650	624	598	571	545	518	492
GH	GH4FFP 0	8,029	7,739	7,448	7,158	6,867	6,577	6,287	5,996	5,706	5,416
GH	GH4SAM 0	730	701	673	645	617	589	561	532	504	476
MC	MC1FGD 0	0	0	0	0	0	0	0	0	0	0
MC	MC1FFP 0	0	0	0	0	0	0	0	0	0	0
MC	MC1SAM 0	0	0	0	0	0	0	0	0	0	0
MC	MC2FGD 0	0	0	0	0	0	0	0	0	0	0
MC	MC2FFP 0	0	0	0	0	0	0	0	0	0	0
MC	MC2SAM 0	0	0	0	0	0	0	0	0	0	0
MC	MC3FGDU 0	2,653	188	0	0	0	0	0	0	0	0
MC	MC3FGDR 0	64	44	0	0	0	0	0	0	0	0
MC	MC3FFP 0	5,830	4,673	341	0	0	0	0	0	0	0
MC	MC3SAM 0	0	0	0	0	0	0	0	0	0	0
MC	MC4FGD 0	7,976	573	0	0	0	0	0	0	0	0
MC	MC4SCR 0	0	0	0	0	0	0	0	0	0	0
MC	MC4FFP 0	5,537	398	0	0	0	0	0	0	0	0
MC	MC4SAM 0	618	44	0	0	0	0	0	0	0	0
TC	TC1FFP 0	5,349	5,075	4,801	4,186	261	0	0	0	0	0
CR	CR4FGD 0	0	0	0	0	0	0	0	0	0	0
CR	CR4SCR 0	0	0	0	0	0	0	0	0	0	0
CR	CR4FF 0	0	0	0	0	0	0	0	0	0	0
CR	CR4PAC 0	0	0	0	0	0	0	0	0	0	0
CR	CR4LIME 0	0	0	0	0	0	0	0	0	0	0

Station	Unit	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
CR	CR5FGD 0	0	0	0	0	0	0	0	0	0	0
CR	CR5SCR 0	0	0	0	0	0	0	0	0	0	0
CR	CR5FF 0	0	0	0	0	0	0	0	0	0	0
CR	CR5PAC 0	0	0	0	0	0	0	0	0	0	0
CR	CR5LIME 0	0	0	0	0	0	0	0	0	0	0
CR	CR6FGD 0	0	0	0	0	0	0	0	0	0	0
CR	CR6SCR 0	0	0	0	0	0	0	0	0	0	0
CR	CR6FF 0	0	0	0	0	0	0	0	0	0	0
CR	CR6PAC 0	0	0	0	0	0	0	0	0	0	0
CR	CR6LIME 0	0	0	0	0	0	0	0	0	0	0
GR	GR3SFF 0	1,800	1,717	1,634	1,550	1,467	1,384	0	0	0	0
GR	GR3PAC 0	50	48	45	43	41	38	0	0	0	0
GR	GR4SFF 0	0	0	0	0	0	0	0	0	0	0
GR	GR4PAC 0	0	0	0	0	0	0	0	0	0	0

Station	Unit	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
BR	BR1FFP 0	0	0	0	0	0	0	0	0	0	0
BR	BR1SAM 0	0	0	0	0	0	0	0	0	0	0
BR	BR2FFP 0	0	0	0	0	0	0	0	0	0	0
BR	BR2SAM 0	0	0	0	0	0	0	0	0	0	0
BR	BR3FFP 0	3,460	1,405	0	0	0	0	0	0	0	0
GH	GH1FFP 0	0	0	0	0	0	0	0	0	0	0
GH	GH1SAM 0	0	0	0	0	0	0	0	0	0	0
GH	GH2FFP 0	5,356	5,130	4,904	4,678	4,452	4,226	4,000	3,489	253	0
GH	GH2SAM 0	254	242	231	219	207	196	0	0	0	0
GH	GH3FFP 0	5,805	5,508	5,211	4,152	214	0	0	0	0	0
GH	GH3SAM 0	465	405	21	0	0	0	0	0	0	0
GH	GH4FFP 0	5,125	4,835	0	0	0	0	0	0	0	0
GH	GH4SAM 0	117	0	0	0	0	0	0	0	0	0
MC	MC1FGD 0	0	0	0	0	0	0	0	0	0	0
MC	MC1FFP 0	0	0	0	0	0	0	0	0	0	0
MC	MC1SAM 0	0	0	0	0	0	0	0	0	0	0
MC	MC2FGD 0	0	0	0	0	0	0	0	0	0	0
MC	MC2FFP 0	0	0	0	0	0	0	0	0	0	0
MC	MC2SAM 0	0	0	0	0	0	0	0	0	0	0
MC	MC3FGDU 0	0	0	0	0	0	0	0	0	0	0
MC	MC3FGDR 0	0	0	0	0	0	0	0	0	0	0
MC	MC3FFP 0	0	0	0	0	0	0	0	0	0	0
MC	MC3SAM 0	0	0	0	0	0	0	0	0	0	0
MC	MC4FGD 0	0	0	0	0	0	0	0	0	0	0
MC	MC4SCR 0	0	0	0	0	0	0	0	0	0	0
MC	MC4FFP 0	0	0	0	0	0	0	0	0	0	0
MC	MC4SAM 0	0	0	0	0	0	0	0	0	0	0
TC	TC1FFP 0	0	0	0	0	0	0	0	0	0	0
CR	CR4FGD 0	0	0	0	0	0	0	0	0	0	0
CR	CR4SCR 0	0	0	0	0	0	0	0	0	0	0
CR	CR4FF 0	0	0	0	0	0	0	0	0	0	0
CR	CR4PAC 0	0	0	0	0	0	0	0	0	0	0
CR	CR4LIME 0	0	0	0	0	0	0	0	0	0	0

NewControlsCapital

Station	Unit	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
CR	CR5FGD 0	0	0	0	0	0	0	0	0	0	0
CR	CR5SCR 0	0	0	0	0	0	0	0	0	0	0
CR	CR5FF 0	0	0	0	0	0	0	0	0	0	0
CR	CR5PAC 0	0	0	0	0	0	0	0	0	0	0
CR	CR5LIME 0	0	0	0	0	0	0	0	0	0	0
CR	CR6FGD 0	0	0	0	0	0	0	0	0	0	0
CR	CR6SCR 0	0	0	0	0	0	0	0	0	0	0
CR	CR6FF 0	0	0	0	0	0	0	0	0	0	0
CR	CR6PAC 0	0	0	0	0	0	0	0	0	0	0
CR	CR6LIME 0	0	0	0	0	0	0	0	0	0	0
GR	GR3SFF 0	0	0	0	0	0	0	0	0	0	0
GR	GR3PAC 0	0	0	0	0	0	0	0	0	0	0
GR	GR4SFF 0	0	0	0	0	0	0	0	0	0	0
GR	GR4PAC 0	0	0	0	0	0	0	0	0	0	0

Retirement Cost		2010	2011	2012	2013	2014	2015	2016	2017	2018
All Units		0	0	0	0	0	0	2100	0	0

2% Escalation Rate

Unit Costs (\$000)

BR	BR1	3,816	4,811	3,969	4,049	4,130	4,212	4,296	4,382
BR	BR2	6,633	7,160	7,253	7,398	7,546	7,697	7,851	8,008
BR	BR3	15,885	20,876	14,904	15,202	15,506	15,816	16,132	16,455
CR	CR4	14,372	9,218	12,029	12,269	12,515	12,765	13,020	13,281
CR	CR5	11,842	9,889	12,791	13,047	13,308	13,574	13,845	14,122
CR	CR6	10,666	11,619	10,173	10,376	10,584	10,795	11,011	11,231
GH	GH1	17,829	19,141	17,966	18,325	18,691	19,065	19,447	19,835
GH	GH2	12,225	18,498	13,429	13,698	13,972	14,251	14,536	14,827
GH	GH3	17,961	13,501	12,475	12,724	12,979	13,238	13,503	13,773
GH	GH4	11,533	13,496	12,105	12,347	12,594	12,846	13,103	13,365
GR	GR3	4,270	5,792	4,360	4,447	4,536	4,627	4,719	4,813
GR	GR4	7,338	6,924	8,633	8,805	8,982	9,161	9,344	9,531
MC	MC1	11,892	17,333	12,669	12,923	13,181	13,445	13,714	13,988
MC	MC2	16,179	11,941	15,201	15,505	15,815	16,131	16,454	16,783
MC	MC3	18,313	14,238	17,221	17,566	17,917	18,275	18,641	19,014
MC	MC4	16,531	18,981	17,245	17,590	17,942	18,300	18,666	19,040
TC	TC1	17,205	15,170	17,403	17,751	18,106	18,468	18,837	19,214
TY	TY3	410	416	418	427	435	444	453	462

Retirement Cost		2019	2020	2021	2022	2023	2024	2025	2026	2027
All Units		0	0	0	0	0	0	0	0	0
2% Escalation Rate										
Unit Costs (\$000)										
BR	BR1	4,470	4,559	4,651	4,744	4,838	4,935	5,034	5,135	5,237
BR	BR2	8,168	8,331	8,498	8,668	8,841	9,018	9,199	9,383	9,570
BR	BR3	16,784	17,120	17,462	17,811	18,167	18,531	18,901	19,279	19,665
CR	CR4	13,546	13,817	14,094	14,375	14,663	14,956	15,255	15,560	15,872
CR	CR5	14,405	14,693	14,987	15,286	15,592	15,904	16,222	16,546	16,877
CR	CR6	11,456	11,685	11,919	12,157	12,400	12,648	12,901	13,159	13,423
GH	GH1	20,232	20,637	21,050	21,471	21,900	22,338	22,785	23,240	23,705
GH	GH2	15,124	15,426	15,735	16,049	16,370	16,698	17,032	17,372	17,720
GH	GH3	14,049	14,330	14,616	14,909	15,207	15,511	15,821	16,138	16,460
GH	GH4	13,632	13,905	14,183	14,467	14,756	15,051	15,352	15,659	15,973
GR	GR3	4,910	5,008	5,108	5,210	5,314	5,421	5,529	5,640	5,753
GR	GR4	9,722	9,916	10,115	10,317	10,523	10,734	10,949	11,167	11,391
MC	MC1	14,268	14,553	14,844	15,141	15,444	15,753	16,068	16,389	16,717
MC	MC2	17,118	17,461	17,810	18,166	18,530	18,900	19,278	19,664	20,057
MC	MC3	19,394	19,782	20,177	20,581	20,993	21,412	21,841	22,278	22,723
MC	MC4	19,421	19,809	20,205	20,609	21,021	21,442	21,871	22,308	22,754
TC	TC1	19,598	19,990	20,390	20,798	21,214	21,638	22,071	22,512	22,962
TY	TY3	471	480	490	500	510	520	530	541	552

RetirementCost_Savings

		2028	2029	2030	2031	2032	2033	2034	2035	2036
Retirement Cost										
	All Units	0	0	0	0	0	0	0	0	0
2% Escalation Rate										
	Unit Costs (\$000)									
BR	BR1	5,342	5,449	5,558	5,669	5,782	5,898	6,016	6,136	6,259
BR	BR2	9,762	9,957	10,156	10,359	10,566	10,778	10,993	11,213	11,437
BR	BR3	20,058	20,460	20,869	21,286	21,712	22,146	22,589	23,041	23,502
CR	CR4	16,189	16,513	16,843	17,180	17,524	17,874	18,232	18,596	18,968
CR	CR5	17,215	17,559	17,910	18,269	18,634	19,007	19,387	19,775	20,170
CR	CR6	13,691	13,965	14,244	14,529	14,820	15,116	15,418	15,727	16,041
GH	GH1	24,179	24,663	25,156	25,659	26,172	26,696	27,230	27,774	28,330
GH	GH2	18,074	18,436	18,804	19,181	19,564	19,955	20,355	20,762	21,177
GH	GH3	16,790	17,125	17,468	17,817	18,174	18,537	18,908	19,286	19,672
GH	GH4	16,292	16,618	16,950	17,289	17,635	17,988	18,347	18,714	19,089
GR	GR3	5,868	5,985	6,105	6,227	6,351	6,478	6,608	6,740	6,875
GR	GR4	11,619	11,851	12,088	12,330	12,576	12,828	13,084	13,346	13,613
MC	MC1	17,051	17,392	17,740	18,095	18,457	18,826	19,202	19,586	19,978
MC	MC2	20,458	20,867	21,285	21,710	22,145	22,587	23,039	23,500	23,970
MC	MC3	23,178	23,641	24,114	24,596	25,088	25,590	26,102	26,624	27,156
MC	MC4	23,209	23,674	24,147	24,630	25,123	25,625	26,138	26,660	27,194
TC	TC1	23,422	23,890	24,368	24,855	25,352	25,859	26,377	26,904	27,442
TY	TY3	563	574	586	597	609	622	634	647	660

RetirementCost_Savings

		2037	2038	2039	2040
Retirement Cost					
All Units		0	0	0	0

2% Escalation Rate

		Unit Costs (\$000)			
BR	BR1	6,384	6,512	6,642	6,775
BR	BR2	11,666	11,899	12,137	12,380
BR	BR3	23,972	24,451	24,940	25,439
CR	CR4	19,347	19,734	20,129	20,532
CR	CR5	20,573	20,985	21,405	21,833
CR	CR6	16,362	16,689	17,023	17,364
GH	GH1	28,897	29,474	30,064	30,665
GH	GH2	21,600	22,032	22,473	22,923
GH	GH3	20,065	20,466	20,876	21,293
GH	GH4	19,470	19,860	20,257	20,662
GR	GR3	7,012	7,153	7,296	7,442
GR	GR4	13,885	14,163	14,446	14,735
MC	MC1	20,378	20,785	21,201	21,625
MC	MC2	24,449	24,938	25,437	25,946
MC	MC3	27,699	28,253	28,818	29,395
MC	MC4	27,737	28,292	28,858	29,435
TC	TC1	27,991	28,551	29,122	29,704
TY	TY3	673	686	700	714

RetirementCost_Savings

Escalation Rate: 2% Year \$: 2010 Fixed O&M \$/yr

	Month	Year	Equipment	2011	2012	2013	2014	2015	2016
BR	BR1	5	2014 PJFF/PAC	0	0	0	598,882	610,860	623,077
BR	BR1	5	2014 SAM Mitigation	0	0	0	78,540	137,333	140,079
BR	BR2	4	2014 PJFF/PAC	0	0	0	714,168	728,451	743,020
BR	BR2	4	2014 SAM Mitigation	0	0	0	134,640	137,333	140,079
BR	BR3	5	2015 PJFF/PAC	0	0	0	0	1,067,560	1,088,911
GH	GH1	5	2014 PJFF/PAC	0	0	0	1,293,082	1,318,944	1,345,322
GH	GH1	5	2014 SCR Turn-Down	0	0	0	0	0	0
GH	GH1	2	2013 SAM Mitigation	0	0	0	4,899	0	0
GH	GH2	11	2014 PJFF/PAC	0	0	0	777,600	1,586,304	1,618,030
GH	GH2	12	2012 Sorbent Injection	0	8,064	98,700	100,674	102,687	104,741
GH	GH3	10	2015 PJFF/PAC	0	0	0	0	652,436	1,330,969
GH	GH3	11	2013 SCR Turn-Down	0	0	0	0	0	0
GH	GH3	2	2013 SAM Mitigation	0	0	0	0	0	0
GH	GH4	12	2015 PJFF/PAC	0	0	0	0	631,870	1,289,014
GH	GH4	3	2014 SCR Turn-Down	0	0	0	0	0	0
GH	GH4	2	2013 SAM Mitigation	0	0	0	0	0	0
MC	MC1	5	2015 Combined 1&2 FGD	0	0	0	0	-238,642	-219,636
MC	MC1	5	2015 PJFF/PAC	0	0	0	0	1,446,222	1,475,147
MC	MC1	5	2015 SAM Mitigation	0	0	0	0	22,100	38,643
MC	MC2	4	2015 Combined 1&2 FGD	0	0	0	0	186,506	205,512
MC	MC2	4	2015 PJFF/PAC	0	0	0	0	1,418,867	1,447,245
MC	MC2	4	2015 SAM Mitigation	0	0	0	0	25,257	38,643
MC	MC3	11	2014 FGD	0	0	0	0	0	0
MC	MC3	10	2015 PJFF/PAC	0	0	0	0	646,753	1,319,377
MC	MC3	4	2013 SAM Mitigation	0	0	24,068	36,824	37,560	38,312
MC	MC3	4	2013 SCR Turn-Down	0	0	0	0	0	0
MC	MC4	11	2014 FGD	0	0	0	0	0	0
MC	MC4	11	2014 PJFF/PAC	0	0	0	743,376	1,516,487	1,546,817
MC	MC4	11	2014 SAM Mitigation	0	0	0	3,095	37,885	38,643
MC	MC4	11	2014 SCR Turn-Down	0	0	0	0	0	0
TC	TC1	11	2015 PJFF/PAC	0	0	0	0	493,761	1,007,273

	<u>Month</u>	<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
CR	1	2016	SCR	1,871,000	0	0	0	0	0	2,107,050
CR	1	2016	WFGD		0	0	0	0	0	0
CR	1	2016	PJFF	1,191,000	0	0	0	0	0	1,341,259
CR	1	2016	SAM Mitigation	174,000	0	0	0	0	0	195,952
CR	1	2016	PAC Injection	169,000	0	0	0	0	0	190,321
CR	1	2016	SCR	1,993,000	0	0	0	0	0	2,244,442
CR	1	2016	WFGD		0	0	0	0	0	0
CR	1	2016	PJFF	1,251,000	0	0	0	0	0	1,408,829
CR	1	2016	SAM Mitigation	177,000	0	0	0	0	0	199,331
CR	1	2016	PAC Injection	172,000	0	0	0	0	0	193,700
CR	1	2016	SCR	2,392,000	0	0	0	0	0	2,693,781
CR	1	2016	WFGD		0	0	0	0	0	0
CR	1	2016	PJFF	1,632,000	0	0	0	0	0	1,837,897
CR	1	2016	SAM Mitigation	198,000	0	0	0	0	0	222,980
CR	1	2016	PAC Injection	191,000	0	0	0	0	0	215,097
GR	1	2016	SCR	943,000	0	0	0	0	0	1,061,971
GR	1	2016	CDS-FF	3,322,000	0	0	0	0	0	3,741,112
GR	1	2016	PAC Injection	141,000	0	0	0	0	0	158,789
GR	1	2016	SCR	1,284,000	0	0	0	0	0	1,445,993
GR	1	2016	CDS-FF	4,309,000	0	0	0	0	0	4,852,634
GR	1	2016	PAC Injection	150,000	0	0	0	0	0*	168,924
GH			SCR		0	0	0	0	0	0
MC			SCR		0	0	0	0	0	0
MC			SCR		0	0	0	0	0	0
BR			SCR		0	0	0	0	0	0
BR			SCR		0	0	0	0	0	0

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Tab BR 1-2, Lines 17-20

2011 2012 2013 2014 2015 2016

O&M

<u>Month</u>	<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
		BR1 SCR		0	0	0	0	0	0
		BR2 SCR		0	0	0	0	0	0
G:\11-051 Sierra Club KY IRP & Coal Plants\CPCN Docket 2011-00162 - LG&E\Discovery Responses - LG&E\Env									
Tab GH2MC1-2, Lines 19-21									
		O&M							
		GH2SCR	0	0	0	0	0	0	0
		MC1SCR	0	0	0	0	0	0	0
		MC2SCR	0	0	0	0	0	0	0

Year \$: 2010
Fixed O&M

<u>Equipment</u>	<u>\$/yr</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
PJFF/PAC		635,538	648,249	661,214	674,439	687,927	701,686	715,720	730,034	744,635	759,527
SAM Mitigation		142,881	145,739	148,653	151,627	154,659	157,752	160,907	164,125	167,408	170,756
PJFF/PAC		757,880	773,038	788,499	804,269	820,354	836,761	853,496	870,566	887,978	905,737
SAM Mitigation		142,881	145,739	148,653	151,627	154,659	157,752	160,907	164,125	167,408	170,756
PJFF/PAC		1,110,689	1,132,903	1,155,561	1,178,672	1,202,245	1,226,290	1,250,816	1,275,832	1,301,349	1,327,376
PJFF/PAC		1,372,229	1,399,673	1,427,667	1,456,220	1,485,345	1,515,052	1,545,353	1,576,260	1,607,785	1,639,941
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
SAM Mitigation		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,650,391	1,683,399	1,717,067	1,751,408	1,786,436	1,822,165	1,858,608	1,895,781	1,933,696	1,972,370
Sorbent Injection		106,836	108,973	111,152	113,375	115,643	117,956	120,315	122,721	125,175	127,679
PJFF/PAC		1,357,589	1,384,741	1,412,435	1,440,684	1,469,498	1,498,888	1,528,865	1,559,443	1,590,632	1,622,444
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
SAM Mitigation		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,314,795	1,341,091	1,367,912	1,395,271	1,423,176	1,451,640	1,480,672	1,510,286	1,540,491	1,571,301
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
SAM Mitigation		0	0	0	0	0	0	0	0	0	0
Combined 1&2 FGD		-200,250	-180,476	-160,306	-139,733	-118,749	-121,124	-123,546	-126,017	-128,537	-131,108
PJFF/PAC		1,504,650	1,534,743	1,565,438	1,596,746	1,628,681	1,661,255	1,694,480	1,728,370	1,762,937	1,798,196
SAM Mitigation		39,416	40,204	41,008	41,828	42,665	43,518	44,388	45,276	46,182	47,105
Combined 1&2 FGD		224,899	244,673	264,842	285,415	306,400	312,528	318,778	325,154	331,657	338,290
PJFF/PAC		1,476,189	1,505,713	1,535,828	1,566,544	1,597,875	1,629,832	1,662,429	1,695,678	1,729,591	1,764,183
SAM Mitigation		39,416	40,204	41,008	41,828	42,665	43,518	44,388	45,276	46,182	47,105
FGD		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,345,764	1,372,679	1,400,133	1,428,136	1,456,698	1,485,832	1,515,549	1,545,860	1,576,777	1,608,313
SAM Mitigation		39,078	39,859	40,657	41,470	42,299	43,145	44,008	44,888	45,786	46,702
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
FGD		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,577,754	1,609,309	1,641,495	1,674,325	1,707,811	1,741,967	1,776,807	1,812,343	1,848,590	1,885,562
SAM Mitigation		39,416	40,204	41,008	41,828	42,665	43,518	44,388	45,276	46,182	47,105
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,027,418	1,047,966	1,068,926	1,090,304	1,112,110	1,134,353	1,157,040	1,180,180	1,203,784	1,227,860

<u>Equipment</u>	<u>\$/yr</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
SCR	1,871,000	2,149,191	2,192,175	2,236,018	2,280,739	2,326,353	2,372,880	2,420,338	2,468,745	2,518,120	2,568,482
WFGD		0	0	0	0	0	0	0	0	0	0
PJFF	1,191,000	1,368,085	1,395,446	1,423,355	1,451,822	1,480,859	1,510,476	1,540,685	1,571,499	1,602,929	1,634,988
SAM Mitigation	174,000	199,871	203,869	207,946	212,105	216,347	220,674	225,088	229,589	234,181	238,865
PAC Injection	169,000	194,128	198,010	201,971	206,010	210,130	214,333	218,620	222,992	227,452	232,001
SCR	1,993,000	2,289,331	2,335,117	2,381,819	2,429,456	2,478,045	2,527,606	2,578,158	2,629,721	2,682,316	2,735,962
WFGD		0	0	0	0	0	0	0	0	0	0
PJFF	1,251,000	1,437,006	1,465,746	1,495,061	1,524,962	1,555,461	1,586,570	1,618,302	1,650,668	1,683,681	1,717,355
SAM Mitigation	177,000	203,317	207,384	211,531	215,762	220,077	224,479	228,968	233,548	238,219	242,983
PAC Injection	172,000	197,574	201,525	205,556	209,667	213,860	218,138	222,500	226,950	231,489	236,119
SCR	2,392,000	2,747,656	2,802,609	2,858,661	2,915,835	2,974,151	3,033,634	3,094,307	3,156,193	3,219,317	3,283,703
WFGD		0	0	0	0	0	0	0	0	0	0
PJFF	1,632,000	1,874,655	1,912,148	1,950,391	1,989,399	2,029,187	2,069,771	2,111,166	2,153,389	2,196,457	2,240,386
SAM Mitigation	198,000	227,440	231,989	236,628	241,361	246,188	251,112	256,134	261,257	266,482	271,812
PAC Injection	191,000	219,399	223,787	228,263	232,828	237,484	242,234	247,079	252,020	257,061	262,202
SCR	943,000	1,083,211	1,104,875	1,126,972	1,149,512	1,172,502	1,195,952	1,219,871	1,244,268	1,269,154	1,294,537
CDS-FF	3,322,000	3,815,934	3,892,252	3,970,098	4,049,499	4,130,489	4,213,099	4,297,361	4,383,308	4,470,975	4,560,394
PAC Injection	141,000	161,965	165,204	168,508	171,878	175,316	178,822	182,399	186,047	189,767	193,563
SCR	1,284,000	1,474,912	1,504,411	1,534,499	1,565,189	1,596,493	1,628,422	1,660,991	1,694,211	1,728,095	1,762,657
CDS-FF	4,309,000	4,949,687	5,048,680	5,149,654	5,252,647	5,357,700	5,464,854	5,574,151	5,685,634	5,799,347	5,915,334
PAC Injection	150,000	172,303	175,749	179,264	182,849	186,506	190,236	194,041	197,922	201,880	205,918
SCR		0	8,475,784	8,645,300	8,818,206	8,994,570	9,174,461	9,357,950	9,545,109	9,736,012	9,930,732
SCR		0	3,943,805	4,022,682	4,103,135	4,185,198	4,268,902	4,354,280	4,441,366	4,530,193	4,620,797
SCR		0	3,984,814	4,064,510	4,145,800	4,228,716	4,313,290	4,399,556	4,487,547	4,577,298	4,668,844
SCR		0	2,431,193	2,479,817	2,529,413	2,580,002	2,631,602	2,684,234	2,737,918	2,792,677	2,848,530
SCR		0	3,952,007	4,031,047	4,111,668	4,193,902	4,277,780	4,363,335	4,450,602	4,539,614	4,630,406

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Tab BR 1-2, Lines 17-20

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
O&M										

<u>Equipment</u>	<u>\$/yr</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
BR1 SCR		0	2,431	2,480	2,529	2,580	2,632	2,684	2,738	2,793	2,849
BR2 SCR		0	3,952	4,031	4,112	4,194	4,278	4,363	4,451	4,540	4,630

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Tab GH2MC1-2, Lines 19-21

<u>O&M</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
GH2SCR 0	0	8,476	8,645	8,818	8,995	9,174	9,358	9,545	9,736	9,931
MC1SCR 0	0	3,944	4,023	4,103	4,185	4,269	4,354	4,441	4,530	4,621
MC2SCR 0	0	3984.8136	4064.5098	4145.8	4228.716	4313.2903	4399.5562	4487.5473	4577.2982	4668.8442

Year \$: 2010
Fixed O&M

<u>Equipment</u>	<u>\$/yr</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>
PJFF/PAC		774,718	790,212	806,016	822,137	838,580	855,351	872,458	889,907	907,705	925,860
SAM Mitigation		174,171	177,655	181,208	184,832	188,529	192,299	196,145	200,068	204,069	208,151
PJFF/PAC		923,852	942,329	961,175	980,399	1,000,007	1,020,007	1,040,407	1,061,215	1,082,440	1,104,088
SAM Mitigation		174,171	177,655	181,208	184,832	188,529	192,299	196,145	200,068	204,069	208,151
PJFF/PAC		1,353,924	1,381,002	1,408,622	1,436,795	1,465,530	1,494,841	1,524,738	1,555,233	1,586,337	1,618,064
PJFF/PAC		1,672,739	1,706,194	1,740,318	1,775,124	1,810,627	1,846,839	1,883,776	1,921,452	1,959,881	1,999,078
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
SAM Mitigation		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		2,011,817	2,052,054	2,093,095	2,134,957	2,177,656	2,221,209	2,265,633	2,310,946	2,357,165	2,404,308
Sorbent Injection		130,232	132,837	135,494	138,204	140,968	143,787	146,663	149,596	152,588	155,640
PJFF/PAC		1,654,893	1,687,991	1,721,751	1,756,186	1,791,310	1,827,136	1,863,678	1,900,952	1,938,971	1,977,751
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
SAM Mitigation		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,602,727	1,634,782	1,667,477	1,700,827	1,734,844	1,769,540	1,804,931	1,841,030	1,877,850	1,915,407
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
SAM Mitigation		0	0	0	0	0	0	0	0	0	0
Combined 1&2 FGD		-133,730	-136,405	-139,133	-141,916	-144,754	-147,649	-150,602	-153,614	-156,686	-159,820
PJFF/PAC		1,834,160	1,870,843	1,908,260	1,946,425	1,985,354	2,025,061	2,065,562	2,106,873	2,149,010	2,191,991
SAM Mitigation		48,047	49,008	49,989	50,988	52,008	53,048	54,109	55,191	56,295	57,421
Combined 1&2 FGD		345,056	351,957	358,996	366,176	373,499	380,969	388,589	396,361	404,288	412,374
PJFF/PAC		1,799,467	1,835,456	1,872,165	1,909,608	1,947,801	1,986,757	2,026,492	2,067,022	2,108,362	2,150,529
SAM Mitigation		48,047	49,008	49,989	50,988	52,008	53,048	54,109	55,191	56,295	57,421
FGD		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,640,479	1,673,288	1,706,754	1,740,889	1,775,707	1,811,221	1,847,446	1,884,395	1,922,083	1,960,524
SAM Mitigation		47,636	48,588	49,560	50,551	51,562	52,594	53,645	54,718	55,813	56,929
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
FGD		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,923,273	1,961,738	2,000,973	2,040,992	2,081,812	2,123,449	2,165,918	2,209,236	2,253,421	2,298,489
SAM Mitigation		48,047	49,008	49,989	50,988	52,008	53,048	54,109	55,191	56,295	57,421
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,252,417	1,277,465	1,303,015	1,329,075	1,355,656	1,382,769	1,410,425	1,438,633	1,467,406	1,496,754

Equipment	\$/yr	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
SCR	1,871,000	2,619,852	2,672,249	2,725,694	2,780,208	2,835,812	2,892,528	2,950,379	3,009,386	3,069,574	3,130,965
WFGD		0	0	0	0	0	0	0	0	0	0
PJFF	1,191,000	1,667,688	1,701,041	1,735,062	1,769,763	1,805,159	1,841,262	1,878,087	1,915,649	1,953,962	1,993,041
SAM Mitigation	174,000	243,642	248,515	253,485	258,555	263,726	269,000	274,380	279,868	285,465	291,175
PAC Injection	169,000	236,641	241,374	246,201	251,125	256,148	261,271	266,496	271,826	277,262	282,808
SCR	1,993,000	2,790,681	2,846,495	2,903,425	2,961,493	3,020,723	3,081,137	3,142,760	3,205,615	3,269,728	3,335,122
WFGD		0	0	0	0	0	0	0	0	0	0
PJFF	1,251,000	1,751,702	1,786,736	1,822,471	1,858,920	1,896,099	1,934,021	1,972,701	2,012,155	2,052,398	2,093,446
SAM Mitigation	177,000	247,843	252,800	257,856	263,013	268,273	273,638	279,111	284,693	290,387	296,195
PAC Injection	172,000	240,842	245,658	250,572	255,583	260,695	265,909	271,227	276,651	282,184	287,828
SCR	2,392,000	3,349,377	3,416,365	3,484,692	3,554,386	3,625,474	3,697,983	3,771,943	3,847,382	3,924,330	4,002,816
WFGD		0	0	0	0	0	0	0	0	0	0
PJFF	1,632,000	2,285,194	2,330,898	2,377,516	2,425,066	2,473,567	2,523,039	2,573,500	2,624,970	2,677,469	2,731,018
SAM Mitigation	198,000	277,248	282,793	288,449	294,218	300,102	306,104	312,226	318,471	324,840	331,337
PAC Injection	191,000	267,446	272,795	278,251	283,816	289,492	295,282	301,188	307,212	313,356	319,623
SCR	943,000	1,320,428	1,346,836	1,373,773	1,401,248	1,429,273	1,457,859	1,487,016	1,516,756	1,547,091	1,578,033
CDS-FF	3,322,000	4,651,602	4,744,634	4,839,527	4,936,317	5,035,044	5,135,744	5,238,459	5,343,229	5,450,093	5,559,095
PAC Injection	141,000	197,434	201,383	205,410	209,519	213,709	217,983	222,343	226,790	231,325	235,952
SCR	1,284,000	1,797,910	1,833,868	1,870,546	1,907,956	1,946,116	1,985,038	2,024,739	2,065,233	2,106,538	2,148,669
CDS-FF	4,309,000	6,033,640	6,154,313	6,277,399	6,402,947	6,531,006	6,661,626	6,794,859	6,930,756	7,069,371	7,210,759
PAC Injection	150,000	210,036	214,237	218,522	222,892	227,350	231,897	236,535	241,266	246,091	251,013
SCR		10,129,346	10,331,933	10,538,572	10,749,343	10,964,330	11,183,617	11,407,289	11,635,435	11,868,144	12,105,507
SCR		4,713,213	4,807,477	4,903,626	5,001,699	5,101,733	5,203,768	5,307,843	5,414,000	5,522,280	5,632,725
SCR		4,762,221	4,857,465	4,954,615	5,053,707	5,154,781	5,257,877	5,363,034	5,470,295	5,579,701	5,691,295
SCR		2,905,501	2,963,611	3,022,883	3,083,341	3,145,008	3,207,908	3,272,066	3,337,507	3,404,257	3,472,343
SCR		4,723,014	4,817,475	4,913,824	5,012,101	5,112,343	5,214,589	5,318,881	5,425,259	5,533,764	5,644,439

G:\11-051 Sierra Club KY IRP
Tab BR 1-2, Lines 17-20

O&M

<u>Equipment</u>	<u>\$/yr</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>
BR1 SCR		2,906	2,964	3,023	3,083	3,145	3,208	3,272	3,338	3,404	3,472
BR2 SCR		4,723	4,817	4,914	5,012	5,112	5,215	5,319	5,425	5,534	5,644

G:\11-051 Sierra Club KY IRP ;
 Tab GH2MC1-2, Lines 19-21

		<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>
O&M											
GH2SCR 0		10,129	10,332	10,539	10,749	10,964	11,184	11,407	11,635	11,868	12,106
MC1SCR 0		4,713	4,807	4,904	5,002	5,102	5,204	5,308	5,414	5,522	5,633
MC2SCR 0		4762.2211	4857.4655	4954.6148	5053.7071	5154.7812	5257.8769	5363.0344	5470.2951	5579.701	5691.295

Year \$: 2010
Fixed O&M

<u>Equipment</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>
	<u>\$/Yr</u>			
PJFF/PAC	944,377	963,264	982,530	1,002,180
SAM Mitigation	212,314	216,560	220,891	225,309
PJFF/PAC	1,126,170	1,148,694	1,171,668	1,195,101
SAM Mitigation	212,314	216,560	220,891	225,309
PJFF/PAC	1,650,425	1,683,434	1,717,103	1,751,445
PJFF/PAC	2,039,060	2,079,841	2,121,438	2,163,867
SCR Turn-Down	0	0	0	0
SAM Mitigation	0	0	0	0
PJFF/PAC	2,452,394	2,501,442	2,551,471	2,602,500
Sorbent Injection	158,753	161,928	165,166	168,470
PJFF/PAC	2,017,306	2,057,652	2,098,805	2,140,781
SCR Turn-Down	0	0	0	0
SAM Mitigation	0	0	0	0
PJFF/PAC	1,953,716	1,992,790	2,032,646	2,073,299
SCR Turn-Down	0	0	0	0
SAM Mitigation	0	0	0	0
Combined 1&2 FGD	-163,017	-166,277	-169,602	-172,994
PJFF/PAC	2,235,831	2,280,547	2,326,158	2,372,681
SAM Mitigation	58,570	59,741	60,936	62,155
Combined 1&2 FGD	420,621	429,033	437,614	446,366
PJFF/PAC	2,193,540	2,237,411	2,282,159	2,327,802
SAM Mitigation	58,570	59,741	60,936	62,155
FGD	0	0	0	0
PJFF/PAC	1,999,735	2,039,729	2,080,524	2,122,134
SAM Mitigation	58,068	59,229	60,414	61,622
SCR Turn-Down	0	0	0	0
FGD	0	0	0	0
PJFF/PAC	2,344,459	2,391,348	2,439,175	2,487,958
SAM Mitigation	58,570	59,741	60,936	62,155
SCR Turn-Down	0	0	0	0
PJFF/PAC	1,526,689	1,557,223	1,588,367	1,620,135

<u>Equipment</u>	<u>\$/yr</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>
SCR	1,871,000	3,193,585	3,257,456	3,322,605	3,389,058
WFGD		0	0	0	0
PJFF	1,191,000	2,032,902	2,073,560	2,115,031	2,157,332
SAM Mitigation	174,000	296,998	302,938	308,997	315,177
PAC Injection	169,000	288,464	294,233	300,118	306,120
SCR	1,993,000	3,401,825	3,469,861	3,539,258	3,610,044
WFGD		0	0	0	0
PJFF	1,251,000	2,135,315	2,178,021	2,221,582	2,266,013
SAM Mitigation	177,000	302,119	308,161	314,325	320,611
PAC Injection	172,000	293,584	299,456	305,445	311,554
SCR	2,392,000	4,082,872	4,164,530	4,247,820	4,332,777
WFGD		0	0	0	0
PJFF	1,632,000	2,785,639	2,841,352	2,898,179	2,956,142
SAM Mitigation	198,000	337,964	344,723	351,617	358,650
PAC Injection	191,000	326,015	332,536	339,186	345,970
SCR	943,000	1,609,594	1,641,786	1,674,622	1,708,114
CDS-FF	3,322,000	5,670,277	5,783,682	5,899,356	6,017,343
PAC Injection	141,000	240,671	245,484	250,394	255,402
SCR	1,284,000	2,191,642	2,235,475	2,280,185	2,325,788
CDS-FF	4,309,000	7,354,974	7,502,073	7,652,115	7,805,157
PAC Injection	150,000	256,033	261,154	266,377	271,704
SCR		12,347,617	12,594,569	12,846,460	13,103,390
SCR		5,745,380	5,860,287	5,977,493	6,097,043
SCR		5,805,121	5,921,223	6,039,648	6,160,441
SCR		3,541,789	3,612,625	3,684,878	3,758,575
SCR		5,757,328	5,872,475	5,989,924	6,109,723

G:\11-051 Sierra Club KY IRP ;
Tab BR 1-2, Lines 17-20

O&M 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046

<u>Equipment</u>	<u>S/Yr</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>
BR1 SCR		3,542	3,613	3,685	3,759	3833.747	3910.422	3988.63	4068.403	4149.771	4232.766
BR2 SCR		5,757	5,872	5,990	6,110	6231.917	6356.555	6483.687	6613.36	6745.627	6880.54

G:\11-051 Sierra Club KY IRP ;
 Tab GH2MC1-2, Lines 19-21

<u>O&M</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>
GH2SCR 0	12,348	12,595	12,846	13,103	13365.46	13632.77	13905.42	14183.53	14467.2	14756.55
MC1SCR 0	5,745	5,860	5,977	6,097	6218.984	6343.364	6470.231	6599.636	6731.628	6866.261
MC2SCR 0	5805.1209	5921.2233	6039.6478	6160.4407	6283.65	6409.323	6537.509	6668.259	6801.624	6937.657

Year \$: 2010
 Fixed O&M
 \$/yr

<u>Equipment</u>
PJFF/PAC
SAM Mitigation
PJFF/PAC
SAM Mitigation
PJFF/PAC
PJFF/PAC
SCR Turn-Down
SAM Mitigation
PJFF/PAC
Sorbent Injection
PJFF/PAC
SCR Turn-Down
SAM Mitigation
PJFF/PAC
SCR Turn-Down
SAM Mitigation
Combined 1&2 FGD
PJFF/PAC
SAM Mitigation
Combined 1&2 FGD
PJFF/PAC
SAM Mitigation
FGD
PJFF/PAC
SAM Mitigation
SCR Turn-Down
FGD
PJFF/PAC
SAM Mitigation
SCR Turn-Down
PJFF/PAC

Year \$: 2010
Fixed O&M
\$/yr

<u>Equipment</u>
PJFF/PAC
SAM Mitigation
PJFF/PAC
SAM Mitigation
PJFF/PAC
PJFF/PAC
SCR Turn-Down
SAM Mitigation
PJFF/PAC
Sorbent Injection
PJFF/PAC
SCR Turn-Down
SAM Mitigation
PJFF/PAC
SCR Turn-Down
SAM Mitigation
Combined 1&2 FGD
PJFF/PAC
SAM Mitigation
Combined 1&2 FGD
PJFF/PAC
SAM Mitigation
FGD
PJFF/PAC
SAM Mitigation
SCR Turn-Down
FGD
PJFF/PAC
SAM Mitigation
SCR Turn-Down
PJFF/PAC

<u>Equipment</u>	<u>\$/yr</u>
SCR	1,871,000
WFGD	
PJFF	1,191,000
SAM Mitigation	174,000
PAC Injection	169,000
SCR	1,993,000
WFGD	
PJFF	1,251,000
SAM Mitigation	177,000
PAC Injection	172,000
SCR	2,392,000
WFGD	
PJFF	1,632,000
SAM Mitigation	198,000
PAC Injection	191,000
SCR	943,000
CDS-FF	3,322,000
PAC Injection	141,000
SCR	1,284,000
CDS-FF	4,309,000
PAC Injection	150,000

SCR
SCR
SCR

SCR
SCR

G:\11-051 Sierra Club KY IRP ;
Tab BR 1-2, Lines 17-20
O&M

2058

2059

<u>Equipment</u>	<u>\$/yr</u>
BR1 SCR	5368.171 5475.534
BR2 SCR	8726.188 8900.712
G:\11-051 Sierra Club KY IRP ;	
Tab GH2MC1-2, Lines 19-21	2058 2059
O&M	
GH2SCR 0	18714.87 19089.16
MC1SCR 0	8708.079 8882.24
MC2SCR 0	8798.626 8974.599

\$000

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
BR	BR1	101	69	164	256	346	434	520	605	689	771	852
BR	BR2	167	114	271	423	571	717	860	1,001	1,139	1,275	1,408
BR	BR3	416	285	675	1,053	1,423	1,786	2,143	2,493	2,838	3,176	3,508
CR	CR4	155	77	204	327	447	564	678	790	899	1,006	1,109
CR	CR5	168	84	221	355	485	611	735	856	975	1,090	1,202
CR	CR6	240	120	316	507	692	873	1,050	1,223	1,392	1,557	1,718
GH	GH1	475	510	1,206	1,884	2,548	3,200	3,843	4,477	5,101	5,717	6,322
GH	GH2	484	520	1,228	1,920	2,596	3,261	3,916	4,562	5,198	5,825	6,442
GH	GH3	480	516	1,218	1,904	2,575	3,234	3,883	4,524	5,155	5,777	6,389
GH	GH4	479	515	1,216	1,900	2,570	3,227	3,875	4,514	5,144	5,765	6,376
GR	GR3	68	39	96	151	205	258	309	360	410	458	506
GR	GR4	95	55	134	211	286	360	432	503	572	640	707
MC	MC1	303	309	767	1,213	1,649	2,077	2,497	2,910	3,315	3,714	4,104
MC	MC2	301	307	762	1,205	1,639	2,063	2,480	2,891	3,294	3,689	4,077
MC	MC3	391	398	989	1,565	2,128	2,680	3,222	3,755	4,278	4,792	5,296
MC	MC4	477	486	1,207	1,910	2,597	3,270	3,931	4,581	5,219	5,846	6,461
TC	TC1	383	115	270	420	567	712	855	996	1,135	1,272	1,407
TC	TC2	549	166	386	602	813	1,021	1,225	1,427	1,626	1,823	2,016
TY	TY3	71	94	233	368	499	628	754	878	999	1,118	1,234

2.50% Capital Escalation Rate

2011 CR	281	454	428	405	384	364	344	325	305	285
2012 CR		288	465	439	415	394	373	353	333	313
2013 CR			295	477	450	426	403	382	362	341
2014 CR				303	489	461	436	413	392	371
2015 CR					310	501	473	447	424	402
2016 CR						318	513	485	459	434
2017 CR							326	526	497	470
2018 CR								334	539	509
2019 CR									342	553

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2020 CR											351
	2021 CR											
	2022 CR											
	2023 CR											
	2024 CR											
	2025 CR											
	2026 CR											
	2027 CR											
	2028 CR											
	2029 CR											
	2030 CR											
	2031 CR											
	2032 CR											
	2033 CR											
	2034 CR											
	2035 CR											
	2036 CR											
	2037 CR											
	2038 CR											
	2039 CR											
	2040 CR											
	2011 MC		1,499	2,188	2,076	1,972	1,877	1,788	1,703	1,617	1,532	1,447
	2012 MC			1,536	2,243	2,128	2,021	1,923	1,833	1,745	1,658	1,570
	2013 MC				1,575	2,299	2,181	2,072	1,972	1,878	1,789	1,699
	2014 MC					1,614	2,357	2,235	2,124	2,021	1,925	1,834
	2015 MC						1,655	2,416	2,291	2,177	2,071	1,974
	2016 MC							1,696	2,476	2,348	2,231	2,123
	2017 MC								1,738	2,538	2,407	2,287
	2018 MC									1,782	2,601	2,467
	2019 MC										1,826	2,666
	2020 MC											1,872
	2021 MC											
	2022 MC											

MTPCapital

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2023 MC											
	2024 MC											
	2025 MC											
	2026 MC											
	2027 MC											
	2028 MC											
	2029 MC											
	2030 MC											
	2031 MC											
	2032 MC											
	2033 MC											
	2034 MC											
	2035 MC											
	2036 MC											
	2037 MC											
	2038 MC											
	2039 MC											
	2040 MC											
	2011 TC		281	368	350	333	318	304	291	278	264	251
	2012 TC			288	377	358	341	326	312	298	284	271
	2013 TC				295	387	367	350	334	319	305	292
	2014 TC					303	396	376	359	342	327	313
	2015 TC						310	406	386	368	351	336
	2016 TC							318	416	396	377	360
	2017 TC								326	427	405	386
	2018 TC									334	437	416
	2019 TC										342	448
	2020 TC											351
	2021 TC											
	2022 TC											
	2023 TC											
	2024 TC											
	2025 TC											

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
		2026 TC										
		2027 TC										
		2028 TC										
		2029 TC										
		2030 TC										
		2031 TC										
		2032 TC										
		2033 TC										
		2034 TC										
		2035 TC										
		2036 TC										
		2037 TC										
		2038 TC										
		2039 TC										
		2040 TC										
		2011 GH	2,061	2,756	2,617	2,492	2,377	2,272	2,171	2,070	1,970	1,869
		2012 GH		2,113	2,825	2,683	2,554	2,436	2,328	2,225	2,122	2,019
		2013 GH			2,165	2,895	2,750	2,618	2,497	2,387	2,281	2,175
		2014 GH				2,219	2,968	2,819	2,683	2,560	2,446	2,338
		2015 GH					2,275	3,042	2,889	2,750	2,623	2,507
		2016 GH						2,332	3,118	2,961	2,819	2,689
		2017 GH							2,390	3,196	3,035	2,889
		2018 GH								2,450	3,276	3,111
		2019 GH									2,511	3,358
		2020 GH										2,574
		2021 GH										
		2022 GH										
		2023 GH										
		2024 GH										
		2025 GH										
		2026 GH										
		2027 GH										
		2028 GH										

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2029	GH										
	2030	GH										
	2031	GH										
	2032	GH										
	2033	GH										
	2034	GH										
	2035	GH										
	2036	GH										
	2037	GH										
	2038	GH										
	2039	GH										
	2040	GH										
	2011	BR	468	629	595	565	538	513	489	464	440	415
	2012	BR		480	645	610	579	551	526	501	476	451
	2013	BR			492	661	625	594	565	539	513	488
	2014	BR				504	677	641	609	579	552	526
	2015	BR					517	694	657	624	594	566
	2016	BR						530	712	674	639	608
	2017	BR							543	729	690	655
	2018	BR								557	748	708
	2019	BR									571	766
	2020	BR										585
	2021	BR										
	2022	BR										
	2023	BR										
	2024	BR										
	2025	BR										
	2026	BR										
	2027	BR										
	2028	BR										
	2029	BR										
	2030	BR										
	2031	BR										

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2032	BR										
	2033	BR										
	2034	BR										
	2035	BR										
	2036	BR										
	2037	BR										
	2038	BR										
	2039	BR										
	2040	BR										
	2011	GR	94	134	127	120	114	108	103	98	92	87
	2012	GR		96	137	130	123	117	111	106	100	95
	2013	GR			98	141	133	126	120	114	108	103
	2014	GR				101	144	136	129	123	117	111
	2015	GR					103	148	140	132	126	120
	2016	GR						106	151	143	136	129
	2017	GR							109	155	147	139
	2018	GR								111	159	150
	2019	GR									114	163
	2020	GR										117
	2021	GR										
	2022	GR										
	2023	GR										
	2024	GR										
	2025	GR										
	2026	GR										
	2027	GR										
	2028	GR										
	2029	GR										
	2030	GR										
	2031	GR										
	2032	GR										
	2033	GR										
	2034	GR										

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2035 GR											
	2036 GR											
	2037 GR											
	2038 GR											
	2039 GR											
	2040 GR											
	2011 TY		94	137	129	122	116	111	105	99	94	88
	2012 TY			96	140	132	125	119	113	108	102	96
	2013 TY				98	143	136	129	122	116	110	104
	2014 TY					101	147	139	132	125	119	113
	2015 TY						103	151	143	135	128	122
	2016 TY							106	154	146	138	131
	2017 TY								109	158	150	142
	2018 TY									111	162	153
	2019 TY										114	166
	2020 TY											117
	2021 TY											
	2022 TY											
	2023 TY											
	2024 TY											
	2025 TY											
	2026 TY											
	2027 TY											
	2028 TY											
	2029 TY											
	2030 TY											
	2031 TY											
	2032 TY											
	2033 TY											
	2034 TY											
	2035 TY											
	2036 TY											
	2037 TY											

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
		2038 TY										
		2039 TY										
		2040 TY										

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
BR1	101	931	1,008	1,085	1,163	1,241	1,320	1,399	1,479	1,560	1,642	1,724
BR2	167	1,539	1,667	1,794	1,922	2,052	2,182	2,313	2,446	2,579	2,714	2,850
BR3	416	3,834	4,153	4,469	4,789	5,111	5,435	5,762	6,092	6,425	6,761	7,100
CR4	155	1,210	1,308	1,405	1,501	1,596	1,691	1,786	1,880	1,974	2,023	2,073
CR5	168	1,312	1,418	1,522	1,626	1,730	1,833	1,936	2,038	2,139	2,193	2,247
CR6	240	1,874	2,026	2,175	2,324	2,471	2,619	2,765	2,911	3,056	3,132	3,210
GH1	475	6,918	7,504	8,080	8,653	9,231	9,814	10,402	10,995	11,594	12,199	12,809
GH2	484	7,049	7,646	8,233	8,817	9,405	9,999	10,599	11,204	11,814	12,430	13,052
GH3	480	6,991	7,583	8,165	8,744	9,328	9,917	10,511	11,111	11,716	12,327	12,944
GH4	479	6,977	7,567	8,148	8,726	9,308	9,896	10,489	11,088	11,692	12,302	12,917
GR3	68	553	598	643	689	734	780	825	871	918	964	1,011
GR4	95	772	836	899	962	1,026	1,089	1,153	1,217	1,282	1,347	1,412
MC1	303	4,487	4,862	5,229	5,592	5,956	6,320	6,686	7,053	7,421	7,790	8,160
MC2	301	4,458	4,830	5,194	5,555	5,916	6,279	6,642	7,007	7,372	7,739	8,106
MC3	391	5,790	6,274	6,747	7,216	7,685	8,156	8,628	9,102	9,576	10,052	10,530
MC4	477	7,064	7,654	8,231	8,803	9,376	9,950	10,526	11,103	11,683	12,263	12,846
TC1	383	1,539	1,670	1,799	1,927	2,057	2,188	2,320	2,453	2,588	2,725	2,863
TC2	549	2,207	2,394	2,579	2,762	2,948	3,136	3,325	3,517	3,710	3,906	4,104
TY3	71	1,347	1,458	1,568	1,677	1,787	1,898	2,008	2,119	2,230	2,341	2,453

2.50%

2011 CR	266	246	231	221	211	200	190	180	169	0	0	0
2012 CR	293	272	252	237	226	216	205	195	184	174	174	0
2013 CR	321	300	279	259	243	232	221	210	200	189	189	178
2014 CR	350	329	307	286	265	249	238	227	216	205	205	194
2015 CR	380	358	337	315	293	272	255	244	232	221	221	210
2016 CR	412	390	367	345	323	301	279	262	250	238	238	227
2017 CR	445	422	399	377	354	331	308	286	268	256	256	244
2018 CR	482	456	433	409	386	363	339	316	293	275	275	263
2019 CR	522	494	468	444	420	396	372	348	324	300	300	282

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Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2020 CR		567	535	506	479	455	430	406	381	357	332	307
2021 CR		360	581	548	519	491	466	441	416	391	365	340
2022 CR			369	595	562	532	504	478	452	426	400	375
2023 CR				378	610	576	545	516	490	463	437	410
2024 CR					387	625	591	559	529	502	475	448
2025 CR						397	641	605	573	542	514	487
2026 CR							407	657	621	587	556	527
2027 CR								417	673	636	602	570
2028 CR									428	690	652	617
2029 CR										438	708	668
2030 CR											449	725
2031 CR												461
2032 CR												
2033 CR												
2034 CR												
2035 CR												
2036 CR												
2037 CR												
2038 CR												
2039 CR												
2040 CR												
2011 MC		1,361	1,276	1,191	1,128	1,089	1,049	1,010	970	931	891	851
2012 MC		1,483	1,395	1,308	1,221	1,157	1,116	1,075	1,035	994	954	913
2013 MC		1,610	1,520	1,430	1,341	1,251	1,185	1,144	1,102	1,061	1,019	978
2014 MC		1,742	1,650	1,558	1,466	1,374	1,282	1,215	1,173	1,130	1,087	1,045
2015 MC		1,879	1,785	1,691	1,597	1,503	1,409	1,314	1,245	1,202	1,158	1,115
2016 MC		2,023	1,926	1,830	1,733	1,637	1,540	1,444	1,347	1,277	1,232	1,187
2017 MC		2,176	2,073	1,975	1,876	1,777	1,678	1,579	1,480	1,381	1,309	1,263
2018 MC		2,344	2,231	2,125	2,024	1,922	1,821	1,720	1,618	1,517	1,415	1,341
2019 MC		2,529	2,403	2,286	2,178	2,075	1,971	1,867	1,763	1,659	1,555	1,451
2020 MC		2,733	2,592	2,463	2,344	2,233	2,126	2,020	1,913	1,807	1,700	1,594
2021 MC		1,919	2,801	2,657	2,524	2,402	2,289	2,180	2,070	1,961	1,852	1,743
2022 MC			1,967	2,871	2,723	2,588	2,462	2,346	2,234	2,122	2,010	1,898

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2023 MC				2,016	2,943	2,792	2,652	2,524	2,405	2,290	2,175	2,060
2024 MC					2,066	3,017	2,861	2,719	2,587	2,465	2,347	2,230
2025 MC						2,118	3,092	2,933	2,787	2,651	2,526	2,406
2026 MC							2,171	3,170	3,006	2,856	2,718	2,589
2027 MC								2,225	3,249	3,081	2,928	2,786
2028 MC									2,281	3,330	3,158	3,001
2029 MC										2,338	3,413	3,237
2030 MC											2,396	3,499
2031 MC												2,456
2032 MC												
2033 MC												
2034 MC												
2035 MC												
2036 MC												
2037 MC												
2038 MC												
2039 MC												
2040 MC												
2011 TC		238	225	211	203	198	193	189	184	179	175	170
2012 TC		257	244	230	217	208	203	198	193	189	184	179
2013 TC		278	264	250	236	222	213	208	203	198	193	188
2014 TC		299	285	270	256	242	228	218	213	208	203	198
2015 TC		321	306	292	277	263	248	233	224	218	213	208
2016 TC		344	329	314	299	284	269	254	239	229	224	219
2017 TC		369	353	337	322	307	291	276	261	245	235	230
2018 TC		396	378	361	346	330	314	298	283	267	251	241
2019 TC		426	406	387	370	354	338	322	306	290	274	258
2020 TC		460	437	416	397	380	363	347	330	314	297	281
2021 TC		360	471	447	426	407	389	372	355	338	321	305
2022 TC			369	483	459	437	417	399	381	364	347	329
2023 TC				378	495	470	448	427	409	391	373	355
2024 TC					387	507	482	459	438	419	401	383
2025 TC						397	520	494	470	449	429	411

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2026 TC							407	533	506	482	460	440
2027 TC								417	546	519	494	472
2028 TC									428	560	532	507
2029 TC										438	574	545
2030 TC											449	588
2031 TC												461
2032 TC												
2033 TC												
2034 TC												
2035 TC												
2036 TC												
2037 TC												
2038 TC												
2039 TC												
2040 TC												
2011 GH		1,768	1,667	1,567	1,498	1,460	1,422	1,384	1,346	1,309	1,271	1,233
2012 GH		1,916	1,812	1,709	1,606	1,535	1,496	1,458	1,419	1,380	1,341	1,303
2013 GH		2,069	1,963	1,858	1,752	1,646	1,573	1,534	1,494	1,454	1,415	1,375
2014 GH		2,229	2,121	2,013	1,904	1,796	1,687	1,613	1,572	1,531	1,491	1,450
2015 GH		2,396	2,285	2,174	2,063	1,952	1,841	1,729	1,653	1,611	1,570	1,528
2016 GH		2,570	2,456	2,342	2,228	2,114	2,001	1,887	1,773	1,694	1,652	1,609
2017 GH		2,756	2,634	2,518	2,401	2,284	2,167	2,051	1,934	1,817	1,737	1,693
2018 GH		2,962	2,825	2,700	2,581	2,461	2,341	2,221	2,102	1,982	1,862	1,780
2019 GH		3,189	3,036	2,896	2,768	2,645	2,522	2,400	2,277	2,154	2,032	1,909
2020 GH		3,442	3,269	3,112	2,968	2,837	2,711	2,585	2,460	2,334	2,208	2,082
2021 GH		2,638	3,528	3,350	3,189	3,042	2,908	2,779	2,650	2,521	2,392	2,263
2022 GH			2,704	3,616	3,434	3,269	3,119	2,981	2,848	2,716	2,584	2,452
2023 GH				2,772	3,706	3,520	3,351	3,196	3,055	2,920	2,784	2,649
2024 GH					2,841	3,799	3,608	3,435	3,276	3,131	2,993	2,854
2025 GH						2,912	3,894	3,698	3,521	3,358	3,210	3,067
2026 GH							2,985	3,991	3,791	3,609	3,442	3,290
2027 GH								3,060	4,091	3,886	3,699	3,528
2028 GH									3,136	4,193	3,983	3,791

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2029 GH										3,214	4,298	4,082
2030 GH											3,295	4,406
2031 GH												3,377
2032 GH												
2033 GH												
2034 GH												
2035 GH												
2036 GH												
2037 GH												
2038 GH												
2039 GH												
2040 GH												
2011 BR		391	367	350	341	332	323	315	306	297	288	279
2012 BR		426	401	376	359	350	341	332	323	313	304	295
2013 BR		462	436	411	385	368	358	349	340	331	321	312
2014 BR		500	474	447	421	395	377	367	358	348	339	329
2015 BR		539	512	485	458	432	405	386	377	367	357	347
2016 BR		580	553	525	498	470	442	415	396	386	376	366
2017 BR		624	595	567	538	510	482	453	425	406	396	385
2018 BR		672	639	610	581	552	523	494	465	436	416	406
2019 BR		725	688	655	625	595	566	536	506	476	447	426
2020 BR		785	743	706	672	641	610	580	549	519	488	458
2021 BR		600	805	762	723	688	657	625	594	563	532	500
2022 BR			615	825	781	741	706	673	641	609	577	545
2023 BR				630	846	801	760	723	690	657	624	591
2024 BR					646	867	821	779	741	707	673	640
2025 BR						662	889	841	798	760	725	690
2026 BR							678	911	862	818	779	743
2027 BR								695	934	884	839	798
2028 BR									713	957	906	860
2029 BR										731	981	928
2030 BR											749	1,005
2031 BR												768

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2032 BR												
2033 BR												
2034 BR												
2035 BR												
2036 BR												
2037 BR												
2038 BR												
2039 BR												
2040 BR												
2011 GR		81	76	72	70	68	65	63	61	58	56	54
2012 GR		89	83	78	74	72	69	67	65	62	60	58
2013 GR		97	91	86	80	76	73	71	69	66	64	61
2014 GR		105	99	94	88	82	78	75	73	70	68	65
2015 GR		114	108	102	96	90	84	80	77	75	72	70
2016 GR		123	117	111	104	98	92	86	82	79	77	74
2017 GR		132	126	120	113	107	101	94	88	84	81	78
2018 GR		143	135	129	123	116	110	103	97	90	86	83
2019 GR		154	146	139	132	126	119	112	106	99	93	88
2020 GR		167	158	150	142	135	129	122	115	108	102	95
2021 GR		120	171	162	154	146	139	132	125	118	111	104
2022 GR			123	176	166	157	150	142	135	128	121	114
2023 GR				126	180	170	161	153	146	139	131	124
2024 GR					129	184	174	165	157	150	142	135
2025 GR						132	189	179	169	161	153	146
2026 GR							136	194	183	174	165	157
2027 GR								139	199	188	178	169
2028 GR									143	204	193	183
2029 GR										146	209	197
2030 GR											150	214
2031 GR												154
2032 GR												
2033 GR												
2034 GR												

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Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2035 GR												
2036 GR												
2037 GR												
2038 GR												
2039 GR												
2040 GR												
2011 TY		83	77	73	71	68	66	63	61	58	56	53
2012 TY		90	85	79	75	72	70	67	65	62	60	57
2013 TY		99	93	87	81	77	74	71	69	66	64	61
2014 TY		107	101	95	89	83	79	76	73	71	68	65
2015 TY		116	110	104	97	91	85	81	78	75	72	70
2016 TY		125	119	112	106	100	93	87	83	80	77	74
2017 TY		135	128	122	115	109	102	96	89	85	82	79
2018 TY		145	138	131	125	118	111	105	98	92	87	84
2019 TY		157	149	142	135	128	121	114	107	101	94	89
2020 TY		171	161	153	145	138	131	124	117	110	103	96
2021 TY		120	175	165	157	149	141	134	127	120	113	106
2022 TY			123	179	169	161	152	145	138	130	123	116
2023 TY				126	184	174	165	156	149	141	134	126
2024 TY					129	188	178	169	160	152	145	137
2025 TY						132	193	182	173	164	156	148
2026 TY							136	198	187	177	168	160
2027 TY								139	203	192	182	172
2028 TY									143	208	196	186
2029 TY										146	213	201
2030 TY											150	218
2031 TY												154
2032 TY												
2033 TY												
2034 TY												
2035 TY												
2036 TY												
2037 TY												

Unit Capacity

2038 TY

2039 TY

2040 TY

2021

2022

2023

2024

2025

2026

2027

2028

2029

2030

2031

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
BR1	101	1,807	1,891	1,975	2,061	2,147	2,234	2,322	2,411	2,501	2,446	2,340
BR2	167	2,988	3,126	3,266	3,407	3,550	3,694	3,839	3,986	4,135	4,045	3,868
BR3	416	7,442	7,787	8,136	8,488	8,843	9,202	9,564	9,930	10,300	10,076	9,636
CR4	155	2,125	2,178	2,233	2,289	2,346	2,405	2,465	2,526	2,589	2,492	2,292
CR5	168	2,304	2,361	2,420	2,481	2,543	2,606	2,671	2,738	2,807	2,701	2,484
CR6	240	3,291	3,373	3,457	3,544	3,632	3,723	3,816	3,912	4,009	3,858	3,549
GH1	475	13,425	14,048	14,676	15,311	15,953	16,601	17,256	17,918	18,587	18,193	17,419
GH2	484	13,680	14,314	14,954	15,601	16,255	16,915	17,583	18,257	18,939	18,537	17,749
GH3	480	13,567	14,196	14,831	15,472	16,121	16,775	17,437	18,106	18,782	18,384	17,602
GH4	479	13,538	14,166	14,800	15,440	16,087	16,741	17,401	18,069	18,743	18,346	17,565
GR3	68	1,057	1,104	1,152	1,199	1,247	1,295	1,343	1,377	1,411	1,364	1,281
GR4	95	1,477	1,543	1,609	1,675	1,742	1,809	1,876	1,923	1,971	1,906	1,790
MC1	303	8,531	8,903	9,277	9,651	10,027	10,278	10,535	10,798	11,068	10,698	10,020
MC2	301	8,475	8,845	9,216	9,588	9,961	10,210	10,465	10,727	10,995	10,627	9,954
MC3	391	11,009	11,489	11,971	12,455	12,940	13,263	13,595	13,934	14,283	13,805	12,931
MC4	477	13,430	14,016	14,604	15,194	15,786	16,180	16,585	16,999	17,424	16,841	15,775
TC1	383	3,002	3,144	3,286	3,431	3,577	3,725	3,875	4,026	4,180	4,093	3,927
TC2	549	4,304	4,506	4,711	4,918	5,127	5,339	5,554	5,771	5,991	5,866	5,629
TY3	71	2,565	2,678	2,790	2,904	3,017	3,092	3,170	3,249	3,330	3,217	3,011

2.50%

2011 CR	0	0	0	0	0	0	0	0	0	0	0	0
2012 CR	0	0	0	0	0	0	0	0	0	0	0	0
2013 CR	0	0	0	0	0	0	0	0	0	0	0	0
2014 CR	182	0	0	0	0	0	0	0	0	0	0	0
2015 CR	198	187	0	0	0	0	0	0	0	0	0	0
2016 CR	215	203	192	0	0	0	0	0	0	0	0	0
2017 CR	232	220	208	196	0	0	0	0	0	0	0	0
2018 CR	250	238	226	214	201	0	0	0	0	0	0	0
2019 CR	269	257	244	232	219	206	0	0	0	0	0	0

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Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2020 CR	289	276	263	250	237	224	212	200	0	0	0	0
2021 CR	315	296	283	270	256	243	230	217	0	0	0	0
2022 CR	349	323	303	290	276	263	249	236	0	222	0	0
2023 CR	384	358	331	311	297	283	269	256	228	242	228	0
2024 CR	421	394	366	339	319	305	290	276	248	262	248	234
2025 CR	459	431	403	376	348	327	312	298	268	283	268	254
2026 CR	499	470	442	413	385	357	335	320	290	305	290	275
2027 CR	540	511	482	453	424	395	365	343	313	328	313	297
2028 CR	584	554	524	494	464	434	404	375	336	352	336	320
2029 CR	632	599	568	537	506	476	445	415	361	384	361	345
2030 CR	685	648	614	582	551	519	488	456	394	425	394	370
2031 CR	743	702	664	629	596	564	532	500	436	468	436	403
2032 CR	472	762	720	681	645	611	578	545	479	512	479	446
2033 CR	484	484	781	738	698	661	627	593	525	559	525	491
2034 CR			496	800	756	715	677	642	573	608	573	538
2035 CR				508	820	775	733	694	623	658	623	587
2036 CR					521	841	794	751	675	712	675	638
2037 CR						534	862	814	730	770	730	692
2038 CR							547	884	789	835	789	748
2039 CR								561	855	906	855	809
2040 CR									928	575	928	877
2011 MC	812	772	733	693	654	0	0	0	0	0	0	0
2012 MC	873	832	792	751	711	670	0	0	0	0	0	0
2013 MC	936	895	853	811	770	728	687	0	0	0	0	0
2014 MC	1,002	960	917	874	832	789	747	704	0	0	0	0
2015 MC	1,071	1,027	984	940	896	853	809	765	0	722	0	0
2016 MC	1,142	1,098	1,053	1,008	963	919	874	829	740	784	740	0
2017 MC	1,217	1,171	1,125	1,079	1,033	987	942	896	804	850	804	758
2018 MC	1,294	1,247	1,200	1,153	1,106	1,059	1,012	965	918	918	871	824
2019 MC	1,375	1,327	1,278	1,230	1,182	1,134	1,086	1,037	941	989	941	893
2020 MC	1,487	1,409	1,360	1,310	1,261	1,212	1,162	1,113	1,063	1,063	1,014	965
2021 MC	1,634	1,524	1,444	1,394	1,343	1,292	1,242	1,191	1,141	1,141	1,090	1,039
2022 MC	1,786	1,674	1,562	1,480	1,429	1,377	1,325	1,273	1,221	1,221	1,169	1,117

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Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2023 MC		1,946	1,831	1,716	1,601	1,518	1,464	1,411	1,358	1,305	1,252	1,198
2024 MC		2,112	1,994	1,877	1,759	1,642	1,555	1,501	1,446	1,392	1,337	1,283
2025 MC		2,285	2,165	2,044	1,924	1,803	1,683	1,594	1,538	1,483	1,427	1,371
2026 MC		2,466	2,342	2,219	2,095	1,972	1,848	1,725	1,634	1,577	1,520	1,462
2027 MC		2,654	2,528	2,401	2,274	2,148	2,021	1,894	1,768	1,675	1,616	1,558
2028 MC		2,855	2,721	2,591	2,461	2,331	2,201	2,072	1,942	1,812	1,717	1,657
2029 MC		3,076	2,927	2,789	2,656	2,522	2,389	2,256	2,123	1,990	1,857	1,760
2030 MC		3,318	3,153	3,000	2,858	2,722	2,586	2,449	2,313	2,176	2,040	1,904
2031 MC		3,586	3,401	3,232	3,075	2,930	2,790	2,650	2,510	2,371	2,231	2,091
2032 MC		2,518	3,676	3,486	3,312	3,152	3,003	2,860	2,716	2,573	2,430	2,287
2033 MC			2,580	3,768	3,573	3,395	3,231	3,078	2,931	2,784	2,637	2,491
2034 MC				2,645	3,862	3,663	3,480	3,311	3,155	3,004	2,854	2,703
2035 MC					2,711	3,958	3,754	3,567	3,394	3,234	3,080	2,925
2036 MC						2,779	4,057	3,848	3,656	3,479	3,315	3,157
2037 MC							2,848	4,159	3,944	3,748	3,566	3,398
2038 MC								2,920	4,263	4,043	3,841	3,655
2039 MC									2,993	4,369	4,144	3,937
2040 MC										3,067	4,478	4,248
2011 TC		165	161	156	152	147	142	138	133	128	124	119
2012 TC		174	170	165	160	155	151	146	141	136	132	127
2013 TC		184	179	174	169	164	159	154	149	145	140	135
2014 TC		193	188	183	178	173	168	163	158	153	148	143
2015 TC		203	198	193	188	183	178	172	167	162	157	152
2016 TC		213	208	203	198	192	187	182	177	171	166	161
2017 TC		224	219	213	208	203	197	192	187	181	176	170
2018 TC		235	230	224	219	213	208	202	197	191	186	180
2019 TC		247	241	235	230	224	219	213	207	202	196	190
2020 TC		264	253	247	241	236	230	224	218	212	207	201
2021 TC		288	271	259	253	247	241	236	230	224	218	212
2022 TC		312	295	277	266	260	254	248	241	235	229	223
2023 TC		338	320	302	284	272	266	260	254	247	241	235
2024 TC		364	346	328	310	292	279	273	266	260	254	247
2025 TC		392	373	355	336	317	299	286	280	273	267	260

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2026 TC		421	402	383	364	345	325	306	293	287	280	273
2027 TC		451	432	412	392	373	353	334	314	301	294	287
2028 TC		484	463	442	422	402	382	362	342	322	308	301
2029 TC		519	496	474	453	433	412	392	371	350	330	316
2030 TC		559	532	508	486	465	444	423	401	380	359	338
2031 TC		603	573	546	521	498	476	455	433	411	390	368
2032 TC		472	618	587	559	534	511	488	466	444	422	400
2033 TC			484	633	602	573	547	523	501	478	455	432
2034 TC				496	649	617	588	561	536	513	490	466
2035 TC					508	665	632	602	575	550	526	502
2036 TC						521	682	648	617	589	564	539
2037 TC							534	699	664	633	604	578
2038 TC								547	717	681	648	619
2039 TC									561	735	698	665
2040 TC										575	753	715
2011 GH		1,195	1,158	1,120	1,082	1,044	1,007	969	931	893	856	818
2012 GH		1,264	1,225	1,187	1,148	1,109	1,070	1,032	993	954	916	877
2013 GH		1,335	1,296	1,256	1,216	1,177	1,137	1,097	1,058	1,018	978	939
2014 GH		1,409	1,369	1,328	1,287	1,247	1,206	1,165	1,125	1,084	1,043	1,003
2015 GH		1,486	1,445	1,403	1,361	1,320	1,278	1,236	1,194	1,153	1,111	1,069
2016 GH		1,566	1,523	1,481	1,438	1,395	1,353	1,310	1,267	1,224	1,182	1,139
2017 GH		1,649	1,605	1,562	1,518	1,474	1,430	1,386	1,343	1,299	1,255	1,211
2018 GH		1,735	1,690	1,645	1,601	1,556	1,511	1,466	1,421	1,376	1,331	1,286
2019 GH		1,825	1,779	1,733	1,687	1,641	1,595	1,549	1,503	1,457	1,410	1,364
2020 GH		1,957	1,870	1,823	1,776	1,729	1,682	1,634	1,587	1,540	1,493	1,446
2021 GH		2,134	2,006	1,917	1,869	1,820	1,772	1,724	1,675	1,627	1,579	1,530
2022 GH		2,320	2,188	2,056	1,965	1,915	1,866	1,816	1,767	1,717	1,668	1,618
2023 GH		2,513	2,378	2,243	2,107	2,014	1,963	1,912	1,862	1,811	1,760	1,709
2024 GH		2,715	2,576	2,437	2,299	2,160	2,064	2,012	1,960	1,908	1,856	1,804
2025 GH		2,925	2,783	2,641	2,498	2,356	2,214	2,116	2,063	2,009	1,956	1,903
2026 GH		3,144	2,998	2,852	2,707	2,561	2,415	2,269	2,169	2,114	2,060	2,005
2027 GH		3,372	3,223	3,073	2,924	2,774	2,625	2,475	2,326	2,223	2,167	2,111
2028 GH		3,617	3,456	3,303	3,150	2,997	2,844	2,690	2,537	2,384	2,279	2,221

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2029 GH		3,886	3,707	3,543	3,386	3,229	3,072	2,915	2,758	2,601	2,444	2,336
2030 GH		4,184	3,983	3,800	3,631	3,470	3,310	3,149	2,988	2,827	2,666	2,505
2031 GH		4,516	4,289	4,083	3,895	3,722	3,557	3,392	3,227	3,062	2,897	2,732
2032 GH		3,462	4,629	4,396	4,185	3,992	3,815	3,646	3,477	3,308	3,139	2,970
2033 GH			3,548	4,744	4,506	4,289	4,092	3,911	3,737	3,564	3,391	3,217
2034 GH				3,637	4,863	4,619	4,397	4,194	4,008	3,831	3,653	3,475
2035 GH					3,728	4,984	4,734	4,507	4,299	4,109	3,927	3,744
2036 GH						3,821	5,109	4,852	4,619	4,406	4,211	4,025
2037 GH							3,917	5,237	4,974	4,735	4,517	4,317
2038 GH								4,014	5,368	5,098	4,853	4,629
2039 GH									4,115	5,502	5,226	4,974
2040 GH									4,218	5,639	5,356	
2011 BR		271	262	253	244	235	226	218	209	200	191	182
2012 BR		286	277	268	259	250	241	232	223	214	205	196
2013 BR		303	293	284	275	266	256	247	238	229	219	210
2014 BR		320	310	301	291	282	272	263	253	244	234	225
2015 BR		338	328	318	308	299	289	279	269	260	250	240
2016 BR		356	346	336	326	316	306	296	286	276	266	256
2017 BR		375	365	355	344	334	324	314	303	293	283	273
2018 BR		395	385	374	364	353	343	332	322	311	301	290
2019 BR		416	405	394	383	373	362	351	340	330	319	308
2020 BR		437	426	415	404	393	382	371	360	349	338	327
2021 BR		469	448	437	425	414	403	391	380	369	358	346
2022 BR		513	481	459	448	436	424	413	401	390	378	367
2023 BR		559	526	493	471	459	447	435	423	411	399	388
2024 BR		606	573	539	505	482	470	458	446	434	422	409
2025 BR		656	621	587	552	518	495	482	470	457	445	432
2026 BR		708	672	637	602	566	531	507	494	481	469	456
2027 BR		761	725	689	653	617	580	544	520	506	493	480
2028 BR		818	781	743	706	669	632	595	558	533	519	506
2029 BR		881	839	800	762	724	686	648	610	572	546	532
2030 BR		952	903	860	820	781	742	703	664	625	586	559
2031 BR		1,031	975	926	881	841	801	761	721	681	641	601

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2032 BR		787	1,056	1,000	949	903	862	821	780	739	698	657
2033 BR			806	1,083	1,025	973	926	883	841	799	757	715
2034 BR				827	1,110	1,050	997	949	905	862	819	776
2035 BR					847	1,138	1,077	1,022	973	928	884	840
2036 BR						868	1,166	1,104	1,048	997	951	906
2037 BR							890	1,195	1,131	1,074	1,022	975
2038 BR								912	1,225	1,160	1,101	1,047
2039 BR									935	1,256	1,189	1,128
2040 BR										959	1,287	1,218
2011 GR		52	49	47	45	42	40	38	0	0	0	0
2012 GR		55	53	51	48	46	44	41	39	0	0	0
2013 GR		59	57	54	52	49	47	45	42	40	0	0
2014 GR		63	61	58	56	53	51	48	46	43	41	0
2015 GR		67	65	62	60	57	54	52	49	47	44	42
2016 GR		71	69	66	64	61	58	56	53	51	48	45
2017 GR		76	73	70	68	65	63	60	57	55	52	49
2018 GR		80	78	75	72	70	67	64	61	59	56	53
2019 GR		85	82	80	77	74	71	68	66	63	60	57
2020 GR		90	87	84	82	79	76	73	70	67	64	62
2021 GR		97	92	90	87	84	81	78	75	72	69	66
2022 GR		107	100	95	92	89	86	83	80	77	74	71
2023 GR		117	110	102	97	94	91	88	85	82	79	76
2024 GR		127	120	112	105	100	96	93	90	87	84	81
2025 GR		138	130	123	115	107	102	99	96	92	89	86
2026 GR		149	141	134	126	118	110	105	101	98	95	91
2027 GR		161	153	145	137	129	121	113	107	104	100	97
2028 GR		173	165	157	149	140	132	124	116	110	106	103
2029 GR		187	178	169	161	152	144	135	127	119	113	109
2030 GR		202	192	182	173	165	156	148	139	130	122	115
2031 GR		219	207	197	187	178	169	160	151	142	133	125
2032 GR		157	225	212	201	191	182	173	164	155	146	137
2033 GR			161	230	218	206	196	187	177	168	159	150
2034 GR				165	236	223	212	201	191	182	172	163

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2035 GR					169	242	229	217	206	196	186	177
2036 GR						174	248	235	222	211	201	191
2037 GR							178	254	240	228	217	206
2038 GR								182	261	246	234	222
2039 GR									187	267	253	239
2040 GR										192	274	259
2011 TY		51	48	46	43	41	0	0	0	0	0	0
2012 TY		55	52	49	47	44	42	0	0	0	0	0
2013 TY		59	56	53	51	48	46	43	0	0	0	0
2014 TY		63	60	57	55	52	49	47	44	0	0	0
2015 TY		67	64	61	59	56	53	51	48	45	0	0
2016 TY		71	69	66	63	60	57	55	52	49	46	0
2017 TY		76	73	70	67	65	62	59	56	53	50	47
2018 TY		81	78	75	72	69	66	63	60	57	54	52
2019 TY		86	83	80	77	74	71	68	65	62	59	56
2020 TY		91	88	85	82	79	76	73	70	66	63	60
2021 TY		99	93	90	87	84	81	78	74	71	68	65
2022 TY		108	101	96	93	89	86	83	80	76	73	70
2023 TY		119	111	104	98	95	92	88	85	82	78	75
2024 TY		129	122	114	106	101	97	94	90	87	84	80
2025 TY		140	133	125	117	109	103	100	96	93	89	86
2026 TY		152	144	136	128	120	112	106	102	99	95	91
2027 TY		164	156	148	139	131	123	114	108	105	101	97
2028 TY		177	168	160	151	143	134	126	117	111	107	104
2029 TY		191	181	172	164	155	146	138	129	120	114	110
2030 TY		206	196	186	177	168	159	150	141	132	123	117
2031 TY		224	212	201	190	181	172	163	154	145	135	126
2032 TY		157	229	217	206	195	186	176	167	158	148	139
2033 TY			161	235	222	211	200	190	181	171	161	152
2034 TY				165	241	228	216	205	195	185	175	165
2035 TY					169	247	234	221	210	200	190	180
2036 TY						174	253	239	227	215	205	195
2037 TY							178	259	245	233	221	210

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	2038 TY							182	266	252	238	226
	2039 TY								187	273	258	244
	2040 TY									192	279	264

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
BR1	101	2,239	2,145	2,055	1,969	1,867	1,770	1,678	1,591	1,510	1,434	1,361
BR2	167	3,703	3,546	3,397	3,255	3,087	2,926	2,774	2,631	2,496	2,371	2,251
BR3	416	9,223	8,833	8,463	8,109	7,689	7,289	6,910	6,553	6,218	5,906	5,607
CR4	155	2,102	1,921	1,747	1,580	1,421	1,269	1,125	988	859	738	623
CR5	168	2,278	2,082	1,893	1,713	1,540	1,375	1,219	1,071	931	800	675
CR6	240	3,255	2,974	2,705	2,447	2,200	1,965	1,741	1,529	1,330	1,143	965
GH1	475	16,688	15,994	15,334	14,702	14,098	13,375	12,686	12,033	11,415	10,834	10,291
GH2	484	17,004	16,297	15,624	14,981	14,365	13,628	12,927	12,261	11,631	11,039	10,486
GH3	480	16,863	16,163	15,495	14,857	14,246	13,516	12,820	12,159	11,535	10,948	10,399
GH4	479	16,828	16,129	15,463	14,826	14,217	13,488	12,793	12,134	11,511	10,925	10,378
GR3	68	1,203	1,128	1,056	988	922	860	801	745	692	643	595
GR4	95	1,680	1,575	1,476	1,380	1,288	1,201	1,118	1,040	967	898	832
MC1	303	9,375	8,758	8,166	7,598	7,053	6,531	6,033	5,559	5,110	4,687	4,290
MC2	301	9,313	8,700	8,112	7,548	7,007	6,488	5,993	5,523	5,077	4,656	4,262
MC3	391	12,097	11,301	10,538	9,805	9,102	8,428	7,785	7,174	6,595	6,048	5,536
MC4	477	14,758	13,787	12,856	11,962	11,104	10,282	9,498	8,752	8,045	7,379	6,754
TC1	383	3,771	3,623	3,483	3,349	3,222	3,101	2,986	2,878	2,777	2,652	2,536
TC2	549	5,405	5,193	4,992	4,801	4,618	4,445	4,280	4,125	3,980	3,802	3,636
TY3	71	2,815	2,629	2,451	2,281	2,117	1,962	1,814	1,675	1,543	1,420	1,303

2.50%

2011 CR	0	0	0	0	0	0	0	0	0	0	0	0
2012 CR	0	0	0	0	0	0	0	0	0	0	0	0
2013 CR	0	0	0	0	0	0	0	0	0	0	0	0
2014 CR	0	0	0	0	0	0	0	0	0	0	0	0
2015 CR	0	0	0	0	0	0	0	0	0	0	0	0
2016 CR	0	0	0	0	0	0	0	0	0	0	0	0
2017 CR	0	0	0	0	0	0	0	0	0	0	0	0
2018 CR	0	0	0	0	0	0	0	0	0	0	0	0
2019 CR	0	0	0	0	0	0	0	0	0	0	0	0

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Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2020 CR	0	0	0	0	0	0	0	0	0	0	0	0
2021 CR	0	0	0	0	0	0	0	0	0	0	0	0
2022 CR	0	0	0	0	0	0	0	0	0	0	0	0
2023 CR	0	0	0	0	0	0	0	0	0	0	0	0
2024 CR	0	0	0	0	0	0	0	0	0	0	0	0
2025 CR	239	0	0	0	0	0	0	0	0	0	0	0
2026 CR	260	245	267	252	0	0	0	0	0	0	0	0
2027 CR	282	289	273	273	258	0	0	0	0	0	0	0
2028 CR	305	312	296	280	280	264	0	0	0	0	0	0
2029 CR	329	337	320	304	287	271	0	0	0	0	0	0
2030 CR	353	362	345	328	311	294	278	0	0	0	0	0
2031 CR	379	388	371	354	336	319	302	0	285	0	0	0
2032 CR	414	424	398	380	363	345	327	292	309	292	0	0
2033 CR	458	469	434	408	390	372	353	317	335	317	299	0
2034 CR	504	516	481	445	418	400	381	344	362	344	325	306
2035 CR	552	566	529	493	456	429	410	371	390	371	352	333
2036 CR	602	617	580	542	505	468	439	400	420	400	381	361
2037 CR	654	671	633	594	556	518	480	430	450	430	410	390
2038 CR	709	727	688	648	609	570	531	462	492	462	441	421
2039 CR	766	786	745	705	665	624	584	504	544	504	473	452
2040 CR	829	0	0	0	0	0	0	0	0	0	0	0
2011 MC	0	0	0	0	0	0	0	0	0	0	0	0
2012 MC	0	0	0	0	0	0	0	0	0	0	0	0
2013 MC	0	0	0	0	0	0	0	0	0	0	0	0
2014 MC	0	0	0	0	0	0	0	0	0	0	0	0
2015 MC	0	0	0	0	0	0	0	0	0	0	0	0
2016 MC	0	0	0	0	0	0	0	0	0	0	0	0
2017 MC	0	0	0	0	0	0	0	0	0	0	0	0
2018 MC	777	0	0	0	0	0	0	0	0	0	0	0
2019 MC	845	797	0	0	0	0	0	0	0	0	0	0
2020 MC	915	866	816	0	0	0	0	0	0	0	0	0
2021 MC	989	938	887	837	0	0	0	0	0	0	0	0
2022 MC	1,065	1,013	962	910	858	0	0	0	0	0	0	0

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Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2023 MC	1,145	1,092	1,039	986	932	879	0	0	0	0	0	0
2024 MC	1,228	1,174	1,119	1,065	1,010	956	901	0	0	0	0	0
2025 MC	1,315	1,259	1,203	1,147	1,091	1,035	980	924	0	0	0	0
2026 MC	1,405	1,348	1,290	1,233	1,176	1,119	1,061	1,004	947	0	0	0
2027 MC	1,499	1,440	1,381	1,323	1,264	1,205	1,147	1,088	1,029	970	0	0
2028 MC	1,597	1,536	1,476	1,416	1,356	1,296	1,235	1,175	1,115	1,055	995	995
2029 MC	1,698	1,636	1,575	1,513	1,451	1,390	1,328	1,266	1,205	1,143	1,081	1,081
2030 MC	1,804	1,741	1,677	1,614	1,551	1,488	1,424	1,361	1,298	1,235	1,172	1,172
2031 MC	1,951	1,849	1,784	1,719	1,655	1,590	1,525	1,460	1,395	1,330	1,266	1,266
2032 MC	2,143	2,000	1,895	1,829	1,762	1,696	1,629	1,563	1,497	1,430	1,364	1,364
2033 MC	2,344	2,197	2,050	1,943	1,874	1,806	1,738	1,670	1,602	1,534	1,466	1,466
2034 MC	2,553	2,402	2,252	2,101	1,991	1,921	1,852	1,782	1,712	1,642	1,572	1,572
2035 MC	2,771	2,617	2,462	2,308	2,154	2,041	1,969	1,898	1,826	1,755	1,683	1,683
2036 MC	2,998	2,840	2,682	2,524	2,366	2,208	2,092	2,019	1,945	1,872	1,799	1,799
2037 MC	3,236	3,073	2,911	2,749	2,587	2,425	2,263	2,144	2,069	1,994	1,919	1,919
2038 MC	3,483	3,316	3,150	2,984	2,818	2,652	2,486	2,319	2,198	2,121	2,044	2,044
2039 MC	3,746	3,570	3,399	3,229	3,059	2,888	2,718	2,548	2,377	2,253	2,174	2,174
2040 MC	4,036	3,840	3,659	3,484	3,310	3,135	2,961	2,786	2,611	2,437	2,309	2,309
2011 TC	114	110	105	101	96	91	87	82	77	0	0	0
2012 TC	122	117	113	108	103	98	94	89	84	79	0	0
2013 TC	130	125	120	115	111	106	101	96	91	86	81	81
2014 TC	138	133	128	123	118	113	108	103	98	93	88	88
2015 TC	147	142	137	131	126	121	116	111	106	101	96	96
2016 TC	156	150	145	140	135	130	124	119	114	109	103	103
2017 TC	165	160	154	149	144	138	133	127	122	117	111	111
2018 TC	175	169	164	158	153	147	142	136	131	125	120	120
2019 TC	185	179	173	168	162	156	151	145	139	134	128	128
2020 TC	195	189	183	178	172	166	160	155	149	143	137	137
2021 TC	206	200	194	188	182	176	170	164	158	152	147	147
2022 TC	217	211	205	199	193	187	181	175	168	162	156	156
2023 TC	229	223	216	210	204	198	191	185	179	173	166	166
2024 TC	241	234	228	222	215	209	203	196	190	183	177	177
2025 TC	253	247	240	234	227	221	214	208	201	194	188	188

MTPCapital

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2026 TC	266	260	253	246	240	233	226	219	213	206	199	
2027 TC	280	273	266	259	253	246	239	232	225	218	211	
2028 TC	294	287	280	273	266	259	252	245	238	231	224	
2029 TC	309	301	294	287	280	273	265	258	251	244	236	
2030 TC	324	316	309	302	294	287	279	272	265	257	250	
2031 TC	347	332	324	317	309	302	294	286	279	271	264	
2032 TC	377	355	340	332	325	317	309	301	293	286	278	
2033 TC	410	387	364	349	341	333	325	317	309	301	293	
2034 TC	443	420	396	373	357	349	341	333	325	317	308	
2035 TC	478	454	430	406	382	366	358	350	341	333	324	
2036 TC	515	490	466	441	417	392	376	367	358	350	341	
2037 TC	553	527	502	477	452	427	402	385	376	367	358	
2038 TC	592	566	541	515	489	463	438	412	395	385	376	
2039 TC	634	607	580	554	528	501	475	449	422	404	395	
2040 TC	681	650	622	595	568	541	514	487	460	433	414	
2011 GH	780	742	704	667	629	0	0	0	0	0	0	0
2012 GH	838	800	761	722	683	645	0	0	0	0	0	0
2013 GH	899	859	819	780	740	700	661	0	0	0	0	0
2014 GH	962	921	881	840	799	759	718	677	0	0	0	0
2015 GH	1,028	986	944	903	861	819	778	736	694	0	0	0
2016 GH	1,096	1,053	1,011	968	925	882	840	797	754	712	0	0
2017 GH	1,167	1,124	1,080	1,036	992	948	905	861	817	773	729	
2018 GH	1,241	1,197	1,152	1,107	1,062	1,017	972	927	882	837	792	
2019 GH	1,318	1,272	1,226	1,180	1,134	1,088	1,042	996	950	904	858	
2020 GH	1,399	1,351	1,304	1,257	1,210	1,163	1,116	1,068	1,021	974	927	
2021 GH	1,482	1,434	1,385	1,337	1,289	1,240	1,192	1,143	1,095	1,047	998	
2022 GH	1,569	1,519	1,469	1,420	1,370	1,321	1,271	1,222	1,172	1,123	1,073	
2023 GH	1,659	1,608	1,557	1,506	1,455	1,405	1,354	1,303	1,252	1,201	1,151	
2024 GH	1,752	1,700	1,648	1,596	1,544	1,492	1,440	1,388	1,336	1,283	1,231	
2025 GH	1,849	1,796	1,742	1,689	1,636	1,582	1,529	1,476	1,422	1,369	1,316	
2026 GH	1,950	1,895	1,841	1,786	1,731	1,677	1,622	1,567	1,513	1,458	1,403	
2027 GH	2,055	1,999	1,943	1,887	1,831	1,775	1,719	1,662	1,606	1,550	1,494	
2028 GH	2,164	2,106	2,049	1,991	1,934	1,876	1,819	1,762	1,704	1,647	1,589	

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2029 GH		2,277	2,218	2,159	2,100	2,041	1,982	1,923	1,864	1,806	1,747	1,688
2030 GH		2,394	2,334	2,273	2,213	2,153	2,092	2,032	1,971	1,911	1,851	1,790
2031 GH		2,567	2,454	2,392	2,330	2,268	2,206	2,144	2,083	2,021	1,959	1,897
2032 GH		2,801	2,632	2,515	2,452	2,388	2,325	2,262	2,198	2,135	2,071	2,008
2033 GH		3,044	2,871	2,697	2,578	2,513	2,448	2,383	2,318	2,253	2,188	2,123
2034 GH		3,298	3,120	2,942	2,765	2,643	2,576	2,509	2,443	2,376	2,309	2,243
2035 GH		3,562	3,380	3,198	3,016	2,834	2,709	2,640	2,572	2,504	2,435	2,367
2036 GH		3,838	3,651	3,465	3,278	3,091	2,905	2,776	2,706	2,636	2,566	2,496
2037 GH		4,125	3,934	3,743	3,551	3,360	3,169	2,977	2,846	2,774	2,702	2,630
2038 GH		4,425	4,228	4,032	3,836	3,640	3,444	3,248	3,052	2,917	2,843	2,770
2039 GH		4,745	4,535	4,334	4,133	3,932	3,731	3,530	3,329	3,128	2,990	2,914
2040 GH		5,099	4,864	4,649	4,443	4,236	4,030	3,824	3,618	3,412	3,206	3,065
2011 BR		173	165	156	147	0	0	0	0	0	0	0
2012 BR		187	178	169	160	151	0	0	0	0	0	0
2013 BR		201	191	182	173	164	154	0	0	0	0	0
2014 BR		215	206	196	187	177	168	158	0	0	0	0
2015 BR		230	221	211	201	191	182	172	162	0	0	0
2016 BR		246	236	226	216	206	196	186	176	166	0	0
2017 BR		263	252	242	232	222	211	201	191	181	170	0
2018 BR		280	269	259	248	238	227	217	206	196	185	175
2019 BR		297	287	276	265	254	244	233	222	211	201	190
2020 BR		316	305	294	283	272	261	250	239	228	217	206
2021 BR		335	324	312	301	290	278	267	256	245	233	222
2022 BR		355	343	332	320	309	297	285	274	262	251	239
2023 BR		376	364	352	340	328	316	304	293	281	269	257
2024 BR		397	385	373	361	349	336	324	312	300	288	276
2025 BR		420	407	395	382	370	357	345	332	320	307	295
2026 BR		443	430	417	405	392	379	366	353	341	328	315
2027 BR		467	454	441	428	415	402	388	375	362	349	336
2028 BR		492	479	465	452	438	425	412	398	385	371	358
2029 BR		518	505	491	477	463	449	436	422	408	394	381
2030 BR		545	531	517	503	489	475	461	447	432	418	404
2031 BR		573	559	545	530	516	501	487	472	458	443	429

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2032 BR	616	588	573	558	543	529	514	499	484	469	454	
2033 BR	673	631	603	587	572	557	542	527	511	496	481	
2034 BR	733	690	647	618	602	586	571	555	540	524	509	
2035 BR	795	751	707	663	633	617	601	585	569	553	537	
2036 BR	861	815	770	725	680	649	632	616	600	583	567	
2037 BR	928	882	836	789	743	697	665	648	632	615	598	
2038 BR	999	952	904	857	809	762	714	682	664	647	630	
2039 BR	1,074	1,024	975	927	878	829	781	732	699	681	663	
2040 BR	1,156	1,100	1,050	1,000	950	900	850	800	750	716	698	
2011 GR	0	0	0	0	0	0	0	0	0	0	0	0
2012 GR	0	0	0	0	0	0	0	0	0	0	0	0
2013 GR	0	0	0	0	0	0	0	0	0	0	0	0
2014 GR	0	0	0	0	0	0	0	0	0	0	0	0
2015 GR	0	0	0	0	0	0	0	0	0	0	0	0
2016 GR	43	0	0	0	0	0	0	0	0	0	0	0
2017 GR	47	44	0	0	0	0	0	0	0	0	0	0
2018 GR	50	48	45	0	0	0	0	0	0	0	0	0
2019 GR	55	52	49	46	0	0	0	0	0	0	0	0
2020 GR	59	56	53	50	47	0	0	0	0	0	0	0
2021 GR	63	60	57	54	51	48	0	0	0	0	0	0
2022 GR	68	65	62	59	56	53	50	0	0	0	0	0
2023 GR	72	69	66	63	60	57	54	51	0	0	0	0
2024 GR	77	74	71	68	65	62	59	55	52	0	0	0
2025 GR	83	79	76	73	70	66	63	60	57	54	0	0
2026 GR	88	85	81	78	75	71	68	65	61	58	55	55
2027 GR	94	90	87	83	80	77	73	70	66	63	60	60
2028 GR	99	96	92	89	86	82	79	75	72	68	65	65
2029 GR	105	102	98	95	91	88	84	81	77	73	70	70
2030 GR	112	108	104	101	97	93	90	86	83	79	75	75
2031 GR	118	115	111	107	103	100	96	92	88	85	81	81
2032 GR	128	121	117	114	110	106	102	98	94	91	87	87
2033 GR	140	131	124	120	116	113	109	105	101	97	93	93
2034 GR	153	144	134	127	123	119	115	111	107	103	99	99

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Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2035 GR		167	157	147	138	131	126	122	118	114	110	106
2036 GR		181	171	161	151	141	134	130	125	121	117	113
2037 GR		196	186	175	165	155	145	137	133	129	124	120
2038 GR		211	201	190	180	169	159	148	141	136	132	127
2039 GR		228	217	206	195	184	173	163	152	144	140	135
2040 GR		245	233	222	211	200	189	178	167	156	148	143
2011 TY		0	0	0	0	0	0	0	0	0	0	0
2012 TY		0	0	0	0	0	0	0	0	0	0	0
2013 TY		0	0	0	0	0	0	0	0	0	0	0
2014 TY		0	0	0	0	0	0	0	0	0	0	0
2015 TY		0	0	0	0	0	0	0	0	0	0	0
2016 TY		0	0	0	0	0	0	0	0	0	0	0
2017 TY		0	0	0	0	0	0	0	0	0	0	0
2018 TY		49	0	0	0	0	0	0	0	0	0	0
2019 TY		53	50	0	0	0	0	0	0	0	0	0
2020 TY		57	54	51	0	0	0	0	0	0	0	0
2021 TY		62	59	55	52	0	0	0	0	0	0	0
2022 TY		67	63	60	57	54	0	0	0	0	0	0
2023 TY		72	68	65	62	58	55	0	0	0	0	0
2024 TY		77	73	70	67	63	60	56	0	0	0	0
2025 TY		82	79	75	72	68	65	61	58	0	0	0
2026 TY		88	84	81	77	73	70	66	63	59	0	0
2027 TY		94	90	86	83	79	75	72	68	64	61	0
2028 TY		100	96	92	89	85	81	77	73	70	66	62
2029 TY		106	102	98	95	91	87	83	79	75	71	68
2030 TY		113	109	105	101	97	93	89	85	81	77	73
2031 TY		120	116	112	107	103	99	95	91	87	83	79
2032 TY		129	123	118	114	110	106	102	98	94	89	85
2033 TY		142	133	126	121	117	113	109	104	100	96	92
2034 TY		156	146	136	129	124	120	116	111	107	103	98
2035 TY		170	160	149	139	132	128	123	119	114	110	105
2036 TY		184	174	164	153	143	135	131	126	122	117	112
2037 TY		199	189	178	168	157	146	139	134	129	125	120

MTPCapital

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2038 TY		215	204	194	183	172	161	150	142	137	133	128
2039 TY		232	221	210	198	187	176	165	154	146	141	136
2040 TY		250	238	226	215	203	192	180	169	158	149	144

Unit	Capacity	2054	2055	2056	2057	2058	2059
BR1	101	1,290	1,219	1,149	1,080	1,013	946
BR2	167	2,132	2,015	1,900	1,787	1,675	1,564
BR3	416	5,312	5,021	4,733	4,450	4,171	3,897
CR4	155	511	402	297	194	95	0
CR5	168	554	436	322	211	103	0
CR6	240	792	623	459	301	148	0
GH1	475	9,770	9,256	8,749	8,249	7,755	7,269
GH2	484	9,956	9,432	8,915	8,405	7,902	7,407
GH3	480	9,873	9,354	8,841	8,336	7,837	7,346
GH4	479	9,853	9,334	8,823	8,318	7,821	7,331
GR3	68	549	504	459	415	373	331
GR4	95	767	704	641	580	521	462
MC1	303	3,910	3,538	3,173	2,817	2,468	2,128
MC2	301	3,884	3,515	3,152	2,798	2,452	2,114
MC3	391	5,046	4,565	4,095	3,635	3,185	2,746
MC4	477	6,156	5,570	4,996	4,434	3,886	3,350
TC1	383	2,425	2,315	2,206	2,099	1,993	1,888
TC2	549	3,476	3,319	3,163	3,009	2,857	2,706
TY3	71	1,187	1,074	964	855	749	646

2.50%

2011 CR	0	0	0	0	0	0	0
2012 CR	0	0	0	0	0	0	0
2013 CR	0	0	0	0	0	0	0
2014 CR	0	0	0	0	0	0	0
2015 CR	0	0	0	0	0	0	0
2016 CR	0	0	0	0	0	0	0
2017 CR	0	0	0	0	0	0	0
2018 CR	0	0	0	0	0	0	0
2019 CR	0	0	0	0	0	0	0

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Unit	Capacity	2054	2055	2056	2057	2058	2059
2020 CR		0	0	0	0	0	0
2021 CR		0	0	0	0	0	0
2022 CR		0	0	0	0	0	0
2023 CR		0	0	0	0	0	0
2024 CR		0	0	0	0	0	0
2025 CR		0	0	0	0	0	0
2026 CR		0	0	0	0	0	0
2027 CR		0	0	0	0	0	0
2028 CR		0	0	0	0	0	0
2029 CR		0	0	0	0	0	0
2030 CR		0	0	0	0	0	0
2031 CR		0	0	0	0	0	0
2032 CR		0	0	0	0	0	0
2033 CR		0	0	0	0	0	0
2034 CR		0	0	0	0	0	0
2035 CR		0	0	0	0	0	0
2036 CR		314	0	0	0	0	0
2037 CR		342	322	0	0	0	0
2038 CR		370	350	330	0	0	0
2039 CR		400	379	359	338	0	0
2040 CR		431	410	389	368	347	0
2011 MC		0	0	0	0	0	0
2012 MC		0	0	0	0	0	0
2013 MC		0	0	0	0	0	0
2014 MC		0	0	0	0	0	0
2015 MC		0	0	0	0	0	0
2016 MC		0	0	0	0	0	0
2017 MC		0	0	0	0	0	0
2018 MC		0	0	0	0	0	0
2019 MC		0	0	0	0	0	0
2020 MC		0	0	0	0	0	0
2021 MC		0	0	0	0	0	0
2022 MC		0	0	0	0	0	0

MTPCapital

Unit	Capacity	2054	2055	2056	2057	2058	2059
2023 MC	0	0	0	0	0	0	0
2024 MC	0	0	0	0	0	0	0
2025 MC	0	0	0	0	0	0	0
2026 MC	0	0	0	0	0	0	0
2027 MC	0	0	0	0	0	0	0
2028 MC	0	0	0	0	0	0	0
2029 MC	1,020	0	0	0	0	0	0
2030 MC	1,108	1,045	0	0	0	0	0
2031 MC	1,201	1,136	1,071	0	0	0	0
2032 MC	1,297	1,231	1,164	1,098	0	0	0
2033 MC	1,398	1,330	1,262	1,194	1,125	0	0
2034 MC	1,503	1,433	1,363	1,293	1,223	0	1,154
2035 MC	1,612	1,540	1,469	1,397	1,325	0	1,254
2036 MC	1,725	1,652	1,579	1,505	1,432	0	1,359
2037 MC	1,844	1,768	1,693	1,618	1,543	0	1,468
2038 MC	1,967	1,890	1,813	1,736	1,659	0	1,581
2039 MC	2,095	2,016	1,937	1,858	1,779	0	1,700
2040 MC	2,228	2,147	2,066	1,985	1,904	0	1,823
2011 TC	0	0	0	0	0	0	0
2012 TC	0	0	0	0	0	0	0
2013 TC	0	0	0	0	0	0	0
2014 TC	83	0	0	0	0	0	0
2015 TC	91	85	0	0	0	0	0
2016 TC	98	93	88	0	0	0	0
2017 TC	106	101	95	90	0	0	0
2018 TC	114	109	103	98	92	0	0
2019 TC	123	117	111	106	100	94	0
2020 TC	131	126	120	114	108	102	0
2021 TC	141	135	129	123	117	111	0
2022 TC	150	144	138	132	126	120	0
2023 TC	160	154	148	141	135	129	0
2024 TC	171	164	158	151	145	139	0
2025 TC	181	175	168	162	155	149	0

MTPCapital

Unit	Capacity	2054	2055	2056	2057	2058	2059
2026 TC	193	186	179	173	166	159	
2027 TC	204	197	191	184	177	170	
2028 TC	217	209	202	195	188	181	
2029 TC	229	222	215	207	200	193	
2030 TC	242	235	227	220	213	205	
2031 TC	256	248	241	233	226	218	
2032 TC	270	262	255	247	239	231	
2033 TC	285	277	269	261	253	245	
2034 TC	300	292	284	276	267	259	
2035 TC	316	308	299	291	283	274	
2036 TC	333	324	315	307	298	290	
2037 TC	350	341	332	323	314	306	
2038 TC	367	358	349	340	331	322	
2039 TC	386	377	367	358	349	340	
2040 TC	405	396	386	377	367	358	
2011 GH	0	0	0	0	0	0	
2012 GH	0	0	0	0	0	0	
2013 GH	0	0	0	0	0	0	
2014 GH	0	0	0	0	0	0	
2015 GH	0	0	0	0	0	0	
2016 GH	0	0	0	0	0	0	
2017 GH	0	0	0	0	0	0	
2018 GH	748	0	0	0	0	0	
2019 GH	812	766	0	0	0	0	
2020 GH	880	833	785	0	0	0	
2021 GH	950	902	853	805	0	0	
2022 GH	1,023	974	924	875	825	0	
2023 GH	1,100	1,049	998	947	897	846	
2024 GH	1,179	1,127	1,075	1,023	971	919	
2025 GH	1,262	1,209	1,155	1,102	1,049	995	
2026 GH	1,348	1,294	1,239	1,184	1,130	1,075	
2027 GH	1,438	1,382	1,326	1,270	1,214	1,158	
2028 GH	1,532	1,474	1,417	1,359	1,302	1,244	

MTPCapital

Unit	Capacity	2054	2055	2056	2057	2058	2059
2029 GH	1,629	1,570	1,511	1,452	1,393	1,334	
2030 GH	1,730	1,670	1,609	1,549	1,488	1,428	
2031 GH	1,835	1,773	1,711	1,649	1,588	1,526	
2032 GH	1,944	1,881	1,818	1,754	1,691	1,627	
2033 GH	2,058	1,993	1,928	1,863	1,798	1,733	
2034 GH	2,176	2,109	2,043	1,976	1,910	1,843	
2035 GH	2,299	2,231	2,162	2,094	2,026	1,957	
2036 GH	2,426	2,356	2,286	2,216	2,146	2,076	
2037 GH	2,559	2,487	2,415	2,343	2,272	2,200	
2038 GH	2,696	2,623	2,549	2,476	2,402	2,328	
2039 GH	2,839	2,764	2,688	2,613	2,537	2,462	
2040 GH	2,987	2,910	2,833	2,755	2,678	2,601	
2011 BR	0	0	0	0	0	0	0
2012 BR	0	0	0	0	0	0	0
2013 BR	0	0	0	0	0	0	0
2014 BR	0	0	0	0	0	0	0
2015 BR	0	0	0	0	0	0	0
2016 BR	0	0	0	0	0	0	0
2017 BR	0	0	0	0	0	0	0
2018 BR	0	0	0	0	0	0	0
2019 BR	179	0	0	0	0	0	0
2020 BR	195	183	0	0	0	0	0
2021 BR	211	199	188	0	0	0	0
2022 BR	228	216	204	193	0	0	0
2023 BR	245	233	221	209	198	0	0
2024 BR	263	251	239	227	215	203	203
2025 BR	282	270	257	245	233	220	220
2026 BR	302	290	277	264	251	238	238
2027 BR	323	310	297	284	271	257	257
2028 BR	344	331	318	304	291	277	277
2029 BR	367	353	339	326	312	298	298
2030 BR	390	376	362	348	334	320	320
2031 BR	414	400	385	371	356	342	342

Unit	Capacity	2054	2055	2056	2057	2058	2059
2032 BR	440	425	410	395	380	365	
2033 BR	466	451	435	420	405	390	
2034 BR	493	477	462	446	431	415	
2035 BR	521	505	489	473	457	441	
2036 BR	551	534	518	502	485	469	
2037 BR	581	564	548	531	514	497	
2038 BR	613	596	579	561	544	527	
2039 BR	646	628	611	593	575	558	
2040 BR	680	662	644	626	608	590	
2011 GR	0	0	0	0	0	0	
2012 GR	0	0	0	0	0	0	
2013 GR	0	0	0	0	0	0	
2014 GR	0	0	0	0	0	0	
2015 GR	0	0	0	0	0	0	
2016 GR	0	0	0	0	0	0	
2017 GR	0	0	0	0	0	0	
2018 GR	0	0	0	0	0	0	
2019 GR	0	0	0	0	0	0	
2020 GR	0	0	0	0	0	0	
2021 GR	0	0	0	0	0	0	
2022 GR	0	0	0	0	0	0	
2023 GR	0	0	0	0	0	0	
2024 GR	0	0	0	0	0	0	
2025 GR	0	0	0	0	0	0	
2026 GR	0	0	0	0	0	0	
2027 GR	56	0	0	0	0	0	
2028 GR	61	58	0	0	0	0	
2029 GR	66	63	59	0	0	0	
2030 GR	72	68	64	61	0	0	
2031 GR	77	73	70	66	62	0	
2032 GR	83	79	75	71	67	64	
2033 GR	89	85	81	77	73	69	
2034 GR	95	91	87	83	79	75	

MTPCapital

Unit	Capacity	2054	2055	2056	2057	2058	2059
2035 GR	102	98	93	89	85	81	
2036 GR	108	104	100	96	91	87	
2037 GR	115	111	107	102	98	94	
2038 GR	123	118	114	109	105	101	
2039 GR	130	126	121	117	112	108	
2040 GR	138	134	129	124	120	115	
2011 TY	0	0	0	0	0	0	
2012 TY	0	0	0	0	0	0	
2013 TY	0	0	0	0	0	0	
2014 TY	0	0	0	0	0	0	
2015 TY	0	0	0	0	0	0	
2016 TY	0	0	0	0	0	0	
2017 TY	0	0	0	0	0	0	
2018 TY	0	0	0	0	0	0	
2019 TY	0	0	0	0	0	0	
2020 TY	0	0	0	0	0	0	
2021 TY	0	0	0	0	0	0	
2022 TY	0	0	0	0	0	0	
2023 TY	0	0	0	0	0	0	
2024 TY	0	0	0	0	0	0	
2025 TY	0	0	0	0	0	0	
2026 TY	0	0	0	0	0	0	
2027 TY	0	0	0	0	0	0	
2028 TY	0	0	0	0	0	0	
2029 TY	64	0	0	0	0	0	
2030 TY	69	65	0	0	0	0	
2031 TY	75	71	67	0	0	0	
2032 TY	81	77	73	69	0	0	
2033 TY	87	83	79	75	70	0	
2034 TY	94	90	85	81	76	72	
2035 TY	101	96	92	87	83	78	
2036 TY	108	103	99	94	89	85	
2037 TY	115	111	106	101	96	92	

MTPCapital

Unit	Capacity	2054	2055	2056	2057	2058	2059
2038 TY		123	118	113	108	104	99
2039 TY		131	126	121	116	111	106
2040 TY		139	134	129	124	119	114*

\$'000

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
BR	BR1	101	0	0	0	0	0	441	454	590	616	785
BR	BR2	167	0	0	0	0	0	729	751	975	1,018	1,299
BR	BR3	416	0	0	0	0	0	1,816	1,870	2,430	2,536	3,235
CR	CR4	155	258	840	1,124	1,095	1,216	1,960	1,949	1,644	1,927	2,572
CR	CR5	168	279	910	1,219	1,187	1,318	2,124	2,112	1,782	2,089	2,788
CR	CR6	240	399	1,300	1,741	1,696	1,882	5,221	5,152	4,566	4,899	5,799
GH	GH1	475	0	0	0	0	0	5,620	5,988	6,566	7,371	8,085
GH	GH2	484	0	0	0	0	0	5,727	6,101	6,691	7,510	8,238
GH	GH3	480	0	0	0	0	0	5,680	6,051	6,635	7,448	8,170
GH	GH4	479	0	0	0	0	0	5,668	6,038	6,622	7,433	8,153
GR	GR3	68										
GR	GR4	95										
MC	MC1	303										
MC	MC2	301										
MC	MC3	391										
MC	MC4	477										
TC	TC1	383	0	0	0	0	0	1,965	2,066	2,172	2,216	2,260
TC	TC2	549	0	0	0	0	0	2,817	2,961	3,114	3,176	3,240
TY	TY3	71										
	BR Landfill Phase 2 Savings		0	0	0	0	0	0	0	828	908	1,960
	BR Landfill Phase 3 Savings		0	0	0	0	0	0	0	0	0	0
	BR Landfill O&M Savings		0	0	0	0	0	2,985	3,075	3,167	3,262	3,360
	CR Landfill Capital Savings		936	3,049	4,083	3,979	4,416	4,938	4,772	3,579	4,464	6,617
	CR Landfill O&M Savings		0	0	0	0	0	2,181	2,307	2,393	2,537	2,726
	CR6 Stator Rewind Savings		0	0	0	0	0	2,187	2,135	2,020	1,914	1,816
	GH Landfill Capital Savings		0	0	0	0	0	61	188	1,083	2,805	4,044
	GH Landfill O&M Savings		0	0	0	0	0	22,633	23,991	25,431	26,957	28,601
	TC Landfill Capital Savings		0	0	0	0	0	0	0	0	0	0
	TC Landfill O&M Savings		0	0	0	0	0	4,782	5,027	5,286	5,392	5,500

LandfillCapital

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
BR1	101	787	789	1,035	1,054	1,357	1,337	1,319	1,301	1,285	1,267	1,122
BR2	167	1,301	1,305	1,711	1,743	2,245	2,211	2,180	2,151	2,124	2,095	1,855
BR3	416	3,242	3,252	4,261	4,342	5,591	5,508	5,431	5,359	5,291	5,219	4,620
CR4	155	2,560	2,096	2,059	2,073	1,531	1,768	1,810	1,869	1,932	2,000	1,861
CR5	168	2,774	2,272	2,232	2,247	1,659	1,916	1,962	2,025	2,094	2,168	2,017
CR6	240	5,682	4,867	4,712	4,637	3,700	3,969	3,960	4,000	4,047	4,101	3,833
GH1	475	8,761	9,219	9,707	10,790	12,508	14,281	15,439	15,604	16,273	16,860	17,332
GH2	484	8,927	9,394	9,891	10,994	12,745	14,551	15,732	15,900	16,581	17,180	17,660
GH3	480	8,854	9,316	9,809	10,904	12,640	14,431	15,602	15,769	16,444	17,038	17,514
GH4	479	8,835	9,297	9,789	10,881	12,614	14,401	15,569	15,736	16,410	17,002	17,478
GR3	68											
GR4	95											
MC1	303											
MC2	301											
MC3	391											
MC4	477											
TC1	383	2,305	2,351	2,398	2,446	2,495	2,545	2,596	2,648	5,363	8,239	8,294
TC2	549	3,304	3,371	3,438	3,507	3,577	3,648	3,721	3,796	7,687	11,809	11,888
TY3	71											
andfill Phase 2 Savings		1,870	1,782	1,697	1,613	1,531	1,451	1,372	1,294	1,215	1,123	156
andfill Phase 3 Savings		0	0	1,638	1,745	3,767	3,594	3,426	3,261	3,101	2,943	2,789
Landfill O&M Savings		3,461	3,564	3,671	3,781	3,895	4,012	4,132	4,256	4,384	4,515	4,651
Landfill Capital Savings		6,353	4,493	4,170	4,023	1,844	2,496	2,513	2,483	2,455	2,429	1,631
Landfill O&M Savings		2,944	3,121	3,308	3,507	3,717	3,925	4,061	4,305	4,563	4,837	5,128
Stator Rewind Savings		1,719	1,621	1,524	1,427	1,329	1,232	1,158	1,106	1,055	1,004	952
Landfill Capital Savings		4,399	4,388	4,387	6,672	11,397	16,206	18,397	18,341	18,358	17,892	16,784
Landfill O&M Savings		30,979	32,838	34,808	36,897	39,110	41,457	43,944	44,668	47,348	50,189	53,201
Landfill Capital Savings		0	0	0	0	0	0	0	0	6,478	13,344	13,344
Landfill O&M Savings		5,610	5,722	5,836	5,953	6,072	6,194	6,318	6,444	6,573	6,704	6,838

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040
BR1	101	410	385	360	331	54	46	38	30	23
BR2	167	678	636	595	547	89	76	63	50	39
BR3	416	1,688	1,585	1,482	1,363	222	189	157	124	97
CR4	155	1,810	1,778	1,748	1,719	1,692	1,708	1,727	1,747	1,771
CR5	168	1,962	1,927	1,895	1,864	1,834	1,851	1,872	1,894	1,919
CR6	240	3,704	3,602	2,777	2,662	2,620	2,645	2,674	2,705	2,742
GH1	475	17,856	18,548	19,372	20,254	21,186	21,692	2,492	1,854	1,700
GH2	484	18,195	18,899	19,739	20,637	21,587	22,103	2,539	1,889	1,733
GH3	480	18,044	18,743	19,576	20,467	21,409	21,921	2,518	1,874	1,718
GH4	479	18,007	18,704	19,535	20,424	21,364	21,875	2,513	1,870	1,715
GR3	68									
GR4	95									
MC1	303									
MC2	301									
MC3	391									
MC4	477									
TC1	383	12,354	12,003	11,666	11,343	11,031	10,731	10,442	10,162	9,886
TC2	549	17,709	17,206	16,723	16,259	15,812	15,382	14,967	14,567	14,170
TY3	71									
andfill Phase 2 Savings		138	120	101	83	64	46	28	9	0
andfill Phase 3 Savings		2,638	2,487	2,336	2,158	301	265	230	194	159
Landfill O&M Savings										
Landfill Capital Savings		1,345	1,123	908	695	485	430	384	338	303
Stator Rewind Savings		5,230	5,335	5,441	5,550	5,661	5,774	5,890	6,008	6,128
Landfill Capital Savings		901	850	70	0	0	0	0	0	0
Landfill O&M Savings		15,709	15,118	14,860	14,617	14,352	12,126	9,906	7,329	6,705
Landfill Capital Savings		56,393	59,776	63,363	67,165	71,194	75,466	155	158	161
Landfill O&M Savings		23,088	22,094	21,132	20,199	19,293	18,412	17,554	16,717	15,883
Landfill Capital Savings		6,975	7,115	7,257	7,402	7,550	7,701	7,855	8,012	8,172

LandfillCapital

\$000

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
BR	BR1	101	0	0	0	553	743	703	668	635	606	577
BR	BR2	167	0	0	0	915	1,228	1,163	1,104	1,050	1,002	954
BR	BR3	416	0	0	0	2,279	3,060	2,897	2,749	2,616	2,496	2,377
CR	CR4	155	0	0	0	980	1,582	1,494	1,413	1,339	1,269	1,201
CR	CR5	168	0	0	0	1,062	1,715	1,619	1,532	1,451	1,376	1,302
CR	CR6	240	0	0	0	1,518	2,449	2,313	2,188	2,073	1,966	1,860
GH	GH1	475	0	0	0	1,462	1,954	1,856	1,767	1,686	1,611	1,540
GH	GH2	484	0	0	0	1,489	1,991	1,891	1,800	1,718	1,642	1,569
GH	GH3	480	0	0	0	1,477	1,975	1,876	1,786	1,703	1,628	1,556
GH	GH4	479	0	0	0	1,474	1,971	1,872	1,782	1,700	1,625	1,553
GR	GR3	68	0	0	0	586	837	792	751	713	679	645
GR	GR4	95	0	0	0	819	1,169	1,106	1,049	996	948	901
MC	MC1	303	0	0	0	1,215	1,774	1,682	1,598	1,521	1,449	1,380
MC	MC2	301	0	0	0	1,207	1,762	1,671	1,588	1,511	1,440	1,371
MC	MC3	391	0	0	0	1,568	2,289	2,171	2,063	1,963	1,870	1,781
MC	MC4	477	0	0	0	1,913	2,792	2,648	2,516	2,394	2,281	2,172
TC	TC1	383	0	0	0	770	1,008	958	912	871	833	797
TC	TC2	549	0	0	0	1,104	1,445	1,373	1,307	1,248	1,194	1,142
TY	TY3	71	0	0	0	586	837	792	751	713	679	645
	BRWATER		0	0	0	3,747	5,032	4,763	4,521	4,302	4,104	3,908
	CRWATER		0	0	0	3,560	5,746	5,427	5,134	4,863	4,611	4,362
	MCWATER		0	0	0	5,902	8,617	8,173	7,765	7,389	7,040	6,704
	TCWATER		0	0	0	1,874	2,453	2,331	2,220	2,119	2,026	1,938
	GHWATER		0	0	0	5,902	7,892	7,495	7,135	6,806	6,505	6,217
	GRWATER		0	0	0	1,405	2,006	1,898	1,799	1,709	1,627	1,546

WaterCapital

Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
101	548	519	491	462	433	413	403	393	382	372	361	351
167	907	859	811	764	716	684	666	649	632	615	597	580
416	2,258	2,140	2,021	1,902	1,784	1,703	1,660	1,617	1,574	1,531	1,488	1,445
155	1,132	1,064	996	927	859	806	770	735	699	663	627	591
168	1,227	1,153	1,079	1,005	931	874	835	796	757	718	679	640
240	1,754	1,647	1,541	1,435	1,329	1,249	1,193	1,137	1,082	1,026	970	915
475	1,468	1,397	1,325	1,254	1,183	1,111	1,062	1,035	1,008	982	955	928
484	1,496	1,423	1,350	1,278	1,205	1,132	1,082	1,055	1,028	1,000	973	946
480	1,484	1,411	1,339	1,267	1,195	1,123	1,073	1,046	1,019	992	965	938
479	1,481	1,409	1,337	1,265	1,193	1,121	1,071	1,044	1,017	990	963	936
68	611	577	544	510	476	452	438	423	409	395	380	366
95	854	807	759	712	665	631	611	591	571	551	531	511
303	1,311	1,242	1,173	1,103	1,034	965	915	882	850	818	786	754
301	1,302	1,234	1,165	1,096	1,027	959	908	877	845	813	781	749
391	1,692	1,602	1,513	1,424	1,335	1,245	1,180	1,139	1,097	1,056	1,015	973
477	2,064	1,955	1,846	1,737	1,628	1,519	1,440	1,389	1,339	1,288	1,238	1,187
383	760	724	688	652	616	579	555	542	529	517	504	491
549	1,090	1,038	986	934	882	830	795	777	759	741	723	704
71	611	577	544	510	476	452	438	423	409	395	380	366
BRWATER	3,713	3,518	3,323	3,128	2,933	2,800	2,729	2,659	2,588	2,517	2,447	2,376
CRWATER	4,113	3,865	3,616	3,367	3,118	2,929	2,798	2,668	2,537	2,407	2,277	2,146
MCWATER	6,368	6,032	5,696	5,361	5,025	4,689	4,443	4,287	4,131	3,976	3,820	3,664
TCWATER	1,850	1,762	1,674	1,586	1,498	1,410	1,350	1,319	1,288	1,258	1,227	1,196
GHWATER	5,928	5,640	5,352	5,063	4,775	4,487	4,288	4,180	4,072	3,964	3,856	3,748
GRWATER	1,465	1,384	1,303	1,222	1,141	1,083	1,049	1,015	980	946	912	877

Capacity	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
101	340	330	320	309	299	288	278	267	257	247	236	226
167	563	546	528	511	494	477	459	442	425	408	390	373
416	1,402	1,359	1,316	1,273	1,230	1,187	1,144	1,101	1,058	1,016	973	930
155	0	0	0	0	0	0	0	0	0	0	0	0
168	0	0	0	0	0	0	0	0	0	0	0	0
240	0	0	0	0	0	0	0	0	0	0	0	0
475	901	875	848	821	794	767	741	714	687	660	634	607
484	918	891	864	837	809	782	755	727	700	673	646	618
480	911	884	857	830	803	776	748	721	694	667	640	613
479	909	882	855	828	801	774	747	720	693	666	639	612
68	352	337	323	309	294	280	266	251	237	0	0	0
95	491	471	451	431	411	391	371	351	331	0	0	0
303	722	690	658	626	594	562	530	0	0	0	0	0
301	717	686	654	622	590	558	526	0	0	0	0	0
391	932	891	849	808	766	725	684	0	0	0	0	0
477	1,137	1,086	1,036	986	935	885	834	0	0	0	0	0
383	479	466	453	441	428	415	403	390	377	364	352	339
549	686	668	650	632	613	595	577	559	541	522	504	486
71	352	337	323	309	294	280	266	251	237	0	0	0

BRWATER	2,305	2,235	2,164	2,094	2,023	1,952	1,882	1,811	1,740	1,670	1,599	1,529
CRWATER	0	0	0	0	0	0	0	0	0	0	0	0
MCWATER	3,508	3,353	3,197	3,041	2,886	2,730	2,574	0	0	0	0	0
TCWATER	1,165	1,134	1,103	1,072	1,041	1,010	979	949	918	887	856	825
GHWATER	3,640	3,531	3,423	3,315	3,207	3,099	2,991	2,883	2,774	2,666	2,558	2,450
GRWATER	843	809	774	740	706	671	637	603	568	0	0	0

WaterCapital

Capacity	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
101	215	205	194	184	174	0	0	0	0	0	0	0
167	356	339	321	304	287	0	0	0	0	0	0	0
416	887	844	801	758	715	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0
168	0	0	0	0	0	0	0	0	0	0	0	0
240	0	0	0	0	0	0	0	0	0	0	0	0
475	580	553	526	500	473	446	0	0	0	0	0	0
484	591	564	536	509	482	454	0	0	0	0	0	0
480	586	559	532	505	478	451	0	0	0	0	0	0
479	585	558	531	504	477	450	0	0	0	0	0	0
68	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0
303	0	0	0	0	0	0	0	0	0	0	0	0
301	0	0	0	0	0	0	0	0	0	0	0	0
391	0	0	0	0	0	0	0	0	0	0	0	0
477	0	0	0	0	0	0	0	0	0	0	0	0
383	326	314	301	288	276	263	250	237	225	212	0	0
549	468	450	431	413	395	377	359	340	322	304	0	0
71	0	0	0	0	0	0	0	0	0	0	0	0

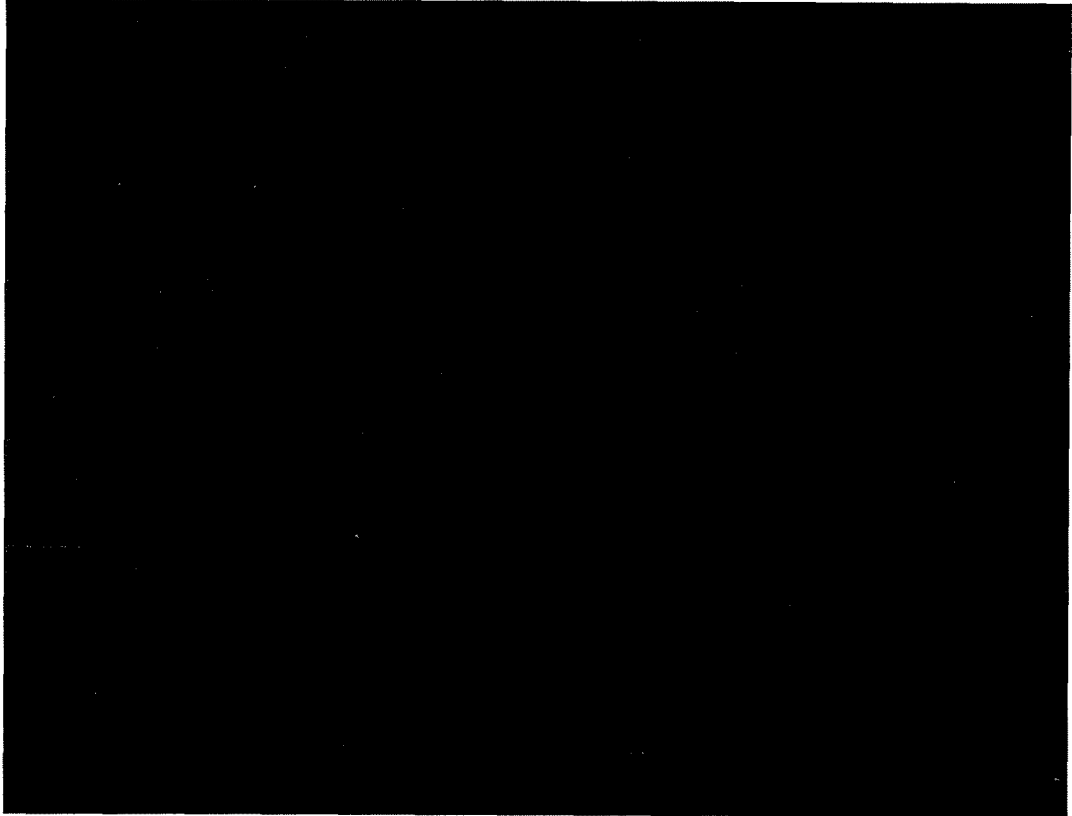
BRWATER	1,458	1,387	1,317	1,246	1,175	0	0	0	0	0	0	0
CRWATER	0	0	0	0	0	0	0	0	0	0	0	0
MCWATER	0	0	0	0	0	0	0	0	0	0	0	0
TCWATER	794	763	732	701	670	640	609	578	547	516	0	0
GHWATER	2,342	2,234	2,125	2,017	1,909	1,801	0	0	0	0	0	0
GRWATER	0	0	0	0	0	0	0	0	0	0	0	0

Capacity	2057	2058	2059
101	0	0	0
167	0	0	0
416	0	0	0
155	0	0	0
168	0	0	0
240	0	0	0
475	0	0	0
484	0	0	0
480	0	0	0
479	0	0	0
68	0	0	0
95	0	0	0
303	0	0	0
301	0	0	0
391	0	0	0
477	0	0	0
383	0	0	0
549	0	0	0
71	0	0	0

BRWATER	0	0	0
CRWATER	0	0	0
MCWATER	0	0	0
TCWATER	0	0	0
GHWATER	0	0	0
GRWATER	0	0	0

Strategist Model Input Data (2010\$)

KU Gas LGE Gas HAF Gas New Gas LF Gas KU/LGE Model Gas Price



2010
2011
2012
2013
2014
2015
2016
2017
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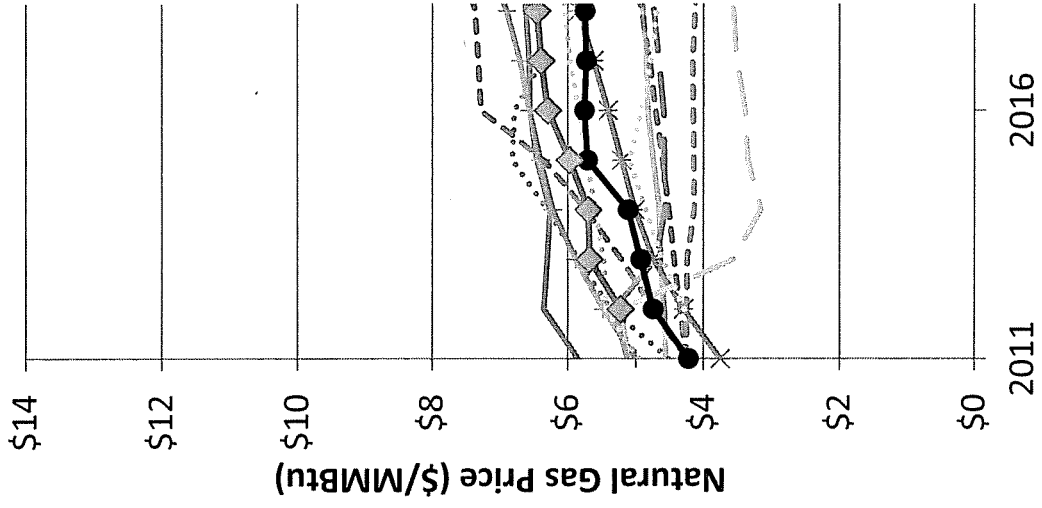
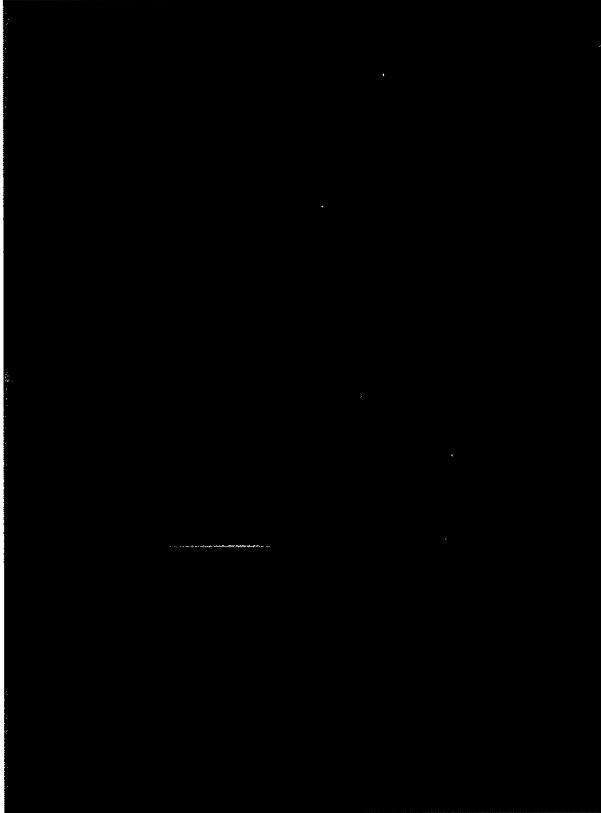
Sensitivity Input (p4)

KU/LGE HI Adder



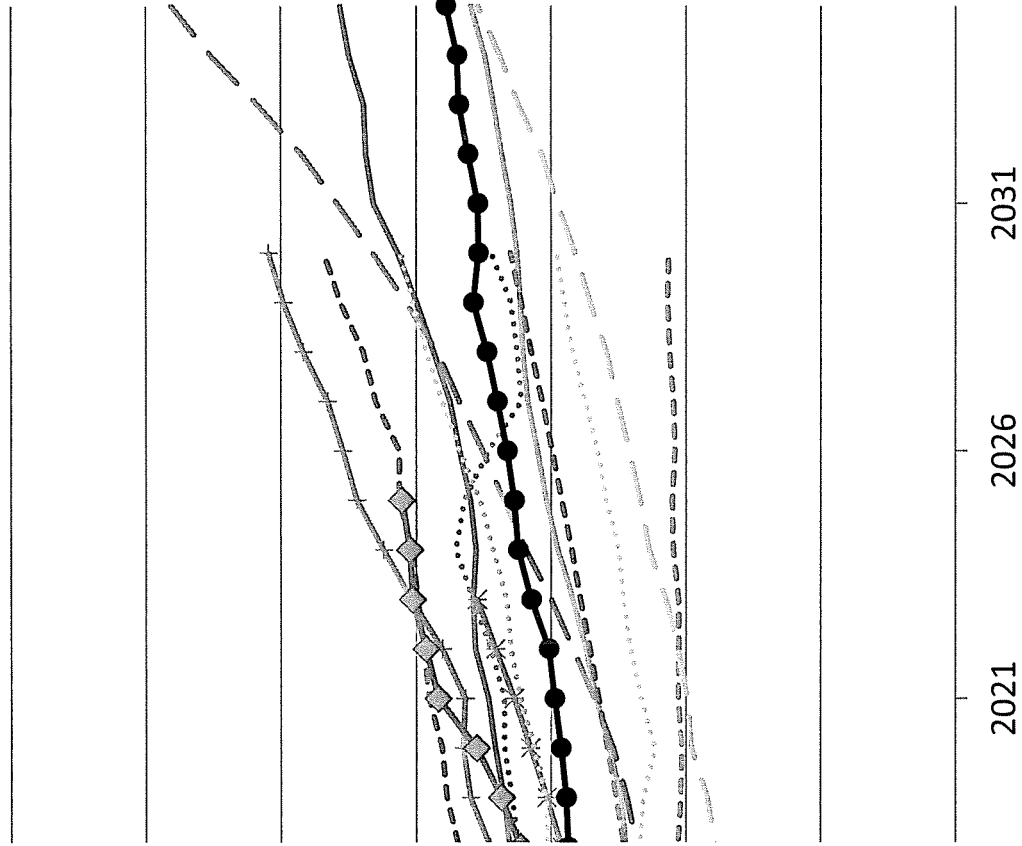
2011 \$1.30
2012 \$1.18
2013 \$1.17
2014 \$1.19
2015 \$1.21
2016 \$1.36
2017 \$1.41
2018 \$1.45
2019 \$1.50
2020 \$1.56
2021 \$1.62
2022 \$1.69
2023 \$1.77
2024 \$1.85
2025 \$1.94

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	BLS Inflator		BLS Inflator		BLS Deflator	
	AEO 2010 AEO 2010 (2008\$)	1.0128 AEO 2010 (2010\$)	AEO 2011 AEO 2011 (2009\$)	1.0164 AEO 2011 (2010\$)	AESC 2011 AESC 2011 (AESC 2011)	0.9652 AESC 2011 (AESC 2011)
2011	\$5.77	\$5.84	\$4.48	\$4.55	2011	4.37
2012	\$6.27	\$6.35	\$4.50	\$4.57	2012	4.91
2013	\$6.22	\$6.30	\$4.56	\$4.63	2013	5.1
2014	\$6.18	\$6.26	\$4.57	\$4.64	2014	5.29
2015	\$6.37	\$6.45	\$4.66	\$4.74	2015	5.91
2016	\$6.47	\$6.55	\$4.74	\$4.82	2016	5.96
2017	\$6.48	\$6.56	\$4.76	\$4.84	2017	5.93
2018	\$6.53	\$6.61	\$4.81	\$4.89	2018	5.95
2019	\$6.61	\$6.69	\$4.87	\$4.95	2019	5.98
2020	\$6.74	\$6.83	\$5.05	\$5.13	2020	6.06
2021	\$6.84	\$6.93	\$5.24	\$5.33	2021	6.16
2022	\$7.03	\$7.12	\$5.39	\$5.48	2022	6.25
2023	\$7.06	\$7.15	\$5.58	\$5.67	2023	6.52
2024	\$7.02	\$7.11	\$5.80	\$5.90	2024	6.72
2025	\$7.10	\$7.19	\$5.97	\$6.07	2025	6.78
2026	\$7.26	\$7.35	\$6.10	\$6.20	2026	6.89
2027	\$7.40	\$7.49	\$6.24	\$6.34	2027	7.04
2028	\$7.64	\$7.74	\$6.31	\$6.41	2028	7.2
2029	\$7.89	\$7.99	\$6.35	\$6.45	2029	7.41
2030	\$8.17	\$8.27	\$6.40	\$6.50	2030	7.33
2031	\$8.52	\$8.63	\$6.49	\$6.60	2031	7.34
2032	\$8.63	\$8.74	\$6.62	\$6.73	2032	7.49
2033	\$8.66	\$8.77	\$6.74	\$6.85	2033	7.63
2034	\$8.88	\$8.99	\$6.87	\$6.98	2034	7.66
2035	\$9.01	\$9.13	\$7.07	\$7.19	2035	7.83
					2036	7.96
					2037	8.1
					2038	8.24
					2039	8.37
						8.52
						8.66
						8.83
						8.99
						9.13

Henry Hub Natural Gas Price Comparisons (2010\$)



— AEO 2010 (2010\$)

— AEO 2011 (2010\$)

*— Globex futures

— EIPC High Scenario

— NWPCC Low

— NWPCC Medium

— NWPCC High

— Navigant GHG As-Is

— • Navigant GHG Plus

••••• Prop. Source (2011, from EIPC review)

••••• RGGI (2010, from EIPC review)

••••• EPA (2010, from EIPC review)

—●— AESC 2011 (2010\$)

—◆— 2011 Wood Mackenzie

2011

2026

2031

yr	Recommended Value For KY		NPCC 201 updated forecast for HH, (\$2010)			Globex futures
	INCORRECT	REVISED	Low	Med	High	
I (2010\$)						
	AESC + KY Adder	AESC + Adders				
2010	\$0.00		2011	4.25	4.25	2011
2011	\$5.52	\$5.32	2012	4.24	4.34	2012
2012	\$5.92	\$5.77	2013	4.24	4.43	2013
2013	\$6.09	\$5.95	2014	4.13	4.51	2014
2014	\$6.29	\$6.14	2015	4.14	4.60	2015
2015	\$6.92	\$6.81	2016	4.15	4.70	2016
2016	\$7.11	\$6.96	2017	4.16	4.79	2017
2017	\$7.13	\$6.92	2018	4.12	4.91	2018
2018	\$7.19	\$6.93	2019	4.08	5.03	2019
2019	\$7.27	\$6.96	2020	4.06	5.16	2020
2020	\$7.41	\$7.05	2021	4.11	5.29	2021
2021	\$7.57	\$7.16	2022	4.11	5.42	2022
2022	\$7.73	\$7.25	2023	4.11	5.56	2023
2023	\$8.06	\$7.55	2024	4.19	5.69	2024
2024	\$8.33	\$7.77	2025	4.20	5.84	2025
2025	\$8.49	\$7.84	2026	4.16	5.98	2026
2026	\$8.59	\$7.96	2027	4.19	6.13	2027
2027	\$8.74	\$8.12	2028	4.24	6.29	2028
2028	\$8.89	\$8.29	2029	4.27	6.44	2029
2029	\$9.09	\$8.52	2030	4.26	6.60	2030
2030	\$9.02	\$8.43				
2031	\$9.03	\$8.45				
2032	\$9.17	\$8.61				
2033	\$9.31	\$8.76				
2034	\$9.34	\$8.79				
2035	\$9.50	\$8.98				
2036	\$9.63	\$9.12				
2037	\$9.76	\$9.27				
2038	\$9.90	\$9.43				
2039	\$10.02	\$9.57				
2040	\$10.17	\$9.73				
2041	\$10.30	\$9.88				

From CME Group, Oct of each year

EIPC High Scenario

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
3.75	\$4.99	\$5.11	\$5.20	\$5.88	\$6.22	\$6.40	\$6.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18					
4.29	\$5.47	\$5.20	\$3.56	\$6.22	\$6.40	\$6.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18						
4.73	\$5.88	\$3.56	\$3.15	\$6.22	\$6.40	\$6.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18						
5.00	\$6.22	\$3.15	\$3.34	\$6.22	\$6.40	\$6.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18						
5.20	\$6.40	\$3.34	\$3.38	\$6.40	\$6.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18							
5.40	\$6.56	\$3.38	\$3.51	\$6.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18								
5.61	\$6.70	\$3.51	\$3.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18									
5.84	\$6.90	\$3.56	\$3.68	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18										
6.06	\$7.19	\$3.68	\$3.91	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18											
6.30	\$7.30	\$3.91	\$3.97	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18												
6.55	\$7.27	\$3.97	\$4.12	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18													
6.82	\$7.61	\$4.12	\$4.30	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18														
7.09	\$8.07	\$4.30	\$4.54	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18															
	\$8.48	\$4.54	\$4.68	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18																
	\$8.87	\$4.68	\$4.84	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18																	
	\$9.08	\$4.84	\$5.01	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18																		
	\$9.31	\$5.01	\$5.17	\$9.31	\$9.67	\$9.96	\$10.18																			
	\$9.67	\$5.17	\$5.42	\$9.67	\$9.96	\$10.18																				
	\$9.96	\$5.42	\$5.64	\$9.96	\$10.18																					
	\$10.18	\$5.64	\$5.91	\$10.18																						
		\$5.91	\$6.14																							
		\$6.14	\$6.48																							
		\$6.48	\$6.76																							
		\$6.76	\$7.08																							
		\$7.08																								

From CME Group, Oct of each year

EIPC High Scenario

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
3.75	\$4.99	\$5.11	\$5.20	\$5.88	\$6.22	\$6.40	\$6.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18					
4.29	\$5.47	\$5.20	\$3.56	\$6.22	\$6.40	\$6.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18						
4.73	\$5.88	\$3.56	\$3.15	\$6.22	\$6.40	\$6.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18						
5.00	\$6.22	\$3.15	\$3.34	\$6.22	\$6.40	\$6.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18						
5.20	\$6.40	\$3.34	\$3.38	\$6.40	\$6.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18							
5.40	\$6.56	\$3.38	\$3.51	\$6.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18								
5.61	\$6.70	\$3.51	\$3.56	\$6.70	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18									
5.84	\$6.90	\$3.56	\$3.68	\$6.90	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18										
6.06	\$7.19	\$3.68	\$3.91	\$7.19	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18											
6.30	\$7.30	\$3.91	\$3.97	\$7.30	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18												
6.55	\$7.27	\$3.97	\$4.12	\$7.27	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18													
6.82	\$7.61	\$4.12	\$4.30	\$7.61	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18														
7.09	\$8.07	\$4.30	\$4.54	\$8.07	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18															
	\$8.48	\$4.54	\$4.68	\$8.48	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18																
	\$8.87	\$4.68	\$4.84	\$8.87	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18																	
	\$9.08	\$4.84	\$5.01	\$9.08	\$9.31	\$9.67	\$9.96	\$10.18																		
	\$9.31	\$5.01	\$5.17	\$9.31	\$9.67	\$9.96	\$10.18																			
	\$9.67	\$5.17	\$5.42	\$9.67	\$9.96	\$10.18																				
	\$9.96	\$5.42	\$5.64	\$9.96	\$10.18																					
	\$10.18	\$5.64	\$5.91	\$10.18																						
		\$5.91	\$6.14																							
		\$6.14	\$6.48																							
		\$6.48	\$6.76																							
		\$6.76	\$7.08																							
		\$7.08																								

EIPC Fuel and Emission Prices Subteam Review
Graphical reps.

Wood Mackenzie
From Company Supplemental Anz

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Prop. Source (2011, from EIPC re RGGI (2010, from EIP. EPA (2010, from EIPC review)

2011 Wood Mackenzie

2011	\$4.51	\$4.95	\$4.27	2012	5.21
2012	\$5.36	\$5.42	\$4.60	2013	5.67
2013	\$5.84	\$5.46	\$4.85	2014	5.69
2014	\$6.30	\$5.59	\$5.09	2015	5.97
2015	\$6.81	\$5.72	\$4.92	2016	6.29
2016	\$6.78	\$5.84	\$4.77	2017	6.39
2017	\$6.37	\$5.97	\$4.69	2018	6.45
2018	\$6.48	\$6.05	\$4.63	2019	6.73
2019	\$6.58	\$6.08	\$4.46	2020	7.1
2020	\$6.69	\$6.23	\$4.66	2021	7.67
2021	\$6.69	\$6.45	\$4.82	2022	7.85
2022	\$6.89	\$6.60	\$4.93	2023	8.05
2023	\$7.16	\$6.66	\$4.99	2024	8.09
2024	\$7.41	\$6.86	\$5.18	2025	8.21
2025	\$7.28	\$7.05	\$5.31		
2026	\$6.92	\$7.35	\$5.50		
2027	\$6.44	\$7.61	\$5.68		
2028	\$6.50	\$7.85	\$5.81		
2029	\$6.59	\$8.05	\$5.92		
2030	\$6.89	\$8.23			

alysis - Septemeber 14th

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**Natural Gas Supply, Disposition, and Prices, Reference case
(trillion cubic feet, unless otherwise noted)**

Supply, Disposition, and Prices	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Production														
Dry Gas Production 1/	20.29	20.96	21.28	21.06	21.27	21.73	22.02	22.43	22.47	22.65	22.92	23.2	23.43	23.53
Supplemental Natural Gas 2/	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Net Imports	2.98	2.64	2.74	2.75	2.64	2.72	2.71	2.69	2.63	2.55	2.42	2.22	1.9	1.6
Pipeline 3/	2.68	2.23	2.33	2.31	2.17	2.22	2.26	2.33	2.26	2.14	2	1.75	1.4	1.09
Liquefied Natural Gas	0.3	0.41	0.41	0.44	0.47	0.5	0.45	0.36	0.36	0.41	0.43	0.47	0.5	0.52
Total Supply	23.33	23.66	24.08	23.87	23.98	24.51	24.79	25.18	25.16	25.26	25.4	25.49	25.4	25.2
Consumption by Sector														
Residential	4.87	4.75	4.77	4.76	4.78	4.79	4.81	4.81	4.83	4.82	4.83	4.83	4.85	4.83
Commercial	3.13	3.11	3.1	3.22	3.24	3.28	3.33	3.38	3.41	3.43	3.46	3.48	3.49	3.5
Industrial 4/	6.65	6.14	6.55	6.95	7.19	7.6	7.83	8.05	8.09	8.11	8.16	8.19	8.24	8.21
Natural Gas-to-Liquids Heat and Power 5/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Natural Gas to Liquids Production 6/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electric Power 7/	6.67	6.89	7.44	7.01	6.8	6.87	6.87	6.98	6.89	6.95	7	7.02	6.84	6.69
Transportation 8/	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07
Pipeline Fuel	0.65	0.64	0.65	0.64	0.64	0.64	0.65	0.65	0.64	0.64	0.64	0.64	0.64	0.63
Lease and Plant Fuel 9/	1.22	1.16	1.29	1.27	1.24	1.22	1.2	1.2	1.2	1.2	1.2	1.2	1.21	1.2
Total	23.22	22.71	23.83	23.86	23.91	24.44	24.72	25.11	25.1	25.2	25.34	25.43	25.34	25.14
Discrepancy 10/	0.11	0.95	0.26	0.01	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06
Natural Gas Prices														
(2009 dollars per million Btu)														
Henry Hub Spot Price	8.94	3.95	4.43	4.48	4.5	4.56	4.57	4.66	4.74	4.76	4.81	4.87	5.05	5.24
Average Lower 48 Wellhead Price 11/	7.96	3.62	3.98	3.99	3.98	4.04	4.05	4.13	4.2	4.22	4.26	4.31	4.47	4.64
(2009 dollars per thousand cubic feet)														
Average Lower 48 Wellhead Price 11/	8.18	3.71	4.08	4.09	4.09	4.15	4.16	4.24	4.31	4.33	4.37	4.43	4.59	4.76

Delivered Prices

Residential	13.99	12.2	11.31	10.56	10.44	10.39	10.28	10.39	10.5	10.61	10.74	10.9	11.16	11.38
Commercial	12.32	9.94	9.15	9.3	9.03	8.8	8.52	8.6	8.68	8.74	8.84	8.96	9.19	9.37
Industrial 4/	9.32	5.39	4.93	4.99	4.99	5.03	5.04	5.1	5.16	5.19	5.24	5.32	5.5	5.67
Electric Power 7/	9.35	4.94	5.2	4.84	4.76	4.75	4.71	4.79	4.83	4.87	4.92	4.99	5.13	5.28
Transportation 12/	17.67	13.05	12.37	12.35	12.3	12.3	12.27	12.29	12.32	12.33	12.37	12.44	12.58	12.71
Average 13/	10.84	7.47	7.02	6.79	6.7	6.64	6.56	6.62	6.7	6.75	6.82	6.92	7.13	7.32

(nominal dollars per million Btu)

Henry Hub Spot Price

Average Lower 48 Wellhead Price 11/

(nominal dollars per thousand cubic feet)

Average Lower 48 Wellhead Price 11/

8.1	3.71	4.12	4.19	4.23	4.36	4.45	4.63	4.79	4.92	5.07	5.24	5.55	5.86
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Delivered Prices

Residential	13.86	12.2	11.41	10.8	10.79	10.92	11	11.34	11.69	12.05	12.46	12.9	13.48	14.01
Commercial	12.2	9.94	9.23	9.51	9.33	9.25	9.12	9.38	9.66	9.94	10.25	10.61	11.1	11.54
Industrial 4/	9.24	5.39	4.97	5.1	5.16	5.28	5.39	5.56	5.75	5.9	6.08	6.3	6.65	6.99
Electric Power 7/	9.26	4.94	5.24	4.94	4.93	5	5.04	5.23	5.38	5.53	5.71	5.91	6.2	6.5
Transportation 12/	17.5	13.05	12.48	12.62	12.72	12.93	13.13	13.42	13.71	14.02	14.36	14.73	15.2	15.65
Average 13/	10.74	7.47	7.08	6.94	6.93	6.98	7.02	7.22	7.46	7.67	7.91	8.19	8.61	9.01

1/ Marketed production (wet) minus extraction losses.

2/ Synthetic natural gas, propane air, coke oven gas, refinery gas, biomass gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural gas.

3/ Includes any natural gas regasified in the Bahamas and transported via pipeline to Florida, as well as gas from Canada and Mexico.

4/ Includes energy for combined heat and power plants, except those whose primary business is to sell electricity, or electricity and heat, to the public.

5/ Includes any natural gas used in the process of converting natural gas to liquid fuel that is not actually converted.

6/ Includes any natural gas converted into liquid fuel.

7/ Includes consumption of energy by electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

8/ Compressed natural gas used as vehicle fuel.

9/ Represents natural gas used in well, field, and lease operations, and in natural gas processing plant machinery.

10/ Balancing item. Natural gas lost as a result of converting flow data measured at varying temperatures and pressures to a standard temperature and pressure and the merger of different data reporting systems which vary in scope, format, definition, and respondent type. In addition, 2008 and 2009 values include net storage injections.

11/ Represents lower 48 onshore and offshore supplies.

12/ Compressed natural gas used as a vehicle fuel. Price includes estimated motor vehicle fuel taxes and estimated dispensing costs or charges.

13/ Weighted average prices. Weights used are the sectoral consumption values excluding lease, plant, and pipeline fuel.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2008 and 2009 are model results and may differ slightly from official EIA data reports.

Sources: 2008 supply values; and lease, plant, and pipeline fuel consumption: Energy

Information Administration (EIA), Natural Gas Annual 2008, DOE/EIA-0131(2008) (Washington, DC, March 2010).

2009 supply values; and lease, plant, and pipeline fuel consumption; and wellhead price: EIA,

Natural Gas Monthly, DOE/EIA-0130(2010/07) (Washington, DC, July 2010).

Other 2008 and 2009 consumption based on: EIA,

Annual Energy Review 2009, DOE/EIA-0384(2009) (Washington, DC, August 2010).

2008 wellhead price: Bureau of Energy Management, Regulation and Enforcement; and EIA, Natural Gas Annual

2008, DOE/EIA-0131(2008) (Washington, DC, March 2010).

2008 residential and commercial delivered prices: EIA, Natural Gas Annual

2008, DOE/EIA-0131(2008) (Washington, DC, March 2010).

2009 residential and commercial delivered prices: EIA, Natural Gas Monthly, DOE/EIA-0130

(2010/07) (Washington, DC, July 2010). 2008 and 2009 electric power prices: EIA,

Electric Power Monthly, DOE/EIA-0226, April 2009 and April 2010, Table 4.13.B. 2008 and 2009

industrial delivered prices are estimated based on: EIA, Manufacturing Energy Consumption Survey and industrial

and wellhead prices from the Natural Gas Annual 2008, DOE/EIA-0131(2008) (Washington, DC, March 2010)

and the Natural Gas Monthly, DOE/EIA-0130(2010/07) (Washington, DC, July 2010). 2008 transportation sector

delivered prices are based on: EIA, Natural Gas Annual 2008, DOE/EIA-0131(2008) (Washington, DC, March 2010)

and estimated state taxes, federal taxes, and dispensing costs or charges.

2009 transportation sector delivered prices are model results.

Projections: EIA, AEO2011 National Energy Modeling System.

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Growth Rate (2009-2035)
	23.7	23.85	23.86	23.98	24.07	24.29	24.57	24.82	25.1	25.36	25.55	25.75	26	26.32	0.90%
	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.00%
	1.38	1.23	1.15	1.08	0.98	0.91	0.81	0.77	0.78	0.72	0.64	0.52	0.37	0.18	-9.70%
	0.88	0.78	0.77	0.74	0.71	0.69	0.67	0.63	0.64	0.58	0.5	0.38	0.23	0.04	-14.00%
	0.49	0.45	0.39	0.34	0.27	0.22	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	-4.10%
	25.14	25.14	25.07	25.12	25.12	25.26	25.44	25.66	25.94	26.14	26.26	26.34	26.43	26.57	0.40%
	4.83	4.83	4.85	4.83	4.83	4.83	4.84	4.83	4.82	4.82	4.82	4.8	4.79	4.78	0.00%
	3.52	3.53	3.55	3.56	3.58	3.6	3.62	3.65	3.68	3.71	3.73	3.76	3.79	3.82	0.80%
	8.14	8.13	8.13	8.1	8.08	8.06	8.04	8.06	8.08	8.08	8.06	8.04	8.03	8.02	1.00%
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.50%
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.50%
	6.68	6.67	6.59	6.66	6.66	6.8	6.95	7.13	7.34	7.51	7.6	7.69	7.76	7.88	0.10%
	0.08	0.09	0.1	0.11	0.11	0.12	0.12	0.13	0.14	0.14	0.15	0.15	0.16	0.16	0.30%
	0.63	0.63	0.63	0.62	0.62	0.62	0.63	0.63	0.64	0.64	0.64	0.64	0.65	0.65	0.60%
	1.2	1.2	1.19	1.19	1.19	1.19	1.19	1.2	1.2	1.21	1.22	1.23	1.24	1.25	0.60%
	25.09	25.09	25.02	25.07	25.07	25.22	25.4	25.62	25.9	26.11	26.23	26.31	26.41	26.55	0.60%
	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.02	--
	5.39	5.58	5.8	5.97	6.1	6.24	6.31	6.35	6.4	6.49	6.62	6.74	6.87	7.07	2.30%
	4.77	4.94	5.13	5.29	5.4	5.52	5.59	5.62	5.66	5.75	5.86	5.96	6.09	6.26	2.10%
	4.9	5.07	5.27	5.43	5.54	5.67	5.73	5.77	5.81	5.9	6.01	6.12	6.24	6.42	2.10%

11.55	11.75	11.96	12.15	12.31	12.51	12.63	12.74	12.85	12.99	13.14	13.33	13.52	13.76	0.50%
9.51	9.68	9.88	10.03	10.16	10.32	10.43	10.49	10.57	10.67	10.79	10.93	11.08	11.28	0.50%
5.82	5.98	6.17	6.33	6.46	6.6	6.68	6.72	6.76	6.83	6.95	7.07	7.21	7.4	1.20%
5.41	5.57	5.74	5.91	6.02	6.16	6.24	6.3	6.36	6.45	6.55	6.66	6.79	6.97	1.30%
12.81	12.93	13.07	13.19	13.27	13.38	13.44	13.46	13.49	13.55	13.62	13.7	13.8	13.94	0.30%
7.47	7.65	7.85	8.01	8.15	8.29	8.38	8.43	8.48	8.56	8.68	8.8	8.95	9.14	0.80%
6.76	7.12	7.53	7.9	8.21	8.56	8.82	9.04	9.28	9.59	9.96	10.34	10.76	11.28	4.10%
5.99	6.3	6.67	6.99	7.27	7.58	7.81	8	8.21	8.49	8.82	9.15	9.52	9.99	4.00%
6.14	6.46	6.84	7.18	7.46	7.77	8.01	8.21	8.43	8.71	9.05	9.39	9.77	10.24	4.00%
14.49	14.99	15.54	16.08	16.58	17.15	17.65	18.14	18.63	19.18	19.78	20.46	21.15	21.95	2.30%
11.93	12.35	12.83	13.27	13.69	14.16	14.57	14.94	15.32	15.76	16.25	16.78	17.34	18	2.30%
7.29	7.63	8.02	8.38	8.69	9.05	9.33	9.57	9.8	10.09	10.46	10.84	11.28	11.82	3.10%
6.79	7.11	7.45	7.81	8.11	8.45	8.73	8.97	9.22	9.52	9.87	10.23	10.63	11.13	3.20%
16.06	16.5	16.98	17.44	17.87	18.35	18.78	19.17	19.56	20.01	20.5	21.03	21.59	22.25	2.10%
9.37	9.76	10.2	10.6	10.97	11.37	11.71	12	12.29	12.64	13.06	13.51	14	14.58	2.60%

**Natural Gas Supply, Disposition, and Prices, AEO2010 Reference case
(trillion cubic feet, unless otherwise noted)**

Supply, Disposition, and Prices	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Production															
Dry Gas Production 1/ Supplemental Natural Gas 2/	20.56 0.05	20.6 0.06	20.01 0.06	19.46 0.06	19.28 0.06	18.9 0.06	18.91 0.06	19.29 0.06	19.3 0.06	19.42 0.06	19.59 0.06	19.79 0.06	19.98 0.06	19.92 0.06	
Net Imports	2.95	2.76	2.82	2.78	2.62	2.36	2.32	2.38	2.48	2.57	2.58	2.59	2.57	2.58	
Pipeline 3/ Liquefied Natural Gas	2.65 0.3	2.34 0.42	2.21 0.61	2.08 0.7	1.81 0.82	1.48 0.87	1.34 0.97	1.29 1.09	1.25 1.23	1.19 1.38	1.14 1.45	1.11 1.48	1.07 1.5	1.07 1.51	
Total Supply	23.57	23.42	22.88	22.3	21.97	21.32	21.29	21.73	21.85	22.06	22.24	22.44	22.61	22.56	
Consumption by Sector															
Residential	4.87	4.77	4.81	4.66	4.66	4.67	4.69	4.71	4.74	4.75	4.77	4.79	4.83	4.83	
Commercial	3.12	3.07	3.2	3.18	3.19	3.18	3.21	3.23	3.25	3.27	3.29	3.32	3.33	3.35	
Industrial 4/	6.65	5.95	6.05	6.22	6.52	6.73	6.86	6.88	6.91	6.93	6.98	7.01	7.03	7.01	
Natural Gas-to-Liquids Heat and Power 5/ Natural Gas to Liquids Production 6/ Electric Power 7/ Transportation 8/ Pipeline Fuel Lease and Plant Fuel 9/ Total	0 0 6.66 0.04 0.63 1.28 23.25	0 0 6.86 0.04 0.61 1.29 22.59	0 0 6.55 0.04 0.62 1.25 22.51	0 0 6.11 0.04 0.6 1.18 21.99	0 0 5.68 0.05 0.6 1.13 21.82	0 0 5.04 0.05 0.58 1.07 21.32	0 0 4.82 0.05 0.59 1.07 21.29	0 0 5.18 0.05 0.6 1.08 21.74	0 0 5.23 0.06 0.6 1.07 21.86	0 0 5.38 0.06 0.6 1.07 21.86	0 0 5.46 0.07 0.61 1.08 22.07	0 0 5.56 0.07 0.61 1.09 22.25	0 0 5.66 0.08 0.62 1.09 22.45	0 0 5.66 0.08 0.62 1.09 22.63	0 0 5.6 0.09 0.61 1.09 22.58
Discrepancy 10/	0.32	0.83	0.37	0.31	0.15	0	0	-0.01	-0.01	-0.01	-0.01	-0.02	-0.02	-0.02	
Natural Gas Prices															
(2009 dollars per million Btu)															
Henry Hub Spot Price Average Lower 48 Wellhead Price 11/	8.99 7.97	3.54 3.29	4.57 4	5.77 5.1	6.27 5.54	6.22 5.5	6.18 5.46	6.37 5.63	6.47 5.72	6.48 5.73	6.53 5.77	6.61 5.84	6.74 5.96	6.84 6.05	
(2009 dollars per thousand cubic feet)															
Average Lower 48 Wellhead Price 11/	8.19	3.38	4.11	5.24	5.69	5.65	5.61	5.78	5.88	5.89	5.93	6	6.12	6.22	

Delivered Prices

Residential	14.08	11.9	11.38	12.3	12.4	11.99	11.92	12.07	12.17	12.21	12.28	12.36	12.49	12.61
Commercial	12.48	9.45	9.06	10.16	10.52	10.36	10.29	10.44	10.54	10.56	10.62	10.69	10.82	10.93
Industrial 4/	9.52	4.39	5.09	6.24	6.68	6.62	6.56	6.73	6.81	6.8	6.84	6.89	7	7.09
Electric Power 7/	9.48	4.31	5.05	6.07	6.43	6.19	6.15	6.34	6.43	6.44	6.48	6.55	6.69	6.79
Transportation 12/	16.67	11.87	12.53	13.67	14.09	13.96	13.85	13.97	14.01	13.98	13.97	13.98	14.04	14.07
Average 13/	10.99	6.86	7.17	8.21	8.56	8.4	8.37	8.5	8.58	8.58	8.63	8.69	8.81	8.93

(nominal dollars per million Btu)

Henry Hub Spot Price	8.86	3.54	4.64	5.93	6.53	6.6	6.67	6.99	7.23	7.38	7.57	7.8	8.11	8.41
Average Lower 48 Wellhead Price 11/	7.85	3.29	4.06	5.24	5.77	5.83	5.89	6.17	6.39	6.52	6.69	6.89	7.17	7.43

(nominal dollars per thousand cubic feet)

Average Lower 48 Wellhead Price 11/	8.07	3.38	4.17	5.39	5.94	6	6.06	6.35	6.57	6.7	6.88	7.08	7.37	7.64
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Delivered Prices

Residential	13.87	11.9	11.54	12.65	12.93	12.72	12.87	13.25	13.6	13.9	14.24	14.59	15.03	15.5
Commercial	12.29	9.45	9.19	10.44	10.96	10.99	11.11	11.46	11.77	12.01	12.31	12.62	13.02	13.43
Industrial 4/	9.38	4.39	5.17	6.41	6.96	7.02	7.09	7.39	7.6	7.74	7.93	8.14	8.43	8.71
Electric Power 7/	9.34	4.31	5.13	6.24	6.71	6.57	6.64	6.96	7.18	7.32	7.52	7.74	8.06	8.35
Transportation 12/	16.42	11.87	12.72	14.06	14.69	14.81	14.95	15.33	15.65	15.9	16.19	16.5	16.9	17.29
Average 13/	10.83	6.86	7.28	8.44	8.92	8.92	9.03	9.33	9.59	9.77	10	10.26	10.61	10.97

1/ Marketed production (wet) minus extraction losses.

2/ Synthetic natural gas, propane air, coke oven gas, refinery gas, biomass gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural gas.

3/ Includes any natural gas regasified in the Bahamas and transported via pipeline to Florida, as well as gas from Canada and Mexico.

4/ Includes energy for combined heat and power plants, except those whose primary business is to sell electricity, or electricity and heat, to the public.

5/ Includes any natural gas used in the process of converting natural gas to liquid fuel that is not actually converted.

6/ Includes any natural gas converted into liquid fuel.

7/ Includes consumption of energy by electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

8/ Compressed natural gas used as vehicle fuel.

9/ Represents natural gas used in well, field, and lease operations, and in natural gas processing plant machinery.

10/ Balancing item. Natural gas lost as a result of converting flow data measured at varying temperatures and pressures to a standard temperature and pressure and the merger of different data reporting systems which vary in scope, format, definition, and respondent type. In addition, 2008 and 2009 values include net storage injections.

11/ Represents lower 48 onshore and offshore supplies.

12/ Compressed natural gas used as a vehicle fuel. Price includes estimated motor vehicle fuel taxes and estimated dispensing costs or charges.

13/ Weighted average prices. Weights used are the sectoral consumption values excluding lease, plant, and pipeline fuel. -- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2008 and 2009 are model results and may differ slightly from official EIA data reports.

Sources: 2008 supply values; and lease, plant, and pipeline fuel consumption: Energy Information Administration (EIA), Natural Gas Annual 2008, DOE/EIA-0131(2008) (Washington, DC, March 2010). 2009 supply values; and lease, plant, and pipeline fuel consumption; and wellhead price: EIA, Natural Gas Monthly, DOE/EIA-0130(2010/07) (Washington, DC, July 2010).

Other 2008 and 2009 consumption based on: EIA,

Annual Energy Review 2009, DOE/EIA-0384(2009) (Washington, DC, August 2010).

2008 wellhead price: Bureau of Energy Management, Regulation and Enforcement; and EIA, Natural Gas Annual 2008, DOE/EIA-0131(2008) (Washington, DC, March 2010).

2008 residential and commercial delivered prices: EIA, Natural Gas Annual

2008, DOE/EIA-0131(2008) (Washington, DC, March 2010).

2009 residential and commercial delivered prices: EIA, Natural Gas Monthly, DOE/EIA-0130

(2010/07) (Washington, DC, July 2010). 2008 and 2009 electric power prices: EIA,

Electric Power Monthly, DOE/EIA-0226, April 2009 and April 2010, Table 4.13.B. 2008 and 2009

industrial delivered prices are estimated based on: EIA, Manufacturing Energy Consumption Survey and industrial

and wellhead prices from the Natural Gas Annual 2008, DOE/EIA-0131(2008) (Washington, DC, March 2010)

and the Natural Gas Monthly, DOE/EIA-0130(2010/07) (Washington, DC, July 2010). 2008 transportation sector

delivered prices are based on: EIA, Natural Gas Annual 2008, DOE/EIA-0131(2008) (Washington, DC, March 2010)

and estimated state taxes, federal taxes, and dispensing costs or charges.

2009 transportation sector delivered prices are model results.

Projections: EIA, AEO2011 National Energy Modeling System.

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Growth Rate (2009-2035)
	20.1	20.53	21.17	21.31	21.65	21.85	22.09	22.26	22.38	22.53	22.71	22.96	23.18	23.27	0.50%
	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.40%
	2.53	2.34	2.22	2.17	2.1	2.06	2	1.91	1.84	1.79	1.73	1.62	1.53	1.46	-2.40%
	1.05	0.93	0.88	0.89	0.89	0.92	0.94	0.94	0.94	0.95	0.92	0.83	0.74	0.64	-4.90%
	1.48	1.41	1.34	1.28	1.21	1.14	1.07	0.98	0.89	0.84	0.81	0.79	0.8	0.83	2.70%
	22.69	22.94	23.46	23.54	23.82	23.98	24.16	24.24	24.28	24.38	24.5	24.64	24.78	24.8	0.20%
	4.84	4.85	4.89	4.89	4.91	4.91	4.92	4.9	4.89	4.89	4.9	4.88	4.88	4.87	0.10%
	3.37	3.39	3.42	3.45	3.48	3.5	3.52	3.54	3.55	3.57	3.59	3.62	3.65	3.69	0.70%
	6.98	6.95	6.96	6.94	6.88	6.86	6.81	6.78	6.74	6.74	6.72	6.72	6.72	6.72	0.50%
	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	--
	5.71	5.89	6.23	6.28	6.57	6.7	6.88	6.99	7.04	7.13	7.23	7.34	7.43	7.42	0.30%
	0.09	0.1	0.11	0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.18	0.19	6.10%
	0.62	0.65	0.69	0.7	0.7	0.71	0.71	0.71	0.72	0.72	0.72	0.72	0.72	0.72	0.60%
	1.1	1.14	1.19	1.19	1.21	1.22	1.22	1.23	1.23	1.23	1.24	1.24	1.26	1.25	-0.10%
	22.71	22.96	23.49	23.57	23.86	24.02	24.2	24.29	24.33	24.43	24.56	24.7	24.84	24.86	0.40%
	-0.02	-0.03	-0.03	-0.03	-0.04	-0.04	-0.04	-0.05	-0.05	-0.05	-0.06	-0.06	-0.06	-0.07	--
	7.03	7.06	7.02	7.1	7.26	7.4	7.64	7.89	8.17	8.52	8.63	8.66	8.88	9.01	3.70%
	6.22	6.24	6.2	6.27	6.41	6.54	6.75	6.97	7.22	7.52	7.62	7.65	7.85	7.96	3.50%
	6.39	6.42	6.38	6.45	6.59	6.72	6.94	7.17	7.42	7.73	7.83	7.86	8.06	8.19	3.50%

12.81	12.84	12.74	12.84	13.02	13.22	13.48	13.75	14.04	14.39	14.55	14.66	14.88	15.04	0.90%
11.12	11.16	11.1	11.18	11.35	11.53	11.79	12.03	12.31	12.65	12.8	12.87	13.08	13.22	1.30%
7.28	7.33	7.28	7.33	7.47	7.61	7.85	8.07	8.34	8.66	8.77	8.79	9	9.12	2.90%
6.98	7.03	6.98	7.04	7.2	7.35	7.58	7.83	8.06	8.37	8.48	8.52	8.71	8.82	2.80%
14.18	14.15	14	14.03	14.14	14.26	14.44	14.62	14.83	15.1	15.19	15.19	15.35	15.44	1.00%
9.11	9.15	9.06	9.13	9.28	9.43	9.67	9.91	10.17	10.49	10.62	10.66	10.86	11	1.80%
8.84	9.06	9.2	9.49	9.91	10.31	10.88	11.48	12.15	12.94	13.4	13.74	14.4	14.92	5.70%
7.81	8.01	8.13	8.38	8.75	9.11	9.61	10.14	10.73	11.43	11.84	12.14	12.72	13.18	5.50%
8.03	8.23	8.35	8.62	9	9.37	9.88	10.43	11.03	11.75	12.17	12.48	13.07	13.55	5.50%
16.09	16.47	16.69	17.16	17.76	18.42	19.19	20	20.88	21.87	22.61	23.26	24.12	24.9	2.90%
13.97	14.33	14.54	14.95	15.49	16.07	16.78	17.5	18.3	19.23	19.9	20.43	21.21	21.89	3.30%
9.14	9.4	9.53	9.8	10.19	10.61	11.17	11.74	12.39	13.16	13.63	13.96	14.58	15.1	4.90%
8.77	9.02	9.15	9.41	9.83	10.24	10.8	11.39	11.98	12.72	13.18	13.52	14.12	14.61	4.80%
17.82	18.16	18.35	18.76	19.3	19.87	20.56	21.27	22.04	22.95	23.6	24.12	24.89	25.56	3.00%
11.45	11.74	11.87	12.21	12.66	13.15	13.76	14.41	15.11	15.94	16.5	16.92	17.6	18.2	3.80%

Northwest Power and Conservation Council
Aug-11
 Update to Council's Forecast of Fuel Prices (pg. 6-7)

Forecasts in \$2010		Low	Medium	High
2010		\$4.25	\$4.25	\$4.25
2011		\$4.24	\$4.34	\$4.73
2012		\$4.24	\$4.43	\$5.20
2013		\$4.13	\$4.51	\$5.73
2014		\$4.14	\$4.60	\$6.35
2015		\$4.15	\$4.70	\$7.28
2016		\$4.16	\$4.79	\$7.32
2017		\$4.12	\$4.91	\$7.37
2018		\$4.08	\$5.03	\$7.55
2019		\$4.06	\$5.16	\$7.61
2020		\$4.11	\$5.29	\$7.81
2021		\$4.11	\$5.42	\$7.88
2022		\$4.11	\$5.56	\$7.98
2023		\$4.19	\$5.69	\$8.06
2024		\$4.20	\$5.84	\$8.25
2025		\$4.16	\$5.98	\$8.25
2026		\$4.19	\$6.13	\$8.60
2027		\$4.24	\$6.29	\$8.78
2028		\$4.27	\$6.44	\$9.12
2029		\$4.26	\$6.60	\$9.37
2030		\$4.33	\$6.77	\$9.70

Forecast in Nominal\$	Low	Med	High	inflation factor
2010	4.2	4.2	4.2	1.01
2011	4.3	4.4	4.4	0.99
2012	4.4	4.6	4.6	0.96
2013	4.4	4.8	4.8	0.94
2014	4.5	5	5	0.92
2015	4.5	5.1	5.1	0.92
2016	4.6	5.3	5.3	0.90
2017	4.7	5.6	5.6	0.88
2018	4.7	5.8	5.8	0.87
2019	4.8	6.1	6.1	0.85
2020	4.9	6.3	6.3	0.84
2021	5	6.6	6.6	0.82
2022	5.1	6.9	6.9	0.81
2023	5.3	7.2	7.2	0.79
2024	5.4	7.5	7.5	0.78
2025	5.5	7.9	7.9	0.76
2026	5.6	8.2	8.2	0.75
2027	5.8	8.6	8.6	0.73
2028	5.9	8.9	8.9	0.72
2029	6	9.3	9.3	0.71
2030	6.2	9.7	9.7	0.70

Henry Hub Natural Gas Futures

Daily Settlements for Henry Hub Natural Gas Futures (FINAL) Trade Date: 09/12/2011

Month	Open	High	Low	Last	Change	Settle	Estimated Volume	Prior Day Open Intert
11-Oct	3.9	3.925	3.826	3.905	-0.03	3.885	103,178	150,654
11-Nov	3.979	4.008	3.916	3.984	-0.032	3.966	53,878	199,710
11-Dec	4.151	4.202	4.12	4.191	-0.024	4.172	29,942	85,770
12-Jan	4.264	4.319	4.236	4.308	-0.016	4.292	22,405	162,319
12-Feb	4.3	4.331	4.25	4.325	-0.014	4.31	6,616	37,562
12-Mar	4.27	4.304	4.222	4.298	-0.013	4.285	12,074	43,759
12-Apr	4.239	4.285B	4.2	4.275	-0.014	4.262	9,962	73,906
12-May	4.275	4.312B	4.23	4.304	-0.015	4.29	766	17,992
12-Jun	4.313	4.352B	4.279	4.343	-0.015	4.332	351	14,117
JULY 12	4.378	4.397B	4.349	4.391	-0.015	4.378	271	11,036
12-Aug	4.385	4.424B	4.384	4.416	-0.015	4.406	194	10,256
12-Sep	4.41	4.429B	4.385	4.423	-0.015	4.411	713	9,191
12-Oct	4.444	4.462	4.41	4.455	-0.014	4.442	2,421	45,028
12-Nov	4.57	4.624B	4.57	4.6	-0.011	4.607	250	8,792
12-Dec	4.84	4.883	4.84	4.85	-0.009	4.867	625	12,437
13-Jan	4.985	5.015	4.975	5.015	-0.006	5.002	1,067	21,376
13-Feb	4.95	4.990B	4.943	4.989	-0.006	4.978	99	2,794
13-Mar	5	5	4.923	4.929	-0.004	4.912	1,404	11,452
13-Apr	4.721	4.785	4.721	4.76	-0.009	4.765	947	12,068
13-May	4.8	4.8	4.779	4.79	-0.009	4.784	23	1,961
13-Jun	4.83	4.83	4.808A	4.828	-0.009	4.814	2	1,608
JULY 13	4.861	4.861	4.844A	4.848	-0.009	4.853	5	1,379
13-Aug	4.98	4.98	4.868A	4.869B	-0.009	4.873	1	1,087
13-Sep	4.838	4.870B	4.838	4.870B	-0.009	4.879	3	943
13-Oct	4.868	4.94	4.868	4.94	-0.009	4.905	14	2,824
13-Nov	5.07	5.07	5.041A	5.06	-0.009	5.038	9	980
13-Dec	5.3	5.3	5.265	5.3	-0.006	5.266	17	6,259
14-Jan	5.385	5.385	5.385	5.385	-0.006	5.386	9	3,635
14-Feb	5.355	5.4	5.355	5.4	-0.006	5.354	14	410
14-Mar	5.27	5.315	5.27	5.315	-0.007	5.269	12	965
14-Apr	5.06	5.115	5.06	5.115	-0.012	5.054	9	3,255
14-May	5.07	5.13	5.067A	5.13	-0.013	5.065	8	457
14-Jun	5.1	5.1	5.095A	5.1	-0.013	5.093	2	290
JULY 14	5.135	5.135	5.133A	5.135	-0.013	5.128	1	522
14-Aug	5.15	5.15	5.15	5.15	-0.013	5.15	2	319
14-Sep	5.165	5.165	5.165	5.165	-0.013	5.157	1	424
14-Oct	5.19	5.19	5.19	5.19	-0.013	5.185	3	828

14-Nov	5.315	5.315	5.315	5.315	5.315	-0.013	5.31	5	309
14-Dec	-	-	5.535A	5.535A	5.315	-0.013	5.53	-	508
15-Jan	-	-	-	-	-	-0.013	5.645	-	596
15-Feb	-	-	-	-	-	-0.013	5.612	-	186
15-Mar	-	-	-	-	-	-0.013	5.527	-	408
15-Apr	-	-	-	-	-	-0.02	5.255	-	1,898
15-May	-	-	-	-	-	-0.02	5.267	-	503
15-Jun	-	-	-	-	-	-0.02	5.295	-	1,200
JLY 15	-	-	-	-	-	-0.02	5.33	-	191
15-Aug	-	-	-	-	-	-0.02	5.352	-	355
15-Sep	-	-	-	-	-	-0.02	5.359	-	105
15-Oct	-	-	-	-	-	-0.02	5.387	-	208
15-Nov	-	-	-	-	-	-0.02	5.517	-	100
15-Dec	-	-	-	-	-	-0.02	5.739	-	2,587
16-Jan	-	-	-	-	-	-0.02	5.854	-	42
16-Feb	-	-	-	-	-	-0.02	5.821	-	33
16-Mar	-	-	-	-	-	-0.02	5.736	-	138
16-Apr	-	-	-	-	-	-0.027	5.449	-	176
16-May	-	-	-	-	-	-0.027	5.459	-	36
16-Jun	-	-	-	-	-	-0.027	5.489	-	168
JLY 16	-	-	-	-	-	-0.027	5.525	-	35
16-Aug	-	-	-	-	-	-0.027	5.551	-	22
16-Sep	-	-	-	-	-	-0.027	5.559	-	15
16-Oct	-	-	-	-	-	-0.027	5.594	-	31
16-Nov	-	-	-	-	-	-0.027	5.729	-	8
16-Dec	-	-	-	-	-	-0.027	5.954	-	336
17-Jan	-	-	-	-	-	-0.027	6.076	-	21
17-Feb	-	-	-	-	-	-0.027	6.044	-	4
17-Mar	-	-	-	-	-	-0.027	5.962	-	9
17-Apr	-	-	-	-	-	-0.027	5.662	-	10
17-May	-	-	-	-	-	-0.027	5.667	-	9
17-Jun	-	-	-	-	-	-0.027	5.695	-	23
JLY 17	-	-	-	-	-	-0.027	5.73	-	29
17-Aug	-	-	-	-	-	-0.027	5.766	-	22
17-Sep	-	-	-	-	-	-0.027	5.776	-	31
17-Oct	-	-	-	-	-	-0.027	5.816	-	14
17-Nov	-	-	-	-	-	-0.027	5.951	-	14
17-Dec	-	-	-	-	-	-0.027	6.181	-	25
18-Jan	-	-	-	-	-	-0.027	6.306	-	50
18-Feb	-	-	-	-	-	-0.027	6.276	-	30

18-Mar -	-	-	-	-0.027	6.196 -	30
18-Apr -	-	-	-	-0.027	5.886 -	50
18-May -	-	-	-	-0.027	5.891 -	65
18-Jun -	-	-	-	-0.027	5.917 -	45
JLY 18 -	-	-	-	-0.027	5.952 -	30
18-Aug -	-	-	-	-0.027	5.988 -	30
18-Sep -	-	-	-	-0.027	5.998 -	30
18-Oct -	-	-	-	-0.027	6.048 -	47
18-Nov -	-	-	-	-0.027	6.183 -	30
18-Dec -	-	-	-	-0.027	6.413 -	34
19-Jan -	-	-	-	-0.027	6.538 -	-
19-Feb -	-	-	-	-0.027	6.508 -	-
19-Mar -	-	-	-	-0.027	6.428 -	-
19-Apr -	-	-	-	-0.027	6.118 -	20
19-May -	-	-	-	-0.027	6.123 -	20
19-Jun -	-	-	-	-0.027	6.148 -	17
JLY 19 -	-	-	-	-0.027	6.183 -	10
19-Aug -	-	-	-	-0.027	6.221 -	11
19-Sep -	-	-	-	-0.027	6.231 -	10
19-Oct -	6.38	6.38	6.38	-0.027	6.281	8
19-Nov -	-	-	-	-0.027	6.416 -	-
19-Dec -	-	-	-	-0.027	6.646 -	-
20-Jan -	-	-	-	-0.027	6.771 -	50
20-Feb -	-	-	-	-0.027	6.741 -	-
20-Mar -	-	-	-	-0.027	6.661 -	-
20-Apr -	-	-	-	-0.027	6.351 -	-
20-May -	-	-	-	-0.027	6.348 -	-
20-Jun -	-	-	-	-0.027	6.373 -	-
JLY 20 -	-	-	-	-0.027	6.413 -	-
20-Aug -	-	-	-	-0.027	6.453 -	-
20-Sep -	-	-	-	-0.027	6.468 -	-
20-Oct -	-	-	-	-0.027	6.531 -	-
20-Nov -	-	-	-	-0.027	6.666 -	-
20-Dec -	-	-	-	-0.027	6.896 -	246
21-Jan -	-	-	-	-0.027	7.021 -	30
21-Feb -	-	-	-	-0.027	6.991 -	30
21-Mar -	-	-	-	-0.027	6.911 -	30
21-Apr -	-	-	-	-0.027	6.601 -	30
21-May -	-	-	-	-0.027	6.599 -	30
21-Jun -	-	-	-	-0.027	6.619 -	30

http://www.cmegroup.com/trading/energy/natural-gas/natural-gas_quotes_globex.html

Appendix A, Exhibit 16 - Natural Gas Prices, Base Case - from Bob Fagan - AEO numbers are close to what we have, could use Hi Gas HH Price AEO 2011 Reference Case (early release)

Year	Henry Hub Spot Price (2010\$/MMBtu)	Shift in Price from							
		AEO2011 AEO2011 AEO 2010	AEO2010 AEO2011	AEO2010	Composite AEO2010	AEO2010	Composite AEO2010		
2011	\$4.52	4.48	4.52	5.68	5.79	100%	0%	4.52	6.27
2012	\$4.61	4.57	4.61	6.17	6.29	93%	7%	4.73	7.15
2013	\$4.74	4.7	4.74	6.13	6.24	86%	14%	4.96	7.27
2014	\$4.81	4.77	4.81	6.09	6.2	79%	21%	5.11	7.41
2015	\$4.85	4.81	4.85	6.27	6.39	71%	29%	5.29	7.59
2016	\$4.88	4.83	4.88	6.38	6.49	64%	36%	5.45	7.67
2017	\$4.92	4.88	4.92	6.38	6.5	57%	43%	5.6	7.64
2018	\$5.00	4.96	5	6.43	6.55	50%	50%	5.78	7.68
2019	\$5.08	5.04	5.08	6.51	6.62	43%	57%	5.96	7.85
2020	\$5.22	5.18	5.22	6.64	6.76	36%	64%	6.21	7.8
2021	\$5.38	5.33	5.38	6.74	6.86	29%	71%	6.44	7.61
2022	\$5.53	5.48	5.53	6.93	7.06	21%	79%	6.73	7.84
2023	\$5.72	5.67	5.72	6.96	7.08	14%	86%	6.89	8.15
2024	\$5.90	5.85	5.9	6.91	7.04	7%	93%	6.96	8.43
2025	\$6.07	6.01	6.07	6.99	7.12	0%	100%	7.12	8.71
2026	\$6.21	6.15	6.21	7.15	7.28	0%	100%	7.28	8.92
2027	\$6.33	6.28	6.33	7.29	7.42	0%	100%	7.42	9.14
2028	\$6.42	6.36	6.42	7.53	7.67	0%	100%	7.67	9.5
2029	\$6.48	6.43	6.48	7.77	7.92	0%	100%	7.92	9.78
2030	\$6.56	6.5	6.56	8.05	8.2	0%	100%	8.2	10
2031	\$6.68	6.62	6.68	8.39	8.54	0%	100%	8.54	9.93
2032	\$6.82	6.76	6.82	8.5	8.65	0%	100%	8.65	10.18
2033	\$6.94	6.88	6.94	8.53	8.69	0%	100%	8.69	10.52
2034	\$7.07	7.01	7.07	8.75	8.91	0%	100%	8.91	10.78
2035	\$7.25	7.19	7.25	8.88	9.04	0%	100%	9.04	10.88

Between 2035 and 2050, CRA proposes to increase gas EIA Case ID EIA Case ID
 same rate of increase for the 2030-2035 period. d120810c d111809a

The input assumptions contained herein reflect a joint assumptions development process between EIPC, EIPC stakeholders and CRA for purposes o
 As such, these inputs do not necessarily reflect the opinions or views of CRA or any individual EIPC stakeholder.

From AEO2011 Referr 2008 2009 2010
 GDP Cha 1.086 1.096 1.106

2e (column o)

Ratio of 20 Hi Gas Henry Hub Price (2010\$/mmBtu)

1.1034	\$4.99
1.1584	\$5.47
1.1862	\$5.88
1.2175	\$6.22
1.2104	\$6.40
1.2028	\$6.56
1.1966	\$6.70
1.1937	\$6.90
1.2065	\$7.19
1.1747	\$7.30
1.1291	\$7.27
1.1315	\$7.61
1.1715	\$8.07
1.2192	\$8.48
1.2458	\$8.87
1.2472	\$9.08
1.2534	\$9.31
1.2616	\$9.67
1.258	\$9.96
1.2423	\$10.18
1.1837	\$10.11
1.1981	\$10.37
1.2333	\$10.71
1.2322	\$10.98
1.2252	\$11.08

if EIPC capacity expansion modeling.

Navigator- Appendix D: Henry Hub Price Forecast Comparison Table (2009\$)
 Market Analysis for Sabine Pass LNG Export Project
http://www.navigant.com/~media/Site/Insights/Energy/Cheniere_LNG_Export_Report_Energy.ashx

only using GHG as-is and GHG Plus cases since the others assume Sabine Pass is included.

	GHG As-is	GHG As-is	GHG As-is	GHG Plus	GHG Plus	GHG Plus, high export
2011	\$5.03	\$5.03	\$5.03	\$5.03	\$5.03	\$5.03
2012	\$5.12	\$5.12	\$5.12	\$5.23	\$5.23	\$5.23
2013	\$3.50	\$3.50	\$3.50	\$4.62	\$4.62	\$4.62
2014	\$3.10	\$3.12	\$3.14	\$4.49	\$4.55	\$4.55
2015	\$3.29	\$3.49	\$3.64	\$4.50	\$5.02	\$5.02
2016	\$3.33	\$3.54	\$3.69	\$4.51	\$5.04	\$5.04
2017	\$3.45	\$3.65	\$3.80	\$4.58	\$5.10	\$5.10
2018	\$3.50	\$3.70	\$3.85	\$4.65	\$5.14	\$5.14
2019	\$3.62	\$3.79	\$3.95	\$4.79	\$5.26	\$5.26
2020	\$3.85	\$3.98	\$4.10	\$4.99	\$5.44	\$5.44
2021	\$3.91	\$4.04	\$4.17	\$5.27	\$5.72	\$5.72
2022	\$4.05	\$4.19	\$4.30	\$5.58	\$6.05	\$6.05
2023	\$4.23	\$4.35	\$4.47	\$5.90	\$6.39	\$6.39
2024	\$4.47	\$4.60	\$4.72	\$6.27	\$6.77	\$6.77
2025	\$4.60	\$4.72	\$4.87	\$6.59	\$7.09	\$7.09
2026	\$4.76	\$4.89	\$5.06	\$6.90	\$7.42	\$7.42
2027	\$4.93	\$5.08	\$5.28	\$7.24	\$7.81	\$7.81
2028	\$5.09	\$5.28	\$5.49	\$7.56	\$8.16	\$8.16
2029	\$5.33	\$5.52	\$5.73	\$8.02	\$8.69	\$8.69
2030	\$5.55	\$5.74	\$5.94	\$8.50	\$9.24	\$9.24
2031	\$5.81	\$5.99	\$6.21	\$9.02	\$9.83	\$9.83
2032	\$6.04	\$6.26	\$6.49	\$9.54	\$10.39	\$10.39
2033	\$6.38	\$6.60	\$6.83	\$10.18	\$11.01	\$11.01
2034	\$6.65	\$6.88	\$7.12	\$10.86	\$11.67	\$11.67
2035	\$6.97	\$7.20	\$7.46	\$11.43	\$12.33	\$12.33

Graphical representation from EIPC Fuel and Emission Prices Subteam (page 4)
http://www.eipconline.com/uploads/Fuel_and_Emissions_Subteam_January_12_Report_updated_Jan_27.pdf
 EIPC Prop Source 2011

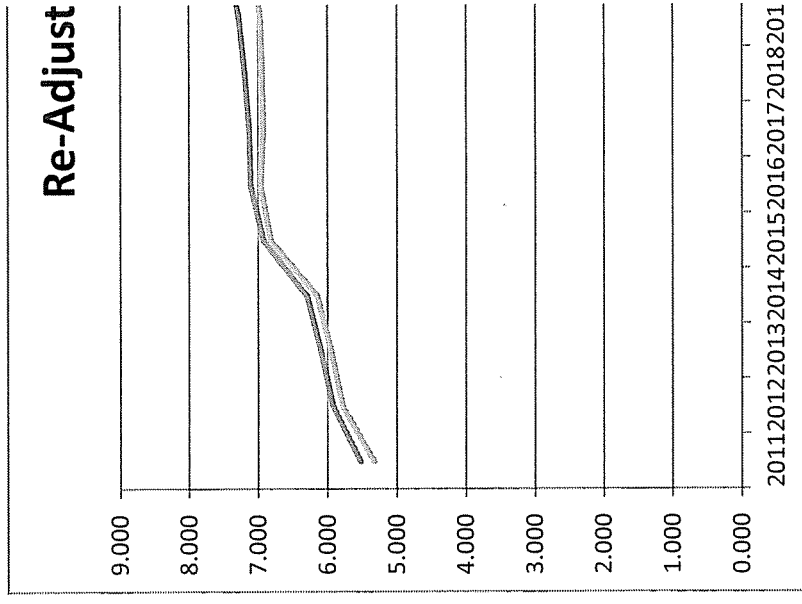
	RGGI		EPA	
Year	2011	2012	2011	2012
2011	4.44	4.87		
2012	5.27	5.33	2012	4.20
2013	5.75	5.38	2013	4.53
2014	6.19	5.50	2014	4.77
2015	6.70	5.62	2015	5.01
2016	6.67	5.75	2016	4.84
2017	6.27	5.87	2017	4.70
2018	6.38	5.95	2018	4.61
2019	6.47	5.98	2019	4.56
2020	6.58	6.13	2020	4.39
2021	6.58	6.35	2021	4.59
2022	6.78	6.49	2022	4.74
2023	7.04	6.55	2023	4.85
2024	7.29	6.75	2024	4.91
2025	7.17	6.94	2025	5.10
2026	6.81	7.23	2026	5.22
2027	6.33	7.49	2027	5.41
2028	6.40	7.72	2028	5.59
2029	6.49	7.92	2029	5.72
2030	6.78	8.09	2030	5.82

Strategist Model Input Data (2010\$) in \$/MCF - Highest Monthly Price per Year

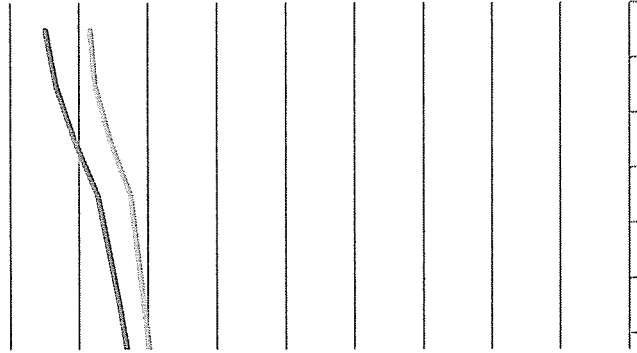
Strategist	Strategist				
		KU/LGE NG Price (High) (\$/MCF) - COMPANY ORIGINAL	KU/LGE NG Delivered Price (High) (\$/MMBtu)	Seasonal Adjustment Factor (from Avg to High Price)	KU/LGE NG Delivered Price (Annual Average) (\$/MMBtu)
2010				0.898	
2011				0.883	
2012				0.907	
2013				0.912	
2014				0.913	
2015				0.915	
2016				0.903	
2017				0.904	
2018				0.905	
2019				0.905	
2020				0.906	
2021				0.907	
2022				0.908	
2023				0.908	
2024				0.909	
2025				0.910	
2026				0.910	
2027				0.910	
2028				0.910	
2029				0.910	
2030				0.910	
2031				0.910	
2032				0.910	
2033				0.910	
2034				0.910	
2035				0.910	
2036				0.910	
2037				0.910	

2038
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2059

0.910
0.910
0.910
0.910



Indexed Natural Gas Price



Original Gas Price Exported to Strategist Model (\$/MMBtu + Adder) - INCORRECT

AESC 2011 HH Price + Delivery Charge + Seasonal Adjustment (2010\$/MCF) - REVISED

9202020212022202320242025

2038	8.240	7.953	8.348
2039	8.370	8.079	8.474
2040	8.520	8.224	8.619
2041	8.660	8.359	8.754

Price to be used in model

AESC 2011 HH Price + Delivery Charge + Seasonal Adjustment (2010\$/MMBtu)	AESC 2011 HH Price + Delivery Charge + Seasonal Adjustment (2010\$/MCF) - REVISED	Original Gas Price Exported to Strategist Model (\$/MMBtu + Adder) - INCORRECT	Error, relative to corrected price
5.182	5.322	5.517	3.7%
5.620	5.772	5.916	2.5%
5.790	5.946	6.093	2.5%
5.982	6.143	6.295	2.5%
6.633	6.812	6.918	1.6%
6.777	6.960	7.109	2.1%
6.740	6.922	7.129	3.0%
6.752	6.934	7.193	3.7%
6.780	6.963	7.274	4.5%
6.868	7.054	7.411	5.1%
6.968	7.156	7.566	5.7%
7.062	7.253	7.726	6.5%
7.348	7.547	8.062	6.8%
7.561	7.765	8.334	7.3%
7.629	7.835	8.487	8.3%
7.746	7.955	8.593	8.0%
7.905	8.119	8.738	7.6%
8.075	8.293	8.892	7.2%
8.298	8.522	9.095	6.7%
8.213	8.435	9.018	6.9%
8.223	8.445	9.027	6.9%
8.383	8.609	9.172	6.5%
8.531	8.762	9.307	6.2%
8.563	8.794	9.336	6.2%
8.743	8.980	9.500	5.8%
8.881	9.121	9.626	5.5%
9.030	9.274	9.761	5.3%

9.179
9.316
9.476
9.624

2038
2039
2040
2041

5.0%
4.7%
4.5%
4.2%

9.426
9.568
9.731
9.884

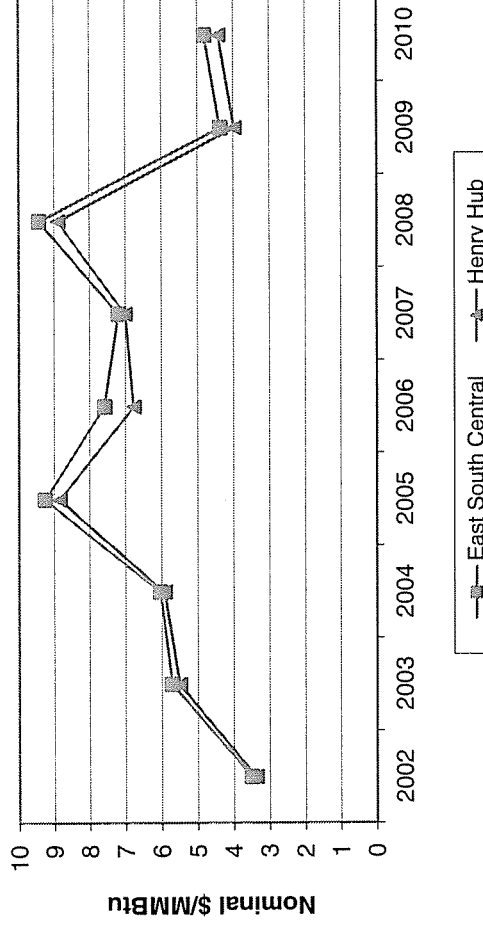
9.896
10.021
10.166
10.301

Seasonal Gas Profile Adjustment - Strategist

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
January	1	0.917993	0.987013	0.995007	0.993115	0.991225	0.965704	0.965588	0.965479	0.96538	0.96528	0.965187	0.965081	0.964985	0.964909	0.964811
February		0.995747	0.913522	0.978893	0.987159	0.986229	0.985251	0.958835	0.958564	0.958447	0.958334	0.958217	0.958096	0.957983	0.95788	0.957769
March		0.97451	0.897797	0.954103	0.960056	0.959367	0.936117	0.935907	0.935701	0.935513	0.935326	0.935149	0.934958	0.934792	0.93463	0.934462
April		0.854195	0.823258	0.841316	0.84814	0.851251	0.854992	0.84389	0.845277	0.84658	0.847782	0.849023	0.850319	0.851498	0.852598	0.853701
May		0.841637	0.826492	0.842058	0.846002	0.847135	0.850354	0.84455	0.845936	0.847236	0.848446	0.849689	0.850981	0.852165	0.853259	0.854374
June		0.846813	0.834794	0.84751	0.851988	0.8547	0.85805	0.851247	0.852654	0.853971	0.855204	0.856471	0.857781	0.858984	0.860099	0.861224
July		0.853948	0.844184	0.856501	0.860816	0.863636	0.85891	0.860454	0.861896	0.863238	0.864498	0.865787	0.867125	0.868352	0.869487	0.870638
August		0.858985	0.85189	0.863865	0.868223	0.871201	0.875689	0.866487	0.869524	0.87089	0.872167	0.873479	0.874834	0.876088	0.87724	0.878412
September		0.860664	0.856496	0.868289	0.872774	0.876009	0.88007	0.871074	0.872658	0.874134	0.875519	0.876805	0.878132	0.879506	0.880767	0.881934
October		0.867379	0.870968	0.882275	0.886595	0.890446	0.893598	0.885337	0.886966	0.888491	0.889915	0.891242	0.892607	0.894025	0.895331	0.896527
November		0.896955	0.955911	0.961624	0.962911	0.964188	0.965184	0.95964	0.959366	0.95925	0.959136	0.959024	0.958899	0.958799	0.958697	0.958589
December		0.928516														
Average		0.898279	0.882775	0.906954	0.911639	0.913106	0.903108	0.903959	0.904752	0.905495	0.906185	0.906897	0.907634	0.908312	0.908938	0.90957

- 2010 0.898279
- 2011 0.882775
- 2012 0.906954
- 2013 0.911639
- 2014 0.913106
- 2015 0.915036
- 2016 0.903108
- 2017 0.903959
- 2018 0.904752
- 2019 0.905495
- 2020 0.906185
- 2021 0.906897
- 2022 0.907634
- 2023 0.908312
- 2024 0.908938
- 2025 0.90957

Comparative Natural Gas Prices



EIA Electric Power Monthly

Table 4.13.A. Average Cost of Natural Gas Delivered for Electricity Generation by State

State	2002	2003	2004	2005	2006	2007	2008	2009	2010
Alabama									
Arkansas									
California									
Colorado									
Connecticut									
Delaware									
District of Columbia									
Florida									
Georgia									
Idaho									
Illinois									
Indiana									
Iowa									
Kansas									
Kentucky									
Louisiana									
Maine									
Maryland									
Massachusetts									
Michigan									
Minnesota									
Mississippi									
Missouri									
Montana									
Nebraska									
Nevada									
New Hampshire									
New Jersey									
New Mexico									
New York									
North Carolina									
North Dakota									
Ohio									
Oklahoma									
Oregon									
Pennsylvania									
Rhode Island									
South Carolina									
South Dakota									
Tennessee									
Texas									
Utah									
Vermont									
Virginia									
Washington									
West Virginia									
Wisconsin									
Wyoming									

[1] The electric power sector includes electricity-only plants and combined-heat-and-power (CHP) plants whose primary business is to sell electricity.

[2] Data shown for electric utilities are collected by the Federal Energy Regulatory Commission on the FERC Form 423.

W = Withheld to avoid disclosure of individual company data.

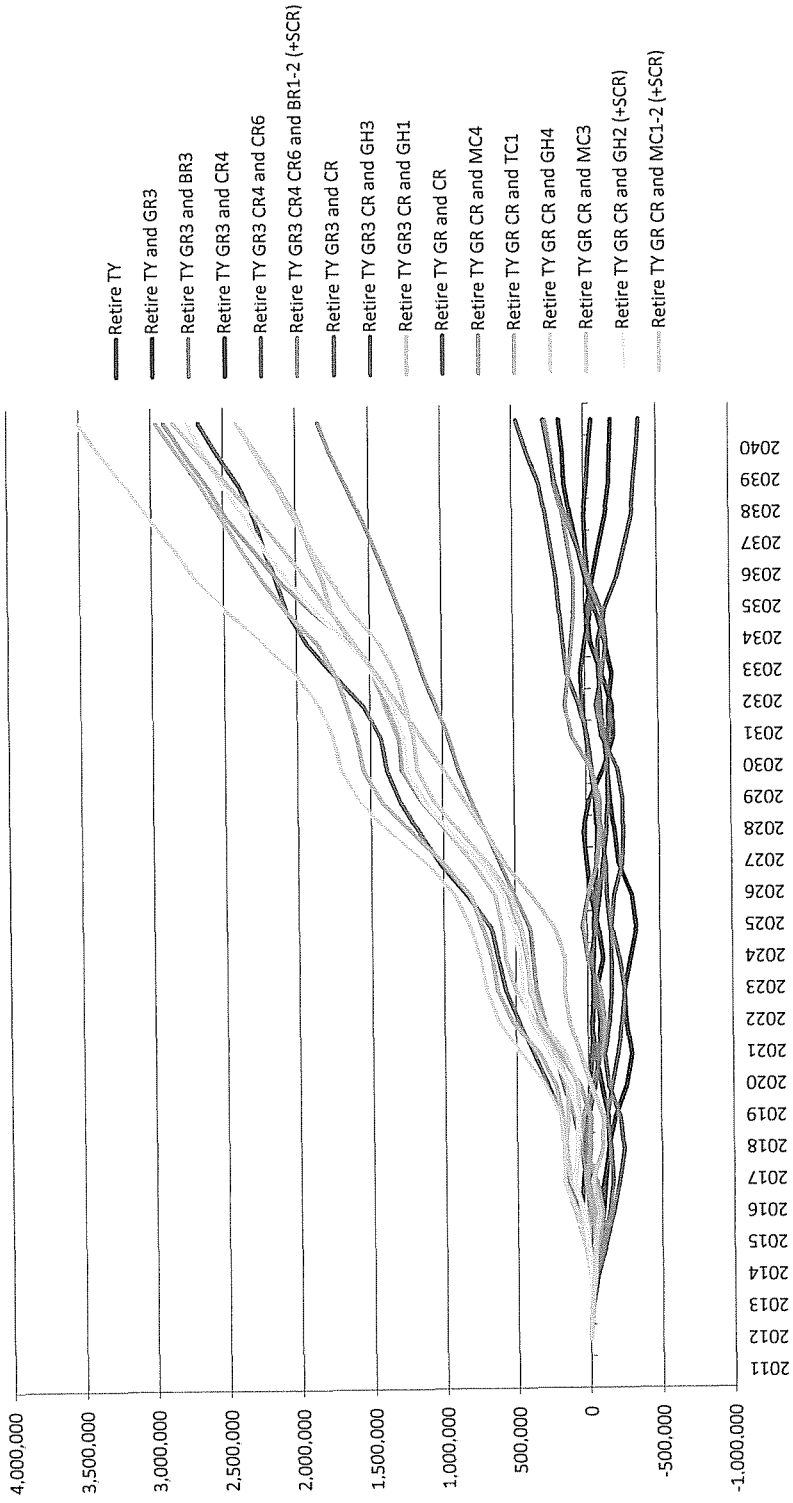
Notes: • See Glossary for definitions. • Data for 2003 and 2004 are preliminary. • Totals may not equal sum of components because of independent

Sources: Energy Information Administration, Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants Report;" and Federal Energy Res

	Delta NPVRR \$M
	Install Controls / (Retire)
Tyrone 3	(13)
Brown 3	(80)
Cane Run 6	603
Brown 1-2	(87)
Cane Run 4-5	11
Green River 3-4	34
Ghent 1-4	(57)
Trimble County 1	921
Mill Creek 3-4	800
Mill Creek 1-2	(110)

Cumulative Difference in Revenue Requirements

Install Controls vs. Retire/Replace Capacity



Retirement Savings (Deltas)	Capital	O&M	Total
Retire TY	-22	-3	-26
Retire TY and GR3	-13	-50	-62
Retire TY GR3 and BR3	-98	-174	-272
Retire TY GR3 and CR4	-46	-140	-186
Retire TY GR3 CR4 and CR6	-84	-118	-202
Retire TY GR3 CR4 CR6 and BR1-2 (+	-63	-129	-192
Retire TY GR3 and CR	-50	-149	-199
Retire TY GR3 CR and GH3	-203	-145	-348
Retire TY GR3 CR and GH1	-201	-210	-411
Retire TY GR and CR	-18	-100	-118
Retire TY GR CR and MC4	-105	-201	-306
Retire TY GR CR and TC1	-68	-203	-271
Retire TY GR CR and GH4	-203	-141	-343
Retire TY GR CR and MC3	-86	-201	-287
Retire TY GR CR and GH2 (+SCR)	-205	-156	-361
Retire TY GR CR and MC1-2 (+SCR)	-133	-325	-457

Revenue Requirement Deltas	Prod Cost	Capital	Total	Check
Retire TY	-49	36	-13	0
Retire TY and GR3	-122	42	-80	0
Retire TY GR3 and BR3	481	122	603	0
Retire TY GR3 and CR4	161	-248	-87	0
Retire TY GR3 CR4 and CR6	279	-268	11	0
Retire TY GR3 CR4 CR6 and BR1-2 (+	219	-185	34	0
Retire TY GR3 and CR	143	-200	-57	0
Retire TY GR3 CR and GH3	832	89	921	0
Retire TY GR3 CR and GH1	722	78	800	0
Retire TY GR and CR	-101	-9	-110	0
Retire TY GR CR and MC4	919	-60	859	0
Retire TY GR CR and TC1	805	190	996	0
Retire TY GR CR and GH4	1,044	117	1,161	0
Retire TY GR CR and MC3	696	60	756	0
Retire TY GR CR and GH2 (+SCR)	939	-81	858	0
Retire TY GR CR and MC1-2 (+SCR)	1,145	-384	762	0

7 8 9 10 11 12 13

	<u>TY GR3 CR</u>	<u>TY GR3 CR</u> <u>GH3</u>	<u>TY GR3 CR</u> <u>GH1</u>	<u>TY GR CR</u>	<u>TY GR CR</u> <u>MC4</u>	<u>TY GR CR</u> <u>TC1</u>	<u>TY GR CR</u> <u>GH4</u>
2010							
2011							
2012							
2013							
2014							
2015							
2016	3x1C(1)	3x1C(1) 2x1C(1)	3x1C(2)	3x1C(1)	3x1C(2)	3x1C(2)	3x1C(2)
2017							
2018				3x1C(1)			
2019	3x1C(1)						
2020		3x1C(1)					
2021					3x1C(1)		3x1C(1)
2022			3x1C(1)			3x1C(1)	
2023							
2024				3x1C(1)			
2025	3x1C(1)						
2026		3x1C(1)					
2027							
2028			3x1C(1)		3x1C(1)	3x1C(1)	3x1C(1)
2029							
2030							
2031	2x1C(1)			3x1C(1)			
2032							
2033		3x1C(1)					
2034							3x1C(1)
2035			2x1C(1)		3x1C(1)	2x1C(1)	
2036	2x1C(1)						
2037				SCCT(1)			
2038							
2039				SCCT(1)			
2040		SCCT(1)	SCCT(1)			SCCT(1)	

30 Yr PVRR (\$B) 25.3 26.6 26.6 25.4 26.9 26.7 26.9

	<u>TY GR CR</u>	<u>TY GR CR</u>	<u>TY GR CR</u>
	<u>MC3</u>	<u>GH2</u>	<u>MC1-2</u>
2010			
2011			
2012			
2013			
2014			
2015			
2016	3x1C(2)	3x1C(2)	3x1C(2)
2017			
2018			
2019			
2020			3x1C(1)
2021		3x1C(1)	
2022	3x1C(1)		
2023			
2024			
2025			
2026			2x1C(1)
2027			
2028	3x1C(1)	3x1C(1)	
2029			
2030			
2031			3x1C(1)
2032			
2033			
2034		3x1C(1)	
2035	2x1C(1)		
2036			
2037			SCCT(1)
2038			
2039			SCCT(1)
2040	SCCT(1)		
30 Yr PVRR (\$B)	26.6	27.0	27.5

Breakeven RR by Year (\$M)

Year \$	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
TY	-13	-14	-15	-16	-17	-18	-19	-21	-22	-23
GR3	-80	-86	-91	-98	-104	-111	-119	-127	-135	-144
BR3	603	643	686	732	782	834	890	950	1,013	1,081
CR4	-87	-93	-99	-106	-113	-120	-128	-137	-146	-156
CR6	11	11	12	13	14	15	16	17	18	19
BR1-2	34	37	39	42	45	48	51	54	58	62
CR5	-57	-61	-65	-69	-74	-79	-84	-90	-96	-102
GH3	921	983	1,049	1,119	1,194	1,274	1,360	1,451	1,548	1,652
GH1	800	854	911	973	1,038	1,107	1,182	1,261	1,346	1,436
GR4	-110	-117	-125	-134	-143	-152	-163	-173	-185	-198
MC4	859	917	979	1,044	1,114	1,189	1,269	1,354	1,445	1,542
TC1	996	1,062	1,134	1,210	1,291	1,378	1,470	1,569	1,674	1,786
GH4	1,161	1,239	1,323	1,411	1,506	1,607	1,715	1,830	1,953	2,084
MC3	756	807	861	919	980	1,046	1,116	1,191	1,271	1,356
GH2	858	916	977	1,043	1,113	1,188	1,267	1,352	1,443	1,540
MC1-2	762	813	867	926	988	1,054	1,125	1,200	1,281	1,367

Breakeven Year

	<u>Must Op Thru</u>
BR3	2019
BR1-2	2021
GH3	2020
GH1	2021
MC4	2023
TC1	2018
GH4	2018
MC3	2021
GH2	2018
MC1-2	2024

Station	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
BR	BR1FFP 0	0	238	3,127	7,278	12,105	12,775	12,123	11,534	10,999	10,472
BR	BR1SAM 0	0	0	0	231	521	550	522	497	474	452
BR	BR2FFP 0	0	252	3,379	7,865	13,414	13,865	13,156	12,514	11,931	11,357
BR	BR2SAM 0	0	0	0	231	534	553	525	499	476	453
BR	BR3FFP 0	0	0	204	2,854	7,595	13,437	14,120	13,404	12,757	12,171
GH	GH1FFP 0	0	64	4,332	10,157	17,736	19,154	18,156	17,246	16,412	15,591
GH	GH1SAM 0	0	122	562	1,006	1,964	2,121	2,010	1,909	1,817	1,726
GH	GH2FFP 0	0	0	2,787	7,280	15,016	18,298	17,569	16,777	16,056	15,369
GH	GH2SAM 0	0	11	724	984	935	891	851	814	779	744
GH	GH3FFP 0	0	0	0	3,571	8,804	18,270	21,813	20,853	19,901	19,030
GH	GH3SAM 0	0	115	565	1,578	1,935	1,853	1,769	1,691	1,618	1,544
GH	GH4FFP 0	0	0	0	2,843	7,668	14,952	21,319	20,238	19,257	18,361
GH	GH4SAM 0	0	122	527	974	1,948	1,967	1,872	1,786	1,707	1,631
MC	MC1FGD 0	0	0	2,360	7,268	12,372	21,934	23,856	22,601	21,453	20,399
MC	MC1FFP 0	0	0	1,271	5,238	9,364	17,796	19,361	18,343	17,414	16,559
MC	MC1SAM 0	0	0	0	42	560	1,131	1,232	1,168	1,109	1,055
MC	MC2FGD 0	0	0	2,361	7,270	12,377	23,214	24,770	23,450	22,238	21,119
MC	MC2FFP 0	0	0	1,215	5,051	9,134	18,426	19,666	18,620	17,659	16,772
MC	MC2SAM 0	0	0	0	42	560	1,197	1,279	1,211	1,149	1,092
MC	MC3FGDU 0	0	0	646	3,668	6,975	9,472	9,135	8,699	8,295	7,908
MC	MC3FGDR 0	0	0	0	0	39	175	207	197	187	179
MC	MC3FFP 0	0	0	0	3,730	8,326	13,896	18,276	17,601	16,757	15,977
MC	MC3SAM 0	0	0	734	1,992	2,100	1,997	1,901	1,813	1,728	1,642
MC	MC4FGD 0	0	379	6,987	15,193	21,072	28,573	27,555	26,231	25,008	23,834
MC	MC4SCR 0	0	105	667	724	688	655	625	596	566	537
MC	MC4FFP 0	0	377	5,055	10,178	14,629	19,836	19,129	18,210	17,361	16,546
MC	MC4SAM 0	0	0	0	578	1,620	2,201	2,123	2,022	1,929	1,839
TC	TC1FFP 0	0	0	0	2,200	5,745	11,967	15,834	15,223	14,502	13,838
CR	CR4FGD 0	0	394	3,222	13,574	27,295	25,773	24,370	23,071	21,861	20,666
CR	CR4SCR 0	64	390	2,395	6,163	10,786	10,183	9,627	9,112	8,633	8,160
CR	CR4FF 0	0	280	1,715	3,329	5,526	5,216	4,930	4,666	4,421	4,178
CR	CR4PAC 0	0	0	0	235	386	365	345	327	310	293
CR	CR4LIME 0	0	0	0	259	427	403	381	361	342	323

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Station	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CR	CR5FGD 0	0	359	3,311	14,658	29,304	27,663	26,148	24,742	23,429	22,132
CR	CR5SCR 0	63	388	2,719	6,475	11,557	10,908	10,308	9,752	9,234	8,721
CR	CR5FF 0	0	300	1,823	3,531	5,992	5,654	5,343	5,054	4,785	4,519
CR	CR5PAC 0	0	0	0	251	423	399	378	357	338	320
CR	CR5LIME 0	0	0	0	278	468	441	417	395	374	353
CR	CR6FGD 0	0	346	3,887	18,407	35,115	33,170	31,385	29,739	28,213	26,706
CR	CR6SCR 0	79	1,294	4,201	8,457	14,206	13,414	12,689	12,019	11,399	10,787
CR	CR6FF 0	0	394	2,364	4,540	7,252	6,848	6,477	6,136	5,819	5,507
CR	CR6PAC 0	0	0	0	352	558	527	499	473	448	424
CR	CR6LIME 0	0	0	0	391	619	585	553	525	498	471
GR	GR3SFF 0	0	0	1,323	4,035	5,553	5,254	4,983	4,739	4,516	4,297
GR	GR3PAC 0	0	0	0	112	154	145	138	131	125	119
GR	GR4SFF 0	0	0	1,885	5,750	8,517	8,050	7,626	7,237	6,881	6,529
GR	GR4PAC 0	0	0	0	160	235	223	211	200	190	181

Station	Unit	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
BR	BR1FFP 0	9,946	9,420	8,894	8,368	7,842	7,483	7,291	7,099	6,908	6,716
BR	BR1SAM 0	429	407	384	362	339	324	315	307	299	291
BR	BR2FFP 0	10,783	10,210	9,636	9,062	8,488	8,095	7,881	7,668	7,455	7,242
BR	BR2SAM 0	431	408	385	362	340	324	315	307	298	290
BR	BR3FFP 0	11,595	11,019	10,443	9,867	9,290	8,714	8,325	8,122	7,920	7,717
GH	GH1FFP 0	14,769	13,948	13,127	12,305	11,484	10,897	10,545	10,193	9,841	9,489
GH	GH1SAM 0	1,635	1,544	1,453	1,362	1,271	1,206	1,167	1,128	1,089	1,050
GH	GH2FFP 0	14,684	13,998	13,313	12,627	11,942	11,257	10,791	10,556	10,330	10,104
GH	GH2SAM 0	709	674	639	605	570	546	535	523	511	500
GH	GH3FFP 0	18,199	17,369	16,538	15,708	14,877	14,047	13,216	12,647	12,344	12,047
GH	GH3SAM 0	1,471	1,397	1,324	1,250	1,177	1,126	1,099	1,073	1,047	1,020
GH	GH4FFP 0	17,541	16,757	15,973	15,188	14,404	13,619	12,835	12,050	11,513	11,223
GH	GH4SAM 0	1,555	1,479	1,403	1,328	1,252	1,176	1,124	1,096	1,068	1,039
MC	MC1FGD 0	19,360	18,320	17,281	16,242	15,203	14,164	13,412	12,949	12,485	12,022
MC	MC1FFP 0	15,717	14,875	14,032	13,190	12,348	11,506	10,896	10,520	10,143	9,767
MC	MC1SAM 0	1,001	948	895	841	788	735	696	672	648	624
MC	MC2FGD 0	20,015	18,911	17,806	16,702	15,598	14,494	13,677	13,148	12,618	12,088
MC	MC2FFP 0	15,896	15,021	14,145	13,270	12,395	11,519	10,871	10,450	10,029	9,608
MC	MC2SAM 0	1,035	978	922	865	808	752	710	682	655	627
MC	MC3FGDU 0	7,522	7,135	6,748	6,362	5,975	5,589	5,303	5,124	4,950	4,777
MC	MC3FGDR 0	170	162	154	145	137	128	121	115	111	107
MC	MC3FFP 0	15,228	14,480	13,732	12,985	12,237	11,489	10,742	10,190	9,844	9,510
MC	MC3SAM 0	1,557	1,472	1,387	1,302	1,217	1,155	1,116	1,077	1,039	1,000
MC	MC4FGD 0	22,662	21,491	20,319	19,147	17,976	16,804	15,940	15,402	14,880	14,358
MC	MC4SCR 0	508	479	449	420	399	386	372	359	346	332
MC	MC4FFP 0	15,733	14,919	14,106	13,293	12,479	11,666	11,066	10,692	10,330	9,968
MC	MC4SAM 0	1,749	1,660	1,570	1,480	1,391	1,301	1,235	1,193	1,153	1,112
TC	TC1FFP 0	13,200	12,564	11,927	11,291	10,654	10,018	9,381	8,918	8,637	8,363
CR	CR4FGD 0	19,471	18,276	17,081	15,886	14,691	13,773	13,130	12,488	11,845	11,203
CR	CR4SCR 0	7,687	7,214	6,740	6,267	5,794	5,431	5,177	4,924	4,671	4,417
CR	CR4FF 0	3,935	3,692	3,450	3,207	2,964	2,778	2,648	2,519	2,389	2,260
CR	CR4PAC 0	276	259	242	225	208	195	186	177	168	159
CR	CR4LIME 0	305	286	267	249	230	216	206	195	185	175

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Station	Unit	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
CR	CR5FGD 0	20,835	19,538	18,241	16,944	15,647	14,641	13,924	13,207	12,490	11,774
CR	CR5SCR 0	8,208	7,696	7,183	6,670	6,158	5,760	5,478	5,196	4,914	4,632
CR	CR5FF 0	4,253	3,987	3,721	3,455	3,189	2,983	2,837	2,691	2,545	2,399
CR	CR5PAC 0	301	282	263	245	226	212	201	191	180	170
CR	CR5LIME 0	333	312	291	271	250	234	222	211	199	188
CR	CR6FGD 0	25,199	23,692	22,185	20,678	19,171	18,033	17,265	16,496	15,727	14,959
CR	CR6SCR 0	10,175	9,563	8,951	8,339	7,727	7,266	6,956	6,646	6,337	6,027
CR	CR6FF 0	5,194	4,882	4,569	4,257	3,944	3,709	3,551	3,393	3,235	3,077
CR	CR6PAC 0	401	377	353	329	305	287	275	262	250	238
CR	CR6LIME 0	445	418	391	365	338	318	305	291	278	264
GR	GR3SFF 0	4,078	3,859	3,640	3,421	3,202	3,050	2,967	2,884	2,800	2,717
GR	GR3PAC 0	113	107	101	95	89	85	82	80	78	75
GR	GR4SFF 0	6,177	5,825	5,473	5,122	4,770	4,515	4,356	4,198	4,040	3,881
GR	GR4PAC 0	171	161	152	142	132	125	121	116	112	108

Station	Unit	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
BR	BR1FFP 0	6,525	6,333	6,141	5,950	5,758	5,566	5,375	5,183	4,991	4,800
BR	BR1SAM 0	282	274	266	257	249	241	232	224	216	208
BR	BR2FFP 0	7,028	6,815	6,602	6,388	6,175	5,962	5,749	5,535	5,322	5,109
BR	BR2SAM 0	281	273	264	256	247	239	230	222	213	205
BR	BR3FFP 0	7,514	7,311	7,109	6,906	6,703	6,501	6,298	6,095	5,893	5,690
GH	GH1FFP 0	9,137	8,785	8,433	8,081	7,729	7,377	7,025	6,673	6,321	5,969
GH	GH1SAM 0	1,011	972	933	894	855	816	777	738	699	661
GH	GH2FFP 0	9,878	9,652	9,425	9,199	8,973	8,747	8,521	8,295	8,069	7,843
GH	GH2SAM 0	488	476	464	453	441	429	418	406	394	383
GH	GH3FFP 0	11,750	11,452	11,155	10,858	10,561	10,263	9,966	9,669	9,372	9,075
GH	GH3SAM 0	994	967	941	915	888	862	835	809	782	756
GH	GH4FFP 0	10,932	10,642	10,352	10,061	9,771	9,481	9,190	8,900	8,610	8,319
GH	GH4SAM 0	1,011	983	955	927	899	870	842	814	786	758
MC	MC1FGD 0	11,558	11,095	10,631	10,167	9,704	9,240	8,777	8,313	7,850	3,188
MC	MC1FFP 0	9,390	9,013	8,637	8,260	7,884	7,507	7,130	6,754	6,377	2,590
MC	MC1SAM 0	600	576	552	528	504	480	455	431	407	165
MC	MC2FGD 0	11,558	11,028	10,499	9,969	9,439	8,909	2,908	0	0	0
MC	MC2FFP 0	9,187	8,766	8,344	7,923	7,502	7,081	2,311	0	0	0
MC	MC2SAM 0	600	572	545	517	490	462	151	0	0	0
MC	MC3FGDU 0	4,603	4,429	4,256	4,082	3,909	3,735	3,561	3,388	3,214	3,040
MC	MC3FGDR 0	104	100	96	92	88	85	81	77	73	69
MC	MC3FFP 0	9,175	8,841	8,506	8,172	7,837	7,503	7,168	6,834	6,499	6,165
MC	MC3SAM 0	961	923	884	846	807	768	730	691	652	213
MC	MC4FGD 0	13,836	13,314	12,792	12,270	11,748	11,226	10,705	10,183	9,661	9,139
MC	MC4SCR 0	319	306	292	279	266	252	239	226	92	0
MC	MC4FFP 0	9,605	9,243	8,881	8,518	8,156	7,794	7,431	7,069	6,707	6,344
MC	MC4SAM 0	1,072	1,031	991	951	910	870	829	789	748	708
TC	TC1FFP 0	8,089	7,815	7,541	7,267	6,993	6,719	6,445	6,171	5,897	5,623
CR	CR4FGD 0	10,560	0	0	0	0	0	0	0	0	0
CR	CR4SCR 0	4,164	0	0	0	0	0	0	0	0	0
CR	CR4FF 0	2,130	0	0	0	0	0	0	0	0	0
CR	CR4PAC 0	150	0	0	0	0	0	0	0	0	0
CR	CR4LIME 0	165	0	0	0	0	0	0	0	0	0

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Station	Unit	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CR	CR5FGD 0	0	0	0	0	0	0	0	0	0	0
CR	CR5SCR 0	0	0	0	0	0	0	0	0	0	0
CR	CR5FF 0	0	0	0	0	0	0	0	0	0	0
CR	CR5PAC 0	0	0	0	0	0	0	0	0	0	0
CR	CR5LIME 0	0	0	0	0	0	0	0	0	0	0
CR	CR6FGD 0	14,190	13,421	12,653	0	0	0	0	0	0	0
CR	CR6SCR 0	5,717	5,408	5,098	0	0	0	0	0	0	0
CR	CR6FF 0	2,919	2,761	2,602	0	0	0	0	0	0	0
CR	CR6PAC 0	226	213	201	0	0	0	0	0	0	0
CR	CR6LIME 0	250	237	223	0	0	0	0	0	0	0
GR	GR3SFF 0	2,634	2,550	2,467	2,384	2,300	2,217	2,134	2,050	1,967	1,884
GR	GR3PAC 0	73	71	68	66	64	62	59	57	55	52
GR	GR4SFF 0	3,723	3,565	3,407	3,248	3,090	2,932	2,773	2,615	0	0
GR	GR4PAC 0	103	99	94	90	86	81	77	73	0	0

Station	Unit	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
BR	BR1FFP 0	4,608	4,417	4,225	4,033	3,842	3,650	3,458	3,267	1,327	0
BR	BR1SAM 0	199	191	183	174	166	158	150	141	57	0
BR	BR2FFP 0	4,895	4,682	4,469	4,256	4,042	3,829	3,616	1,180	0	0
BR	BR2SAM 0	196	187	179	170	162	153	145	47	0	0
BR	BR3FFP 0	5,487	5,284	5,082	4,879	4,676	4,474	4,271	4,068	3,865	3,663
GH	GH1FFP 0	2,424	0	0	0	0	0	0	0	0	0
GH	GH1SAM 0	268	0	0	0	0	0	0	0	0	0
GH	GH2FFP 0	7,617	7,391	7,165	6,939	6,713	6,486	6,260	6,034	5,808	5,582
GH	GH2SAM 0	371	359	348	336	324	312	301	289	277	266
GH	GH3FFP 0	8,777	8,480	8,183	7,886	7,588	7,291	6,994	6,697	6,400	6,102
GH	GH3SAM 0	730	703	677	650	624	598	571	545	518	492
GH	GH4FFP 0	8,029	7,739	7,448	7,158	6,867	6,577	6,287	5,996	5,706	5,416
GH	GH4SAM 0	730	701	673	645	617	589	561	532	504	476
MC	MC1FGD 0	0	0	0	0	0	0	0	0	0	0
MC	MC1FFP 0	0	0	0	0	0	0	0	0	0	0
MC	MC1SAM 0	0	0	0	0	0	0	0	0	0	0
MC	MC2FGD 0	0	0	0	0	0	0	0	0	0	0
MC	MC2FFP 0	0	0	0	0	0	0	0	0	0	0
MC	MC2SAM 0	0	0	0	0	0	0	0	0	0	0
MC	MC3FGDU 0	2,653	188	0	0	0	0	0	0	0	0
MC	MC3FGDR 0	64	44	0	0	0	0	0	0	0	0
MC	MC3FFP 0	5,830	4,673	341	0	0	0	0	0	0	0
MC	MC3SAM 0	0	0	0	0	0	0	0	0	0	0
MC	MC4FGD 0	7,976	573	0	0	0	0	0	0	0	0
MC	MC4SCR 0	0	0	0	0	0	0	0	0	0	0
MC	MC4FFP 0	5,537	398	0	0	0	0	0	0	0	0
MC	MC4SAM 0	618	44	0	0	0	0	0	0	0	0
TC	TC1FFP 0	5,349	5,075	4,801	4,186	261	0	0	0	0	0
CR	CR4FGD 0	0	0	0	0	0	0	0	0	0	0
CR	CR4SCR 0	0	0	0	0	0	0	0	0	0	0
CR	CR4FF 0	0	0	0	0	0	0	0	0	0	0
CR	CR4PAC 0	0	0	0	0	0	0	0	0	0	0
CR	CR4LIME 0	0	0	0	0	0	0	0	0	0	0

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Station	Unit	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
CR	CR5FGD 0	0	0	0	0	0	0	0	0	0	0
CR	CR5SCR 0	0	0	0	0	0	0	0	0	0	0
CR	CR5FF 0	0	0	0	0	0	0	0	0	0	0
CR	CR5PAC 0	0	0	0	0	0	0	0	0	0	0
CR	CR5LIME 0	0	0	0	0	0	0	0	0	0	0
CR	CR6FGD 0	0	0	0	0	0	0	0	0	0	0
CR	CR6SCR 0	0	0	0	0	0	0	0	0	0	0
CR	CR6FF 0	0	0	0	0	0	0	0	0	0	0
CR	CR6PAC 0	0	0	0	0	0	0	0	0	0	0
CR	CR6LIME 0	0	0	0	0	0	0	0	0	0	0
GR	GR3SFF 0	1,800	1,717	1,634	1,550	1,467	1,384	0	0	0	0
GR	GR3PAC 0	50	48	45	43	41	38	0	0	0	0
GR	GR4SFF 0	0	0	0	0	0	0	0	0	0	0
GR	GR4PAC 0	0	0	0	0	0	0	0	0	0	0

Station	Unit	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
BR	BR1FFP 0	0	0	0	0	0	0	0	0	0	0
BR	BR1SAM 0	0	0	0	0	0	0	0	0	0	0
BR	BR2FFP 0	0	0	0	0	0	0	0	0	0	0
BR	BR2SAM 0	0	0	0	0	0	0	0	0	0	0
BR	BR3FFP 0	3,460	1,405	0	0	0	0	0	0	0	0
GH	GH1FFP 0	0	0	0	0	0	0	0	0	0	0
GH	GH1SAM 0	0	0	0	0	0	0	0	0	0	0
GH	GH2FFP 0	5,356	5,130	4,904	4,678	4,452	4,226	4,000	3,489	253	0
GH	GH2SAM 0	254	242	231	219	207	196	0	0	0	0
GH	GH3FFP 0	5,805	5,508	5,211	4,152	214	0	0	0	0	0
GH	GH3SAM 0	465	405	21	0	0	0	0	0	0	0
GH	GH4FFP 0	5,125	4,835	0	0	0	0	0	0	0	0
GH	GH4SAM 0	117	0	0	0	0	0	0	0	0	0
MC	MC1FGD 0	0	0	0	0	0	0	0	0	0	0
MC	MC1FFP 0	0	0	0	0	0	0	0	0	0	0
MC	MC1SAM 0	0	0	0	0	0	0	0	0	0	0
MC	MC2FGD 0	0	0	0	0	0	0	0	0	0	0
MC	MC2FFP 0	0	0	0	0	0	0	0	0	0	0
MC	MC2SAM 0	0	0	0	0	0	0	0	0	0	0
MC	MC3FGDU 0	0	0	0	0	0	0	0	0	0	0
MC	MC3FGDR 0	0	0	0	0	0	0	0	0	0	0
MC	MC3FFP 0	0	0	0	0	0	0	0	0	0	0
MC	MC3SAM 0	0	0	0	0	0	0	0	0	0	0
MC	MC4FGD 0	0	0	0	0	0	0	0	0	0	0
MC	MC4SCR 0	0	0	0	0	0	0	0	0	0	0
MC	MC4FFP 0	0	0	0	0	0	0	0	0	0	0
MC	MC4SAM 0	0	0	0	0	0	0	0	0	0	0
TC	TC1FFP 0	0	0	0	0	0	0	0	0	0	0
CR	CR4FGD 0	0	0	0	0	0	0	0	0	0	0
CR	CR4SCR 0	0	0	0	0	0	0	0	0	0	0
CR	CR4FF 0	0	0	0	0	0	0	0	0	0	0
CR	CR4PAC 0	0	0	0	0	0	0	0	0	0	0
CR	CR4LIME 0	0	0	0	0	0	0	0	0	0	0

Station	Unit	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
CR	CR5FGD	0	0	0	0	0	0	0	0	0	0
CR	CR5SCR	0	0	0	0	0	0	0	0	0	0
CR	CR5FF	0	0	0	0	0	0	0	0	0	0
CR	CR5PAC	0	0	0	0	0	0	0	0	0	0
CR	CR5LIME	0	0	0	0	0	0	0	0	0	0
CR	CR6FGD	0	0	0	0	0	0	0	0	0	0
CR	CR6SCR	0	0	0	0	0	0	0	0	0	0
CR	CR6FF	0	0	0	0	0	0	0	0	0	0
CR	CR6PAC	0	0	0	0	0	0	0	0	0	0
CR	CR6LIME	0	0	0	0	0	0	0	0	0	0
GR	GR3SFF	0	0	0	0	0	0	0	0	0	0
GR	GR3PAC	0	0	0	0	0	0	0	0	0	0
GR	GR4SFF	0	0	0	0	0	0	0	0	0	0
GR	GR4PAC	0	0	0	0	0	0	0	0	0	0

Retirement Cost		2010	2011	2012	2013	2014	2015	2016	2017	2018
All Units		0	0	0	0	0	0	2100	0	0

2% Escalation Rate

Unit Costs (\$000)

BR	BR1	3,816	4,811	3,969	4,049	4,130	4,212	4,296	4,382
BR	BR2	6,633	7,160	7,253	7,398	7,546	7,697	7,851	8,008
BR	BR3	15,885	20,876	14,904	15,202	15,506	15,816	16,132	16,455
CR	CR4	14,372	9,218	12,029	12,269	12,515	12,765	13,020	13,281
CR	CR5	11,842	9,889	12,791	13,047	13,308	13,574	13,845	14,122
CR	CR6	10,666	11,619	10,173	10,376	10,584	10,795	11,011	11,231
GH	GH1	17,829	19,141	17,966	18,325	18,691	19,065	19,447	19,835
GH	GH2	12,225	18,498	13,429	13,698	13,972	14,251	14,536	14,827
GH	GH3	17,961	13,501	12,475	12,724	12,979	13,238	13,503	13,773
GH	GH4	11,533	13,496	12,105	12,347	12,594	12,846	13,103	13,365
GR	GR3	4,270	5,792	4,360	4,447	4,536	4,627	4,719	4,813
GR	GR4	7,338	6,924	8,633	8,805	8,982	9,161	9,344	9,531
MC	MC1	11,892	17,333	12,669	12,923	13,181	13,445	13,714	13,988
MC	MC2	16,179	11,941	15,201	15,505	15,815	16,131	16,454	16,783
MC	MC3	18,313	14,238	17,221	17,566	17,917	18,275	18,641	19,014
MC	MC4	16,531	18,981	17,245	17,590	17,942	18,300	18,666	19,040
TC	TC1	17,205	15,170	17,403	17,751	18,106	18,468	18,837	19,214
TY	TY3	410	416	418	427	435	444	453	462

2019 2020 2021 2022 2023 2024 2025 2026 2027

Retirement Cost

All Units

0

0

0

0

0

0

0

0

0

2% Escalation Rate

Unit Costs (\$000)

BR	4,470	4,559	4,651	4,744	4,838	4,935	5,034	5,135	5,237
BR	8,168	8,331	8,498	8,668	8,841	9,018	9,199	9,383	9,570
BR	16,784	17,120	17,462	17,811	18,167	18,531	18,901	19,279	19,665
CR	13,546	13,817	14,094	14,375	14,663	14,956	15,255	15,560	15,872
CR	14,405	14,693	14,987	15,286	15,592	15,904	16,222	16,546	16,877
CR	11,456	11,685	11,919	12,157	12,400	12,648	12,901	13,159	13,423
GH	20,232	20,637	21,050	21,471	21,900	22,338	22,785	23,240	23,705
GH	15,124	15,426	15,735	16,049	16,370	16,698	17,032	17,372	17,720
GH	14,049	14,330	14,616	14,909	15,207	15,511	15,821	16,138	16,460
GH	13,632	13,905	14,183	14,467	14,756	15,051	15,352	15,659	15,973
GR	4,910	5,008	5,108	5,210	5,314	5,421	5,529	5,640	5,753
GR	9,722	9,916	10,115	10,317	10,523	10,734	10,949	11,167	11,391
MC	14,268	14,553	14,844	15,141	15,444	15,753	16,068	16,389	16,717
MC	17,118	17,461	17,810	18,166	18,530	18,900	19,278	19,664	20,057
MC	19,394	19,782	20,177	20,581	20,993	21,412	21,841	22,278	22,723
MC	19,421	19,809	20,205	20,609	21,021	21,442	21,871	22,308	22,754
TC	19,598	19,990	20,390	20,798	21,214	21,638	22,071	22,512	22,962
TY	471	480	490	500	510	520	530	541	552

		2028	2029	2030	2031	2032	2033	2034	2035	2036
Retirement Cost										
All Units		0	0	0	0	0	0	0	0	0

2% Escalation Rate

		2028	2029	2030	2031	2032	2033	2034	2035	2036
Unit Costs (\$000)										
BR	BR1	5,342	5,449	5,558	5,669	5,782	5,898	6,016	6,136	6,259
BR	BR2	9,762	9,957	10,156	10,359	10,566	10,778	10,993	11,213	11,437
BR	BR3	20,058	20,460	20,869	21,286	21,712	22,146	22,589	23,041	23,502
CR	CR4	16,189	16,513	16,843	17,180	17,524	17,874	18,232	18,596	18,968
CR	CR5	17,215	17,559	17,910	18,269	18,634	19,007	19,387	19,775	20,170
CR	CR6	13,691	13,965	14,244	14,529	14,820	15,116	15,418	15,727	16,041
GH	GH1	24,179	24,663	25,156	25,659	26,172	26,696	27,230	27,774	28,330
GH	GH2	18,074	18,436	18,804	19,181	19,564	19,955	20,355	20,762	21,177
GH	GH3	16,790	17,125	17,468	17,817	18,174	18,537	18,908	19,286	19,672
GH	GH4	16,292	16,618	16,950	17,289	17,635	17,988	18,347	18,714	19,089
GR	GR3	5,868	5,985	6,105	6,227	6,351	6,478	6,608	6,740	6,875
GR	GR4	11,619	11,851	12,088	12,330	12,576	12,828	13,084	13,346	13,613
MC	MC1	17,051	17,392	17,740	18,095	18,457	18,826	19,202	19,586	19,978
MC	MC2	20,458	20,867	21,285	21,710	22,145	22,587	23,039	23,500	23,970
MC	MC3	23,178	23,641	24,114	24,596	25,088	25,590	26,102	26,624	27,156
MC	MC4	23,209	23,674	24,147	24,630	25,123	25,625	26,138	26,660	27,194
TC	TC1	23,422	23,890	24,368	24,855	25,352	25,859	26,377	26,904	27,442
TY	TY3	563	574	586	597	609	622	634	647	660

RetirementCost_Savings

Retirement Cost		2037	2038	2039	2040
All Units		0	0	0	0

2% Escalation Rate

Unit Costs (\$000)

BR	6,384	6,512	6,642	6,775
BR1	11,666	11,899	12,137	12,380
BR2	23,972	24,451	24,940	25,439
BR3	19,347	19,734	20,129	20,532
CR	20,573	20,985	21,405	21,833
CR1	16,362	16,689	17,023	17,364
CR2	28,897	29,474	30,064	30,665
GH	21,600	22,032	22,473	22,923
GH1	20,065	20,466	20,876	21,293
GH2	19,470	19,860	20,257	20,662
GH3	7,012	7,153	7,296	7,442
GH4	13,885	14,163	14,446	14,735
GR	20,378	20,785	21,201	21,625
GR1	24,449	24,938	25,437	25,946
GR2	27,699	28,253	28,818	29,395
MC	27,737	28,292	28,858	29,435
MC1	27,991	28,551	29,122	29,704
MC2	673	686	700	714
MC3				
MC4				
TC				
TC1				
TY				
TY3				

Escalation Rate: 2% Year \$: 2010
Fixed O&M
\$/Yr

	Month	Year	Equipment	2011	2012	2013	2014	2015	2016
BR	BR1	5	2014 PJFF/PAC	0	0	0	598,882	610,860	623,077
BR	BR1	5	2014 SAM Mitigation	0	0	0	78,540	137,333	140,079
BR	BR2	4	2014 PJFF/PAC	0	0	0	714,168	728,451	743,020
BR	BR2	4	2014 SAM Mitigation	0	0	0	134,640	137,333	140,079
BR	BR3	5	2015 PJFF/PAC	0	0	0	0	1,067,560	1,088,911
GH	GH1	5	2014 PJFF/PAC	0	0	0	1,293,082	1,318,944	1,345,322
GH	GH1	5	2014 SCR Turn-Down	0	0	0	0	0	0
GH	GH1	2	2013 SAM Mitigation	0	0	0	4,899	0	0
GH	GH2	11	2014 PJFF/PAC	0	0	0	777,600	1,586,304	1,618,030
GH	GH2	12	2012 Sorbent Injection	0	8,064	98,700	100,674	102,687	104,741
GH	GH3	10	2015 PJFF/PAC	0	0	0	0	652,436	1,330,969
GH	GH3	11	2013 SCR Turn-Down	0	0	0	0	0	0
GH	GH3	2	2013 SAM Mitigation	0	0	0	0	0	0
GH	GH4	12	2015 PJFF/PAC	0	0	0	0	631,870	1,289,014
GH	GH4	3	2014 SCR Turn-Down	0	0	0	0	0	0
GH	GH4	2	2013 SAM Mitigation	0	0	0	0	0	0
MC	MC1	5	2015 Combined 1&2 FGD	0	0	0	0	-238,642	-219,636
MC	MC1	5	2015 PJFF/PAC	0	0	0	0	1,446,222	1,475,147
MC	MC1	5	2015 SAM Mitigation	0	0	0	0	22,100	38,643
MC	MC2	4	2015 Combined 1&2 FGD	0	0	0	0	186,506	205,512
MC	MC2	4	2015 PJFF/PAC	0	0	0	0	1,418,867	1,447,245
MC	MC2	4	2015 SAM Mitigation	0	0	0	0	25,257	38,643
MC	MC3	11	2014 FGD	0	0	0	0	0	0
MC	MC3	10	2015 PJFF/PAC	0	0	0	0	646,753	1,319,377
MC	MC3	4	2013 SAM Mitigation	0	0	24,068	36,824	37,560	38,312
MC	MC3	4	2013 SCR Turn-Down	0	0	0	0	0	0
MC	MC4	11	2014 FGD	0	0	0	0	0	0
MC	MC4	11	2014 PJFF/PAC	0	0	0	743,376	1,516,487	1,546,817
MC	MC4	11	2014 SAM Mitigation	0	0	0	3,095	37,885	38,643
MC	MC4	11	2014 SCR Turn-Down	0	0	0	0	0	0
TC	TC1	11	2015 PJFF/PAC	0	0	0	0	493,761	1,007,273

	<u>Month</u>	<u>Year Equipment</u>	<u>S/Yr</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
CR	1	2016 SCR	1,871,000	0	0	0	0	0	2,107,050
CR	1	2016 WFGD		0	0	0	0	0	0
CR	1	2016 PJFF	1,191,000	0	0	0	0	0	1,341,259
CR	1	2016 SAM Mitigation	174,000	0	0	0	0	0	195,952
CR	1	2016 PAC Injection	169,000	0	0	0	0	0	190,321
CR	1	2016 SCR	1,993,000	0	0	0	0	0	2,244,442
CR	1	2016 WFGD		0	0	0	0	0	0
CR	1	2016 PJFF	1,251,000	0	0	0	0	0	1,408,829
CR	1	2016 SAM Mitigation	177,000	0	0	0	0	0	199,331
CR	1	2016 PAC Injection	172,000	0	0	0	0	0	193,700
CR	1	2016 SCR	2,392,000	0	0	0	0	0	2,693,781
CR	1	2016 WFGD		0	0	0	0	0	0
CR	1	2016 PJFF	1,632,000	0	0	0	0	0	1,837,897
CR	1	2016 SAM Mitigation	198,000	0	0	0	0	0	222,980
CR	1	2016 PAC Injection	191,000	0	0	0	0	0	215,097
GR	1	2016 SCR	943,000	0	0	0	0	0	1,061,971
GR	1	2016 CDS-FF	3,322,000	0	0	0	0	0	3,741,112
GR	1	2016 PAC Injection	141,000	0	0	0	0	0	158,789
GR	1	2016 SCR	1,284,000	0	0	0	0	0	1,445,993
GR	1	2016 CDS-FF	4,309,000	0	0	0	0	0	4,852,634
GR	1	2016 PAC Injection	150,000	0	0	0	0	0	168,924
GH		SCR		0	0	0	0	0	0
MC		SCR		0	0	0	0	0	0
MC		SCR		0	0	0	0	0	0
BR		SCR		0	0	0	0	0	0
BR		SCR		0	0	0	0	0	0

G:\11-051 Sierra Club KY IRP & Coal Plants\CPCN Docket 2011-00162 - LG&E\Discovery Responses - LG&E\Env
Tab BR 1-2, Lines 17-20

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
O&M						

<u>Month</u>	<u>Year</u>	<u>Equipment</u>	<u>\$/yr</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
		BR1 SCR		0	0	0	0	0	0
		BR2 SCR		0	0	0	0	0	0
G:\11-051 Sierra Club KY IRP & Coal Plants\CPCN Docket 2011-00162 - LG&E\Discovery Responses - LG&E\Env									
Tab GH2MC1-2, Lines 19-21									
		O&M		2011	2012	2013	2014	2015	2016
		GH2SCR	0	0	0	0	0	0	0
		MC1SCR	0	0	0	0	0	0	0
		MC2SCR	0	0	0	0	0	0	0

Year \$: 2010

Fixed O&M

<u>Equipment</u>	<u>\$/yr</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
PJFF/PAC		635,538	648,249	661,214	674,439	687,927	701,686	715,720	730,034	744,635	759,527
SAM Mitigation		142,881	145,739	148,653	151,627	154,659	157,752	160,907	164,125	167,408	170,756
PJFF/PAC		757,880	773,038	788,499	804,269	820,354	836,761	853,496	870,566	887,978	905,737
SAM Mitigation		142,881	145,739	148,653	151,627	154,659	157,752	160,907	164,125	167,408	170,756
PJFF/PAC		1,110,689	1,132,903	1,155,561	1,178,672	1,202,245	1,226,290	1,250,816	1,275,832	1,301,349	1,327,376
PJFF/PAC		1,372,229	1,399,673	1,427,667	1,456,220	1,485,345	1,515,052	1,545,353	1,576,260	1,607,785	1,639,941
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
SAM Mitigation		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,650,391	1,683,399	1,717,067	1,751,408	1,786,436	1,822,165	1,858,608	1,895,781	1,933,696	1,972,370
Sorbent Injection		106,836	108,973	111,152	113,375	115,643	117,956	120,315	122,721	125,175	127,679
PJFF/PAC		1,357,589	1,384,741	1,412,435	1,440,684	1,469,498	1,498,888	1,528,865	1,559,443	1,590,632	1,622,444
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
SAM Mitigation		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,314,795	1,341,091	1,367,912	1,395,271	1,423,176	1,451,640	1,480,672	1,510,286	1,540,491	1,571,301
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
SAM Mitigation		0	0	0	0	0	0	0	0	0	0
Combined 1&2 FGD		-200,250	-180,476	-160,306	-139,733	-118,749	-121,124	-123,546	-126,017	-128,537	-131,108
PJFF/PAC		1,504,650	1,534,743	1,565,438	1,596,746	1,628,681	1,661,255	1,694,480	1,728,370	1,762,937	1,798,196
SAM Mitigation		39,416	40,204	41,008	41,828	42,665	43,518	44,388	45,276	46,182	47,105
Combined 1&2 FGD		224,899	244,673	264,842	285,415	306,400	312,528	318,778	325,154	331,657	338,290
PJFF/PAC		1,476,189	1,505,713	1,535,828	1,566,544	1,597,875	1,629,832	1,662,429	1,695,678	1,729,591	1,764,183
SAM Mitigation		39,416	40,204	41,008	41,828	42,665	43,518	44,388	45,276	46,182	47,105
FGD		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,345,764	1,372,679	1,400,133	1,428,136	1,456,698	1,485,832	1,515,549	1,545,860	1,576,777	1,608,313
SAM Mitigation		39,078	39,859	40,657	41,470	42,299	43,145	44,008	44,888	45,786	46,702
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
FGD		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,577,754	1,609,309	1,641,495	1,674,325	1,707,811	1,741,967	1,776,807	1,812,343	1,848,590	1,885,562
SAM Mitigation		39,416	40,204	41,008	41,828	42,665	43,518	44,388	45,276	46,182	47,105
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,027,418	1,047,966	1,068,926	1,090,304	1,112,110	1,134,353	1,157,040	1,180,180	1,203,784	1,227,860

NewControlsFOM

<u>Equipment</u>	<u>\$/Yr</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
SCR	1,871,000	2,149,191	2,192,175	2,236,018	2,280,739	2,326,353	2,372,880	2,420,338	2,468,745	2,518,120	2,568,482
WFGD		0	0	0	0	0	0	0	0	0	0
PJFF	1,191,000	1,368,085	1,395,446	1,423,355	1,451,822	1,480,859	1,510,476	1,540,685	1,571,499	1,602,929	1,634,988
SAM Mitigation	174,000	199,871	203,869	207,946	212,105	216,347	220,674	225,088	229,589	234,181	238,865
PAC Injection	169,000	194,128	198,010	201,971	206,010	210,130	214,333	218,620	222,992	227,452	232,001
SCR	1,993,000	2,289,331	2,335,117	2,381,819	2,429,456	2,478,045	2,527,606	2,578,158	2,629,721	2,682,316	2,735,962
WFGD		0	0	0	0	0	0	0	0	0	0
PJFF	1,251,000	1,437,006	1,465,746	1,495,061	1,524,962	1,555,461	1,586,570	1,618,302	1,650,668	1,683,681	1,717,355
SAM Mitigation	177,000	203,317	207,384	211,531	215,762	220,077	224,479	228,968	233,548	238,219	242,983
PAC Injection	172,000	197,574	201,525	205,556	209,667	213,860	218,138	222,500	226,950	231,489	236,119
SCR	2,392,000	2,747,656	2,802,609	2,858,661	2,915,835	2,974,151	3,033,634	3,094,307	3,156,193	3,219,317	3,283,703
WFGD		0	0	0	0	0	0	0	0	0	0
PJFF	1,632,000	1,874,655	1,912,148	1,950,391	1,989,399	2,029,187	2,069,771	2,111,166	2,153,389	2,196,457	2,240,386
SAM Mitigation	198,000	227,440	231,989	236,628	241,361	246,188	251,112	256,134	261,257	266,482	271,812
PAC Injection	191,000	219,399	223,787	228,263	232,828	237,484	242,234	247,079	252,020	257,061	262,202
SCR	943,000	1,083,211	1,104,875	1,126,972	1,149,512	1,172,502	1,195,952	1,219,871	1,244,268	1,269,154	1,294,537
CDS-FF	3,322,000	3,815,934	3,892,252	3,970,098	4,049,499	4,130,489	4,213,099	4,297,361	4,383,308	4,470,975	4,560,394
PAC Injection	141,000	161,965	165,204	168,508	171,878	175,316	178,822	182,399	186,047	189,767	193,563
SCR	1,284,000	1,474,912	1,504,411	1,534,499	1,565,189	1,596,493	1,628,422	1,660,991	1,694,211	1,728,095	1,762,657
CDS-FF	4,309,000	4,949,687	5,048,680	5,149,654	5,252,647	5,357,700	5,464,854	5,574,151	5,685,634	5,799,347	5,915,334
PAC Injection	150,000	172,303	175,749	179,264	182,849	186,506	190,236	194,041	197,922	201,880	205,918
SCR		0	8,475,784	8,645,300	8,818,206	8,994,570	9,174,461	9,357,950	9,545,109	9,736,012	9,930,732
SCR		0	3,943,805	4,022,682	4,103,135	4,185,198	4,268,902	4,354,280	4,441,366	4,530,193	4,620,797
SCR		0	3,984,814	4,064,510	4,145,800	4,228,716	4,313,290	4,399,556	4,487,547	4,577,298	4,668,844
SCR		0	2,431,193	2,479,817	2,529,413	2,580,002	2,631,602	2,684,234	2,737,918	2,792,677	2,848,530
SCR		0	3,952,007	4,031,047	4,111,668	4,193,902	4,277,780	4,363,335	4,450,602	4,539,614	4,630,406

G:\11-051 Sierra Club KY IRP \26\CER\AdditionalSCRs\20110728_CERResults-BR1-2_GH2_MC1-2SCRs.xlsx

Tab BR 1-2, Lines 17-20

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
O&M										

<u>Equipment</u>	<u>\$/yr</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
BR1 SCR		0	2,431	2,480	2,529	2,580	2,632	2,684	2,738	2,793	2,849
BR2 SCR		0	3,952	4,031	4,112	4,194	4,278	4,363	4,451	4,540	4,630

G:\11-051 Sierra Club KY IRP \26\CER\AdditionalSCRs\20110728_CERResults-BR1-2_GH2_MC1-2SCRs.xlsx
 Tab GH2MC1-2, Lines 19-21

<u>O&M</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
GH2SCR 0	0	8,476	8,645	8,818	8,995	9,174	9,358	9,545	9,736	9,931
MC1SCR 0	0	3,944	4,023	4,103	4,185	4,269	4,354	4,441	4,530	4,621
MC2SCR 0	0	3984.8136	4064.5098	4145.8	4228.716	4313.2903	4399.5562	4487.5473	4577.2982	4668.8442

Year \$: 2010
Fixed O&M

<u>Equipment</u>	<u>\$/yr</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>
PJFF/PAC		774,718	790,212	806,016	822,137	838,580	855,351	872,458	889,907	907,705	925,860
SAM Mitigation		174,171	177,655	181,208	184,832	188,529	192,299	196,145	200,068	204,069	208,151
PJFF/PAC		923,852	942,329	961,175	980,399	1,000,007	1,020,007	1,040,407	1,061,215	1,082,440	1,104,088
SAM Mitigation		174,171	177,655	181,208	184,832	188,529	192,299	196,145	200,068	204,069	208,151
PJFF/PAC		1,353,924	1,381,002	1,408,622	1,436,795	1,465,530	1,494,841	1,524,738	1,555,233	1,586,337	1,618,064
PJFF/PAC		1,672,739	1,706,194	1,740,318	1,775,124	1,810,627	1,846,839	1,883,776	1,921,452	1,959,881	1,999,078
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
SAM Mitigation		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		2,011,817	2,052,054	2,093,095	2,134,957	2,177,656	2,221,209	2,265,633	2,310,946	2,357,165	2,404,308
Sorbent Injection		130,232	132,837	135,494	138,204	140,968	143,787	146,663	149,596	152,588	155,640
PJFF/PAC		1,654,893	1,687,991	1,721,751	1,756,186	1,791,310	1,827,136	1,863,678	1,900,952	1,938,971	1,977,751
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
SAM Mitigation		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,602,727	1,634,782	1,667,477	1,700,827	1,734,844	1,769,540	1,804,931	1,841,030	1,877,850	1,915,407
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
SAM Mitigation		0	0	0	0	0	0	0	0	0	0
Combined 1&2 FGD		-133,730	-136,405	-139,133	-141,916	-144,754	-147,649	-150,602	-153,614	-156,686	-159,820
PJFF/PAC		1,834,160	1,870,843	1,908,260	1,946,425	1,985,354	2,025,061	2,065,562	2,106,873	2,149,010	2,191,991
SAM Mitigation		48,047	49,008	49,989	50,988	52,008	53,048	54,109	55,191	56,295	57,421
Combined 1&2 FGD		345,056	351,957	358,996	366,176	373,499	380,969	388,589	396,361	404,288	412,374
PJFF/PAC		1,799,467	1,835,456	1,872,165	1,909,608	1,947,801	1,986,757	2,026,492	2,067,022	2,108,362	2,150,529
SAM Mitigation		48,047	49,008	49,989	50,988	52,008	53,048	54,109	55,191	56,295	57,421
FGD		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,640,479	1,673,288	1,706,754	1,740,889	1,775,707	1,811,221	1,847,446	1,884,395	1,922,083	1,960,524
SAM Mitigation		47,636	48,588	49,560	50,551	51,562	52,594	53,645	54,718	55,813	56,929
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
FGD		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,923,273	1,961,738	2,000,973	2,040,992	2,081,812	2,123,449	2,165,918	2,209,236	2,253,421	2,298,489
SAM Mitigation		48,047	49,008	49,989	50,988	52,008	53,048	54,109	55,191	56,295	57,421
SCR Turn-Down		0	0	0	0	0	0	0	0	0	0
PJFF/PAC		1,252,417	1,277,465	1,303,015	1,329,075	1,355,656	1,382,769	1,410,425	1,438,633	1,467,406	1,496,754

Equipment	\$/yr	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
SCR	1,871,000	2,619,852	2,672,249	2,725,694	2,780,208	2,835,812	2,892,528	2,950,379	3,009,386	3,069,574	3,130,965
WFGD		0	0	0	0	0	0	0	0	0	0
PJFF	1,191,000	1,667,688	1,701,041	1,735,062	1,769,763	1,805,159	1,841,262	1,878,087	1,915,649	1,953,962	1,993,041
SAM Mitigation	174,000	243,642	248,515	253,485	258,555	263,726	269,000	274,380	279,868	285,465	291,175
PAC Injection	169,000	236,641	241,374	246,201	251,125	256,148	261,271	266,496	271,826	277,262	282,808
SCR	1,993,000	2,790,681	2,846,495	2,903,425	2,961,493	3,020,723	3,081,137	3,142,760	3,205,615	3,269,728	3,335,122
WFGD		0	0	0	0	0	0	0	0	0	0
PJFF	1,251,000	1,751,702	1,786,736	1,822,471	1,858,920	1,896,099	1,934,021	1,972,701	2,012,155	2,052,398	2,093,446
SAM Mitigation	177,000	247,843	252,800	257,856	263,013	268,273	273,638	279,111	284,693	290,387	296,195
PAC Injection	172,000	240,842	245,658	250,572	255,583	260,695	265,909	271,227	276,651	282,184	287,828
SCR	2,392,000	3,349,377	3,416,365	3,484,692	3,554,386	3,625,474	3,697,983	3,771,943	3,847,382	3,924,330	4,002,816
WFGD		0	0	0	0	0	0	0	0	0	0
PJFF	1,632,000	2,285,194	2,330,898	2,377,516	2,425,066	2,473,567	2,523,039	2,573,500	2,624,970	2,677,469	2,731,018
SAM Mitigation	198,000	277,248	282,793	288,449	294,218	300,102	306,104	312,226	318,471	324,840	331,337
PAC Injection	191,000	267,446	272,795	278,251	283,816	289,492	295,282	301,188	307,212	313,356	319,623
SCR	943,000	1,320,428	1,346,836	1,373,773	1,401,248	1,429,273	1,457,859	1,487,016	1,516,756	1,547,091	1,578,033
CDS-FF	3,322,000	4,651,602	4,744,634	4,839,527	4,936,317	5,035,044	5,135,744	5,238,459	5,343,229	5,450,093	5,559,095
PAC Injection	141,000	197,434	201,383	205,410	209,519	213,709	217,983	222,343	226,790	231,325	235,952
SCR	1,284,000	1,797,910	1,833,868	1,870,546	1,907,956	1,946,116	1,985,038	2,024,739	2,065,233	2,106,538	2,148,669
CDS-FF	4,309,000	6,033,640	6,154,313	6,277,399	6,402,947	6,531,006	6,661,626	6,794,859	6,930,756	7,069,371	7,210,759
PAC Injection	150,000	210,036	214,237	218,522	222,892	227,350	231,897	236,535	241,266	246,091	251,013
SCR		10,129,346	10,331,933	10,538,572	10,749,343	10,964,330	11,183,617	11,407,289	11,635,435	11,868,144	12,105,507
SCR		4,713,213	4,807,477	4,903,626	5,001,699	5,101,733	5,203,768	5,307,843	5,414,000	5,522,280	5,632,725
SCR		4,762,221	4,857,465	4,954,615	5,053,707	5,154,781	5,257,877	5,363,034	5,470,295	5,579,701	5,691,295
SCR		2,905,501	2,963,611	3,022,883	3,083,341	3,145,008	3,207,908	3,272,066	3,337,507	3,404,257	3,472,343
SCR		4,723,014	4,817,475	4,913,824	5,012,101	5,112,343	5,214,589	5,318,881	5,425,259	5,533,764	5,644,439

G:\11-051 Sierra Club KY IRP ;
Tab BR 1-2, Lines 17-20

O&M

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036

<u>Equipment</u>	<u>S/Yr</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>
BR1 SCR		2,906	2,964	3,023	3,083	3,145	3,208	3,272	3,338	3,404	3,472
BR2 SCR		4,723	4,817	4,914	5,012	5,112	5,215	5,319	5,425	5,534	5,644
G:\11-051 Sierra Club KY IRP :											
Tab GH2MC1-2, Lines 19-21											
O&M		2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
GH2SCR 0		10,129	10,332	10,539	10,749	10,964	11,184	11,407	11,635	11,868	12,106
MC1SCR 0		4,713	4,807	4,904	5,002	5,102	5,204	5,308	5,414	5,522	5,633
MC2SCR 0		4762.2211	4857.4655	4954.6148	5053.7071	5154.7812	5257.8769	5363.0344	5470.2951	5579.701	5691.295

Year \$: 2010

Fixed O&M

<u>Equipment</u>	<u>\$/yr</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>
PJFF/PAC		944,377	963,264	982,530	1,002,180
SAM Mitigation		212,314	216,560	220,891	225,309
PJFF/PAC		1,126,170	1,148,694	1,171,668	1,195,101
SAM Mitigation		212,314	216,560	220,891	225,309
PJFF/PAC		1,650,425	1,683,434	1,717,103	1,751,445
PJFF/PAC		2,039,060	2,079,841	2,121,438	2,163,867
SCR Turn-Down		0	0	0	0
SAM Mitigation		0	0	0	0
PJFF/PAC		2,452,394	2,501,442	2,551,471	2,602,500
Sorbent Injection		158,753	161,928	165,166	168,470
PJFF/PAC		2,017,306	2,057,652	2,098,805	2,140,781
SCR Turn-Down		0	0	0	0
SAM Mitigation		0	0	0	0
PJFF/PAC		1,953,716	1,992,790	2,032,646	2,073,299
SCR Turn-Down		0	0	0	0
SAM Mitigation		0	0	0	0
Combined 1&2 FGD		-163,017	-166,277	-169,602	-172,994
PJFF/PAC		2,235,831	2,280,547	2,326,158	2,372,681
SAM Mitigation		58,570	59,741	60,936	62,155
Combined 1&2 FGD		420,621	429,033	437,614	446,366
PJFF/PAC		2,193,540	2,237,411	2,282,159	2,327,802
SAM Mitigation		58,570	59,741	60,936	62,155
FGD		0	0	0	0
PJFF/PAC		1,999,735	2,039,729	2,080,524	2,122,134
SAM Mitigation		58,068	59,229	60,414	61,622
SCR Turn-Down		0	0	0	0
FGD		0	0	0	0
PJFF/PAC		2,344,459	2,391,348	2,439,175	2,487,958
SAM Mitigation		58,570	59,741	60,936	62,155
SCR Turn-Down		0	0	0	0
PJFF/PAC		1,526,689	1,557,223	1,588,367	1,620,135

<u>Equipment</u>	<u>\$/Yr</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>
SCR	1,871,000	3,193,585	3,257,456	3,322,605	3,389,058
WFGD		0	0	0	0
PJFF	1,191,000	2,032,902	2,073,560	2,115,031	2,157,332
SAM Mitigation	174,000	296,998	302,938	308,997	315,177
PAC Injection	169,000	288,464	294,233	300,118	306,120
SCR	1,993,000	3,401,825	3,469,861	3,539,258	3,610,044
WFGD		0	0	0	0
PJFF	1,251,000	2,135,315	2,178,021	2,221,582	2,266,013
SAM Mitigation	177,000	302,119	308,161	314,325	320,611
PAC Injection	172,000	293,584	299,456	305,445	311,554
SCR	2,392,000	4,082,872	4,164,530	4,247,820	4,332,777
WFGD		0	0	0	0
PJFF	1,632,000	2,785,639	2,841,352	2,898,179	2,956,142
SAM Mitigation	198,000	337,964	344,723	351,617	358,650
PAC Injection	191,000	326,015	332,536	339,186	345,970
SCR	943,000	1,609,594	1,641,786	1,674,622	1,708,114
CDS-FF	3,322,000	5,670,277	5,783,682	5,899,356	6,017,343
PAC Injection	141,000	240,671	245,484	250,394	255,402
SCR	1,284,000	2,191,642	2,235,475	2,280,185	2,325,788
CDS-FF	4,309,000	7,354,974	7,502,073	7,652,115	7,805,157
PAC Injection	150,000	256,033	261,154	266,377	271,704
SCR		12,347,617	12,594,569	12,846,460	13,103,390
SCR		5,745,380	5,860,287	5,977,493	6,097,043
SCR		5,805,121	5,921,223	6,039,648	6,160,441
SCR		3,541,789	3,612,625	3,684,878	3,758,575
SCR		5,757,328	5,872,475	5,989,924	6,109,723

G:\11-051 Sierra Club KY IRP
Tab BR 1-2, Lines 17-20

	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
O&M										

<u>Equipment</u>	<u>\$/yr</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>	<u>2041</u>	<u>2042</u>	<u>2043</u>	<u>2044</u>	<u>2045</u>	<u>2046</u>
BR1 SCR		3,542	3,613	3,685	3,759	3833.747	3910.422	3988.63	4068.403	4149.771	4232.766
BR2 SCR		5,757	5,872	5,990	6,110	6231.917	6356.555	6483.687	6613.36	6745.627	6880.54
G:\11-051 Sierra Club KY IRP											
Tab GH2MC1-2, Lines 19-21											
O&M		2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
GH2SCR 0		12,348	12,595	12,846	13,103	13365.46	13632.77	13905.42	14183.53	14467.2	14756.55
MC1SCR 0		5,745	5,860	5,977	6,097	6218.984	6343.364	6470.231	6599.636	6731.628	6866.261
MC2SCR 0		5805.1209	5921.2233	6039.6478	6160.4407	6283.65	6409.323	6537.509	6668.259	6801.624	6937.657

Year \$: 2010
Fixed O&M

Equipment \$/Yr

PJFF/PAC

SAM Mitigation

PJFF/PAC

SAM Mitigation

PJFF/PAC

PJFF/PAC

SCR Turn-Down

SAM Mitigation

PJFF/PAC

Sorbent Injection

PJFF/PAC

SCR Turn-Down

SAM Mitigation

PJFF/PAC

SCR Turn-Down

SAM Mitigation

Combined 1&2 FGD

PJFF/PAC

SAM Mitigation

Combined 1&2 FGD

PJFF/PAC

SAM Mitigation

FGD

PJFF/PAC

SAM Mitigation

SCR Turn-Down

FGD

PJFF/PAC

SAM Mitigation

SCR Turn-Down

PJFF/PAC

Year \$: 2010
 Fixed O&M

Equipment \$/Yr

PJFF/PAC

SAM Mitigation

PJFF/PAC

SAM Mitigation

PJFF/PAC

PJFF/PAC

SCR Turn-Down

SAM Mitigation

PJFF/PAC

Sorbent Injection

PJFF/PAC

SCR Turn-Down

SAM Mitigation

PJFF/PAC

SCR Turn-Down

SAM Mitigation

Combined 1&2 FGD

PJFF/PAC

SAM Mitigation

Combined 1&2 FGD

PJFF/PAC

SAM Mitigation

FGD

PJFF/PAC

SAM Mitigation

SCR Turn-Down

FGD

PJFF/PAC

SAM Mitigation

SCR Turn-Down

PJFF/PAC

<u>Equipment</u>	<u>\$/yr</u>
SCR	1,871,000
WFGD	
PJFF	1,191,000
SAM Mitigation	174,000
PAC Injection	169,000
SCR	1,993,000
WFGD	
PJFF	1,251,000
SAM Mitigation	177,000
PAC Injection	172,000
SCR	2,392,000
WFGD	
PJFF	1,632,000
SAM Mitigation	198,000
PAC Injection	191,000
SCR	943,000
CDS-FF	3,322,000
PAC Injection	141,000
SCR	1,284,000
CDS-FF	4,309,000
PAC Injection	150,000

SCR
SCR
SCR

SCR
SCR

G:\11-051 Sierra Club KY IRP ;
Tab BR 1-2, Lines 17-20
2058 2059

O&M

<u>Equipment</u>	<u>\$/yr</u>
BR1 SCR	5368.171 5475.534
BR2 SCR	8726.188 8900.712
G:\11-051 Sierra Club KY IRP ;	
Tab GH2MC1-2, Lines 19-21	2058 2059
O&M	
GH2SCR 0	18714.87 19089.16
MC1SCR 0	8708.079 8882.24
MC2SCR 0	8798.626 8974.599

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
BR	BR1	101	69	164	256	346	434	520	605	689	771	852
BR	BR2	167	114	271	423	571	717	860	1,001	1,139	1,275	1,408
BR	BR3	416	285	675	1,053	1,423	1,786	2,143	2,493	2,838	3,176	3,508
CR	CR4	155	77	204	327	447	564	678	790	899	1,006	1,109
CR	CR5	168	84	221	355	485	611	735	856	975	1,090	1,202
CR	CR6	240	120	316	507	692	873	1,050	1,223	1,392	1,557	1,718
GH	GH1	475	510	1,206	1,884	2,548	3,200	3,843	4,477	5,101	5,717	6,322
GH	GH2	484	520	1,228	1,920	2,596	3,261	3,916	4,562	5,198	5,825	6,442
GH	GH3	480	516	1,218	1,904	2,575	3,234	3,883	4,524	5,155	5,777	6,389
GH	GH4	479	515	1,216	1,900	2,570	3,227	3,875	4,514	5,144	5,765	6,376
GR	GR3	68	39	96	151	205	258	309	360	410	458	506
GR	GR4	95	55	134	211	286	360	432	503	572	640	707
MC	MC1	303	309	767	1,213	1,649	2,077	2,497	2,910	3,315	3,714	4,104
MC	MC2	301	307	762	1,205	1,639	2,063	2,480	2,891	3,294	3,689	4,077
MC	MC3	391	398	989	1,565	2,128	2,680	3,222	3,755	4,278	4,792	5,296
MC	MC4	477	486	1,207	1,910	2,597	3,270	3,931	4,581	5,219	5,846	6,461
TC	TC1	383	115	270	420	567	712	855	996	1,135	1,272	1,407
TC	TC2	549	166	386	602	813	1,021	1,225	1,427	1,626	1,823	2,016
TY	TY3	71	94	233	368	499	628	754	878	999	1,118	1,234

2.50% Capital Escalation Rate

2011 CR	281	454	428	405	384	364	344	325	305	285		
2012 CR	288	288	465	439	415	394	373	353	333	313		
2013 CR	295	295	295	477	450	426	403	382	362	341		
2014 CR	303	303	303	303	489	461	436	413	392	371		
2015 CR	310	310	310	310	310	501	473	447	424	402		
2016 CR	318	318	318	318	318	318	513	485	459	434		
2017 CR	326	326	326	326	326	326	326	526	497	470		
2018 CR	334	334	334	334	334	334	334	534	509	509		
2019 CR	342	342	342	342	342	342	342	542	539	539		
											342	553

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
		2020 CR										351
		2021 CR										
		2022 CR										
		2023 CR										
		2024 CR										
		2025 CR										
		2026 CR										
		2027 CR										
		2028 CR										
		2029 CR										
		2030 CR										
		2031 CR										
		2032 CR										
		2033 CR										
		2034 CR										
		2035 CR										
		2036 CR										
		2037 CR										
		2038 CR										
		2039 CR										
		2040 CR										
		2011 MC	1,499	2,188	2,076	1,972	1,877	1,788	1,703	1,617	1,532	1,447
		2012 MC		1,536	2,243	2,128	2,021	1,923	1,833	1,745	1,658	1,570
		2013 MC			1,575	2,299	2,181	2,072	1,972	1,878	1,789	1,699
		2014 MC				1,614	2,357	2,235	2,124	2,021	1,925	1,834
		2015 MC					1,655	2,416	2,291	2,177	2,071	1,974
		2016 MC						1,696	2,476	2,348	2,231	2,123
		2017 MC							1,738	2,538	2,407	2,287
		2018 MC								1,782	2,601	2,467
		2019 MC									1,826	2,666
		2020 MC										1,872
		2021 MC										
		2022 MC										

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2023 MC											
	2024 MC											
	2025 MC											
	2026 MC											
	2027 MC											
	2028 MC											
	2029 MC											
	2030 MC											
	2031 MC											
	2032 MC											
	2033 MC											
	2034 MC											
	2035 MC											
	2036 MC											
	2037 MC											
	2038 MC											
	2039 MC											
	2040 MC											
	2011 TC		281	368	350	333	318	304	291	278	264	251
	2012 TC			288	377	358	341	326	312	298	284	271
	2013 TC				295	387	367	350	334	319	305	292
	2014 TC					303	396	376	359	342	327	313
	2015 TC						310	406	386	368	351	336
	2016 TC							318	416	396	377	360
	2017 TC								326	427	405	386
	2018 TC									334	437	416
	2019 TC										342	448
	2020 TC											351
	2021 TC											
	2022 TC											
	2023 TC											
	2024 TC											
	2025 TC											

MTPCapital

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
		2026 TC										
		2027 TC										
		2028 TC										
		2029 TC										
		2030 TC										
		2031 TC										
		2032 TC										
		2033 TC										
		2034 TC										
		2035 TC										
		2036 TC										
		2037 TC										
		2038 TC										
		2039 TC										
		2040 TC										
		2011 GH	2,061	2,756	2,617	2,492	2,377	2,272	2,171	2,070	1,970	1,869
		2012 GH		2,113	2,825	2,683	2,554	2,436	2,328	2,225	2,122	2,019
		2013 GH			2,165	2,895	2,750	2,618	2,497	2,387	2,281	2,175
		2014 GH				2,219	2,968	2,819	2,683	2,560	2,446	2,338
		2015 GH					2,275	3,042	2,889	2,750	2,623	2,507
		2016 GH						2,332	3,118	2,961	2,819	2,689
		2017 GH							2,390	3,196	3,035	2,889
		2018 GH								2,450	3,276	3,111
		2019 GH									2,511	3,358
		2020 GH										2,574
		2021 GH										
		2022 GH										
		2023 GH										
		2024 GH										
		2025 GH										
		2026 GH										
		2027 GH										
		2028 GH										

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2029	GH										
	2030	GH										
	2031	GH										
	2032	GH										
	2033	GH										
	2034	GH										
	2035	GH										
	2036	GH										
	2037	GH										
	2038	GH										
	2039	GH										
	2040	GH										
	2011	BR	468	629	595	565	538	513	489	464	440	415
	2012	BR		480	645	610	579	551	526	501	476	451
	2013	BR			492	661	625	594	565	539	513	488
	2014	BR				504	677	641	609	579	552	526
	2015	BR					517	694	657	624	594	566
	2016	BR						530	712	674	639	608
	2017	BR							543	729	690	655
	2018	BR								557	748	708
	2019	BR									571	766
	2020	BR										585
	2021	BR										
	2022	BR										
	2023	BR										
	2024	BR										
	2025	BR										
	2026	BR										
	2027	BR										
	2028	BR										
	2029	BR										
	2030	BR										
	2031	BR										

MTPCapital

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2032	BR										
	2033	BR										
	2034	BR										
	2035	BR										
	2036	BR										
	2037	BR										
	2038	BR										
	2039	BR										
	2040	BR										
	2011	GR	94	134	127	120	114	108	103	98	92	87
	2012	GR		96	137	130	123	117	111	106	100	95
	2013	GR			98	141	133	126	120	114	108	103
	2014	GR				101	144	136	129	123	117	111
	2015	GR					103	148	140	132	126	120
	2016	GR						106	151	143	136	129
	2017	GR							109	155	147	139
	2018	GR								111	159	150
	2019	GR									114	163
	2020	GR										117
	2021	GR										
	2022	GR										
	2023	GR										
	2024	GR										
	2025	GR										
	2026	GR										
	2027	GR										
	2028	GR										
	2029	GR										
	2030	GR										
	2031	GR										
	2032	GR										
	2033	GR										
	2034	GR										

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	2035 GR											
	2036 GR											
	2037 GR											
	2038 GR											
	2039 GR											
	2040 GR											
	2011 TY		94	137	129	122	116	111	105	99	94	88
	2012 TY			96	140	132	125	119	113	108	102	96
	2013 TY				98	143	136	129	122	116	110	104
	2014 TY					101	147	139	132	125	119	113
	2015 TY						103	151	143	135	128	122
	2016 TY							106	154	146	138	131
	2017 TY								109	158	150	142
	2018 TY									111	162	153
	2019 TY										114	166
	2020 TY											117
	2021 TY											
	2022 TY											
	2023 TY											
	2024 TY											
	2025 TY											
	2026 TY											
	2027 TY											
	2028 TY											
	2029 TY											
	2030 TY											
	2031 TY											
	2032 TY											
	2033 TY											
	2034 TY											
	2035 TY											
	2036 TY											
	2037 TY											

Station Unit Capacity 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

2038 TY

2039 TY

2040 TY

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
BR1	101	931	1,008	1,085	1,163	1,241	1,320	1,399	1,479	1,560	1,642	1,724
BR2	167	1,539	1,667	1,794	1,922	2,052	2,182	2,313	2,446	2,579	2,714	2,850
BR3	416	3,834	4,153	4,469	4,789	5,111	5,435	5,762	6,092	6,425	6,761	7,100
CR4	155	1,210	1,308	1,405	1,501	1,596	1,691	1,786	1,880	1,974	2,023	2,073
CR5	168	1,312	1,418	1,522	1,626	1,730	1,833	1,936	2,038	2,139	2,193	2,247
CR6	240	1,874	2,026	2,175	2,324	2,471	2,619	2,765	2,911	3,056	3,132	3,210
GH1	475	6,918	7,504	8,080	8,653	9,231	9,814	10,402	10,995	11,594	12,199	12,809
GH2	484	7,049	7,646	8,233	8,817	9,405	9,999	10,599	11,204	11,814	12,430	13,052
GH3	480	6,991	7,583	8,165	8,744	9,328	9,917	10,511	11,111	11,716	12,327	12,944
GH4	479	6,977	7,567	8,148	8,726	9,308	9,896	10,489	11,088	11,692	12,302	12,917
GR3	68	553	598	643	689	734	780	825	871	918	964	1,011
GR4	95	772	836	899	962	1,026	1,089	1,153	1,217	1,282	1,347	1,412
MC1	303	4,487	4,862	5,229	5,592	5,956	6,320	6,686	7,053	7,421	7,790	8,160
MC2	301	4,458	4,830	5,194	5,555	5,916	6,279	6,642	7,007	7,372	7,739	8,106
MC3	391	5,790	6,274	6,747	7,216	7,685	8,156	8,628	9,102	9,576	10,052	10,530
MC4	477	7,064	7,654	8,231	8,803	9,376	9,950	10,526	11,103	11,683	12,263	12,846
TC1	383	1,539	1,670	1,799	1,927	2,057	2,188	2,320	2,453	2,588	2,725	2,863
TC2	549	2,207	2,394	2,579	2,762	2,948	3,136	3,325	3,517	3,710	3,906	4,104
TV3	71	1,347	1,458	1,568	1,677	1,787	1,898	2,008	2,119	2,230	2,341	2,453

2.50%

2011 CR	266	246	231	221	211	200	190	180	169	0	0	0
2012 CR	293	272	252	237	226	216	205	195	184	174	174	0
2013 CR	321	300	279	259	243	232	221	210	200	189	189	178
2014 CR	350	329	307	286	265	249	238	227	216	205	205	194
2015 CR	380	358	337	315	293	272	255	244	232	221	221	210
2016 CR	412	390	367	345	323	301	279	262	250	238	238	227
2017 CR	445	422	399	377	354	331	308	286	268	256	256	244
2018 CR	482	456	433	409	386	363	339	316	293	275	275	263
2019 CR	522	494	468	444	420	396	372	348	324	300	300	282

MTPCapital

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2020 CR		567	535	506	479	455	430	406	381	357	332	307
2021 CR		360	581	548	519	491	466	441	416	391	365	340
2022 CR			369	595	562	532	504	478	452	426	400	375
2023 CR				378	610	576	545	516	490	463	437	410
2024 CR					387	625	591	559	529	502	475	448
2025 CR						397	641	605	573	542	514	487
2026 CR							407	657	621	587	556	527
2027 CR								417	673	636	602	570
2028 CR									428	690	652	617
2029 CR										438	708	668
2030 CR											449	725
2031 CR												461
2032 CR												
2033 CR												
2034 CR												
2035 CR												
2036 CR												
2037 CR												
2038 CR												
2039 CR												
2040 CR												
2011 MC		1,361	1,276	1,191	1,128	1,089	1,049	1,010	970	931	891	851
2012 MC		1,483	1,395	1,308	1,221	1,157	1,116	1,075	1,035	994	954	913
2013 MC		1,610	1,520	1,430	1,341	1,251	1,185	1,144	1,102	1,061	1,019	978
2014 MC		1,742	1,650	1,558	1,466	1,374	1,282	1,215	1,173	1,130	1,087	1,045
2015 MC		1,879	1,785	1,691	1,597	1,503	1,409	1,314	1,245	1,202	1,158	1,115
2016 MC		2,023	1,926	1,830	1,733	1,637	1,540	1,444	1,347	1,277	1,232	1,187
2017 MC		2,176	2,073	1,975	1,876	1,777	1,678	1,579	1,480	1,381	1,309	1,263
2018 MC		2,344	2,231	2,125	2,024	1,922	1,821	1,720	1,618	1,517	1,415	1,341
2019 MC		2,529	2,403	2,286	2,178	2,075	1,971	1,867	1,763	1,659	1,555	1,451
2020 MC		2,733	2,592	2,463	2,344	2,233	2,126	2,020	1,913	1,807	1,700	1,594
2021 MC		1,919	2,801	2,657	2,524	2,402	2,289	2,180	2,070	1,961	1,852	1,743
2022 MC			1,967	2,871	2,723	2,588	2,462	2,346	2,234	2,122	2,010	1,898

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2023 MC					2,943	2,792	2,652	2,524	2,405	2,290	2,175	2,060
2024 MC			2,066	2,016	2,066	3,017	2,861	2,719	2,587	2,465	2,347	2,230
2025 MC						2,118	3,092	2,933	2,787	2,651	2,526	2,406
2026 MC							2,171	3,170	3,006	2,856	2,718	2,589
2027 MC								2,225	3,249	3,081	2,928	2,786
2028 MC									2,281	3,330	3,158	3,001
2029 MC										2,338	3,413	3,237
2030 MC											2,396	3,499
2031 MC												2,456
2032 MC												
2033 MC												
2034 MC												
2035 MC												
2036 MC												
2037 MC												
2038 MC												
2039 MC												
2040 MC												
2011 TC		238	225	211	203	198	193	189	184	179	175	170
2012 TC		257	244	230	217	208	203	198	193	189	184	179
2013 TC		278	264	250	236	222	213	208	203	198	193	188
2014 TC		299	285	270	256	242	228	218	213	208	203	198
2015 TC		321	306	292	277	263	248	233	224	218	213	208
2016 TC		344	329	314	299	284	269	254	239	229	224	219
2017 TC		369	353	337	322	307	291	276	261	245	235	230
2018 TC		396	378	361	346	330	314	298	283	267	251	241
2019 TC		426	406	387	370	354	338	322	306	290	274	258
2020 TC		460	437	416	397	380	363	347	330	314	297	281
2021 TC		360	471	447	426	407	389	372	355	338	321	305
2022 TC			369	483	459	437	417	399	381	364	347	329
2023 TC				378	495	470	448	427	409	391	373	355
2024 TC					387	507	482	459	438	419	401	383
2025 TC						397	520	494	470	449	429	411

MTPCapital

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2026 TC							407	533	506	482	460	440
2027 TC								417	546	519	494	472
2028 TC									428	560	532	507
2029 TC										438	574	545
2030 TC											449	588
2031 TC												461
2032 TC												
2033 TC												
2034 TC												
2035 TC												
2036 TC												
2037 TC												
2038 TC												
2039 TC												
2040 TC												
2011 GH		1,768	1,667	1,567	1,498	1,460	1,422	1,384	1,346	1,309	1,271	1,233
2012 GH		1,916	1,812	1,709	1,606	1,535	1,496	1,458	1,419	1,380	1,341	1,303
2013 GH		2,069	1,963	1,858	1,752	1,646	1,573	1,534	1,494	1,454	1,415	1,375
2014 GH		2,229	2,121	2,013	1,904	1,796	1,687	1,613	1,572	1,531	1,491	1,450
2015 GH		2,396	2,285	2,174	2,063	1,952	1,841	1,729	1,653	1,611	1,570	1,528
2016 GH		2,570	2,456	2,342	2,228	2,114	2,001	1,887	1,773	1,694	1,652	1,609
2017 GH		2,756	2,634	2,518	2,401	2,284	2,167	2,051	1,934	1,817	1,737	1,693
2018 GH		2,962	2,825	2,700	2,581	2,461	2,341	2,221	2,102	1,982	1,862	1,780
2019 GH		3,189	3,036	2,896	2,768	2,645	2,522	2,400	2,277	2,154	2,032	1,909
2020 GH		3,442	3,269	3,112	2,968	2,837	2,711	2,585	2,460	2,334	2,208	2,082
2021 GH		2,638	3,528	3,350	3,189	3,042	2,908	2,779	2,650	2,521	2,392	2,263
2022 GH			2,704	3,616	3,434	3,269	3,119	2,981	2,848	2,716	2,584	2,452
2023 GH				2,772	3,706	3,520	3,351	3,196	3,055	2,920	2,784	2,649
2024 GH					2,841	3,799	3,608	3,435	3,276	3,131	2,993	2,854
2025 GH						2,912	3,894	3,698	3,521	3,358	3,210	3,067
2026 GH							2,985	3,991	3,791	3,609	3,442	3,290
2027 GH								3,060	4,091	3,886	3,699	3,528
2028 GH									3,136	4,193	3,983	3,791

MTPCapital

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2029 GH										3,214	4,298	4,082
2030 GH										3,295	3,295	4,406
2031 GH												3,377
2032 GH												
2033 GH												
2034 GH												
2035 GH												
2036 GH												
2037 GH												
2038 GH												
2039 GH												
2040 GH												
2011 BR		391	367	350	341	332	323	315	306	297	288	279
2012 BR		426	401	376	359	350	341	332	323	313	304	295
2013 BR		462	436	411	385	368	358	349	340	331	321	312
2014 BR		500	474	447	421	395	377	367	358	348	339	329
2015 BR		539	512	485	458	432	405	386	377	367	357	347
2016 BR		580	553	525	498	470	442	415	396	386	376	366
2017 BR		624	595	567	538	510	482	453	425	406	396	385
2018 BR		672	639	610	581	552	523	494	465	436	416	406
2019 BR		725	688	655	625	595	566	536	506	476	447	426
2020 BR		785	743	706	672	641	610	580	549	519	488	458
2021 BR		600	805	762	723	688	657	625	594	563	532	500
2022 BR			615	825	781	741	706	673	641	609	577	545
2023 BR				630	846	801	760	723	690	657	624	591
2024 BR					646	867	821	779	741	707	673	640
2025 BR						662	889	841	798	760	725	690
2026 BR							678	911	862	818	779	743
2027 BR								695	934	884	839	798
2028 BR									713	957	906	860
2029 BR										731	981	928
2030 BR											749	1,005
2031 BR												768

MTPCapital

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2032 BR												
2033 BR												
2034 BR												
2035 BR												
2036 BR												
2037 BR												
2038 BR												
2039 BR												
2040 BR												
2011 GR		81	76	72	70	68	65	63	61	58	56	54
2012 GR		89	83	78	74	72	69	67	65	62	60	58
2013 GR		97	91	86	80	76	73	71	69	66	64	61
2014 GR		105	99	94	88	82	78	75	73	70	68	65
2015 GR		114	108	102	96	90	84	80	77	75	72	70
2016 GR		123	117	111	104	98	92	86	82	79	77	74
2017 GR		132	126	120	113	107	101	94	88	84	81	78
2018 GR		143	135	129	123	116	110	103	97	90	86	83
2019 GR		154	146	139	132	126	119	112	106	99	93	88
2020 GR		167	158	150	142	135	129	122	115	108	102	95
2021 GR		120	171	162	154	146	139	132	125	118	111	104
2022 GR			123	176	166	157	150	142	135	128	121	114
2023 GR				126	180	170	161	153	146	139	131	124
2024 GR					129	184	174	165	157	150	142	135
2025 GR						132	189	179	169	161	153	146
2026 GR							136	194	183	174	165	157
2027 GR								139	199	188	178	169
2028 GR									143	204	193	183
2029 GR										146	209	197
2030 GR											150	214
2031 GR												154
2032 GR												
2033 GR												
2034 GR												

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2035 GR												
2036 GR												
2037 GR												
2038 GR												
2039 GR												
2040 GR												
2011 TY		83	77	73	71	68	66	63	61	58	56	53
2012 TY		90	85	79	75	72	70	67	65	62	60	57
2013 TY		99	93	87	81	77	74	71	69	66	64	61
2014 TY		107	101	95	89	83	79	76	73	71	68	65
2015 TY		116	110	104	97	91	85	81	78	75	72	70
2016 TY		125	119	112	106	100	93	87	83	80	77	74
2017 TY		135	128	122	115	109	102	96	89	85	82	79
2018 TY		145	138	131	125	118	111	105	98	92	87	84
2019 TY		157	149	142	135	128	121	114	107	101	94	89
2020 TY		171	161	153	145	138	131	124	117	110	103	96
2021 TY		120	175	165	157	149	141	134	127	120	113	106
2022 TY			123	179	169	161	152	145	138	130	123	116
2023 TY				126	184	174	165	156	149	141	134	126
2024 TY					129	188	178	169	160	152	145	137
2025 TY						132	193	182	173	164	156	148
2026 TY							136	198	187	177	168	160
2027 TY								139	203	192	182	172
2028 TY									143	208	196	186
2029 TY										146	213	201
2030 TY											150	218
2031 TY												154

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Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
	2038 TY											
	2039 TY											
	2040 TY											

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
BR1	101	1,807	1,891	1,975	2,061	2,147	2,234	2,322	2,411	2,501	2,446	2,340
BR2	167	2,988	3,126	3,266	3,407	3,550	3,694	3,839	3,986	4,135	4,045	3,868
BR3	416	7,442	7,787	8,136	8,488	8,843	9,202	9,564	9,930	10,300	10,076	9,636
CR4	155	2,125	2,178	2,233	2,289	2,346	2,405	2,465	2,526	2,589	2,492	2,292
CR5	168	2,304	2,361	2,420	2,481	2,543	2,606	2,671	2,738	2,807	2,701	2,484
CR6	240	3,291	3,373	3,457	3,544	3,632	3,723	3,816	3,912	4,009	3,858	3,549
GH1	475	13,425	14,048	14,676	15,311	15,953	16,601	17,256	17,918	18,587	18,193	17,419
GH2	484	13,680	14,314	14,954	15,601	16,255	16,915	17,583	18,257	18,939	18,537	17,749
GH3	480	13,567	14,196	14,831	15,472	16,121	16,775	17,437	18,106	18,782	18,384	17,602
GH4	479	13,538	14,166	14,800	15,440	16,087	16,741	17,401	18,069	18,743	18,346	17,565
GR3	68	1,057	1,104	1,152	1,199	1,247	1,295	1,343	1,377	1,411	1,364	1,281
GR4	95	1,477	1,543	1,609	1,675	1,742	1,809	1,876	1,923	1,971	1,906	1,790
MC1	303	8,531	8,903	9,277	9,651	10,027	10,278	10,535	10,798	11,068	10,698	10,020
MC2	301	8,475	8,845	9,216	9,588	9,961	10,210	10,465	10,727	10,995	10,627	9,954
MC3	391	11,009	11,489	11,971	12,455	12,940	13,263	13,595	13,934	14,283	13,805	12,931
MC4	477	13,430	14,016	14,604	15,194	15,786	16,180	16,585	16,999	17,424	16,841	15,775
TC1	383	3,002	3,144	3,286	3,431	3,577	3,725	3,875	4,026	4,180	4,093	3,927
TC2	549	4,304	4,506	4,711	4,918	5,127	5,339	5,554	5,771	5,991	5,866	5,629
TY3	71	2,565	2,678	2,790	2,904	3,017	3,092	3,170	3,249	3,330	3,217	3,011

2.50%

2011 CR	0	0	0	0	0	0	0	0	0	0	0	0
2012 CR	0	0	0	0	0	0	0	0	0	0	0	0
2013 CR	0	0	0	0	0	0	0	0	0	0	0	0
2014 CR	182	0	0	0	0	0	0	0	0	0	0	0
2015 CR	198	187	0	0	0	0	0	0	0	0	0	0
2016 CR	215	203	192	0	0	0	0	0	0	0	0	0
2017 CR	232	220	208	196	0	0	0	0	0	0	0	0
2018 CR	250	238	226	214	201	0	0	0	0	0	0	0
2019 CR	269	257	244	232	219	206	0	0	0	0	0	0

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Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2020 CR	289	276	263	250	237	224	212	200	0	0	0	0
2021 CR	315	296	283	270	256	243	230	217	0	0	0	0
2022 CR	349	323	303	290	276	263	249	236	0	222	0	0
2023 CR	384	358	331	311	297	283	269	256	228	242	228	0
2024 CR	421	394	366	339	319	305	290	276	248	262	248	234
2025 CR	459	431	403	376	348	327	312	298	268	283	268	254
2026 CR	499	470	442	413	385	357	335	320	290	305	290	275
2027 CR	540	511	482	453	424	395	365	343	313	328	313	297
2028 CR	584	554	524	494	464	434	404	375	336	352	336	320
2029 CR	632	599	568	537	506	476	445	415	361	384	361	345
2030 CR	685	648	614	582	551	519	488	456	394	425	394	370
2031 CR	743	702	664	629	596	564	532	500	436	468	436	403
2032 CR	472	762	720	681	645	611	578	545	479	512	479	446
2033 CR		484	781	738	698	661	627	593	525	559	525	491
2034 CR			496	800	756	715	677	642	573	608	573	538
2035 CR				508	820	775	733	694	623	658	623	587
2036 CR					521	841	794	751	675	712	675	638
2037 CR						534	862	814	730	770	730	692
2038 CR							547	884	789	835	789	748
2039 CR								561	855	906	855	809
2040 CR									928	575	928	877
2011 MC	812	772	733	693	654	0	0	0	0	0	0	0
2012 MC	873	832	792	751	711	670	0	0	0	0	0	0
2013 MC	936	895	853	811	770	728	687	0	0	0	0	0
2014 MC	1,002	960	917	874	832	789	747	704	0	0	0	0
2015 MC	1,071	1,027	984	940	896	853	809	765	722	0	0	0
2016 MC	1,142	1,098	1,053	1,008	963	919	874	829	784	740	740	0
2017 MC	1,217	1,171	1,125	1,079	1,033	987	942	896	850	804	804	758
2018 MC	1,294	1,247	1,200	1,153	1,106	1,059	1,012	965	918	871	871	824
2019 MC	1,375	1,327	1,278	1,230	1,182	1,134	1,086	1,037	989	941	941	893
2020 MC	1,487	1,409	1,360	1,310	1,261	1,212	1,162	1,113	1,063	1,014	1,014	965
2021 MC	1,634	1,524	1,444	1,394	1,343	1,292	1,242	1,191	1,141	1,090	1,090	1,039
2022 MC	1,786	1,674	1,562	1,480	1,429	1,377	1,325	1,273	1,221	1,169	1,169	1,117

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Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2023 MC	1,946	1,831	1,716	1,601	1,518	1,464	1,411	1,358	1,305	1,252	1,198	
2024 MC	2,112	1,994	1,877	1,759	1,642	1,555	1,501	1,446	1,392	1,337	1,283	
2025 MC	2,285	2,165	2,044	1,924	1,803	1,683	1,594	1,538	1,483	1,427	1,371	
2026 MC	2,466	2,342	2,219	2,095	1,972	1,848	1,725	1,634	1,577	1,520	1,462	
2027 MC	2,654	2,528	2,401	2,274	2,148	2,021	1,894	1,768	1,675	1,616	1,558	
2028 MC	2,855	2,721	2,591	2,461	2,331	2,201	2,072	1,942	1,812	1,717	1,657	
2029 MC	3,076	2,927	2,789	2,656	2,522	2,389	2,256	2,123	1,990	1,857	1,760	
2030 MC	3,318	3,153	3,000	2,858	2,722	2,586	2,449	2,313	2,176	2,040	1,904	
2031 MC	3,586	3,401	3,232	3,075	2,930	2,790	2,650	2,510	2,371	2,231	2,091	
2032 MC	2,518	3,676	3,486	3,312	3,152	3,003	2,860	2,716	2,573	2,430	2,287	
2033 MC		2,580	3,768	3,573	3,395	3,231	3,078	2,931	2,784	2,637	2,491	
2034 MC			2,645	3,862	3,663	3,480	3,311	3,155	3,004	2,854	2,703	
2035 MC				2,711	3,958	3,754	3,567	3,394	3,234	3,080	2,925	
2036 MC					2,779	4,057	3,848	3,656	3,479	3,315	3,157	
2037 MC						2,848	4,159	3,944	3,748	3,566	3,398	
2038 MC							2,920	4,263	4,043	3,841	3,655	
2039 MC								2,993	4,369	4,144	3,937	
2040 MC									3,067	4,478	4,248	
2011 TC	165	161	156	152	147	142	138	133	128	124	119	
2012 TC	174	170	165	160	155	151	146	141	136	132	127	
2013 TC	184	179	174	169	164	159	154	149	145	140	135	
2014 TC	193	188	183	178	173	168	163	158	153	148	143	
2015 TC	203	198	193	188	183	178	172	167	162	157	152	
2016 TC	213	208	203	198	192	187	182	177	171	166	161	
2017 TC	224	219	213	208	203	197	192	187	181	176	170	
2018 TC	235	230	224	219	213	208	202	197	191	186	180	
2019 TC	247	241	235	230	224	219	213	207	202	196	190	
2020 TC	264	253	247	241	236	230	224	218	212	207	201	
2021 TC	288	271	259	253	247	241	236	230	224	218	212	
2022 TC	312	295	277	266	260	254	248	241	235	229	223	
2023 TC	338	320	302	284	272	266	260	254	247	241	235	
2024 TC	364	346	328	310	292	279	273	266	260	254	247	
2025 TC	392	373	355	336	317	299	286	280	273	267	260	

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Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2026 TC		421	402	383	364	345	325	306	293	287	280	273
2027 TC		451	432	412	392	373	353	334	314	301	294	287
2028 TC		484	463	442	422	402	382	362	342	322	308	301
2029 TC		519	496	474	453	433	412	392	371	350	330	316
2030 TC		559	532	508	486	465	444	423	401	380	359	338
2031 TC		603	573	546	521	498	476	455	433	411	390	368
2032 TC		472	618	587	559	534	511	488	466	444	422	400
2033 TC			484	633	602	573	547	523	501	478	455	432
2034 TC				496	649	617	588	561	536	513	490	466
2035 TC					508	665	632	602	575	550	526	502
2036 TC						521	682	648	617	589	564	539
2037 TC							534	699	664	633	604	578
2038 TC								547	717	681	648	619
2039 TC									561	735	698	665
2040 TC										575	753	715
2011 GH		1,195	1,158	1,120	1,082	1,044	1,007	969	931	893	856	818
2012 GH		1,264	1,225	1,187	1,148	1,109	1,070	1,032	993	954	916	877
2013 GH		1,335	1,296	1,256	1,216	1,177	1,137	1,097	1,058	1,018	978	939
2014 GH		1,409	1,369	1,328	1,287	1,247	1,206	1,165	1,125	1,084	1,043	1,003
2015 GH		1,486	1,445	1,403	1,361	1,320	1,278	1,236	1,194	1,153	1,111	1,069
2016 GH		1,566	1,523	1,481	1,438	1,395	1,353	1,310	1,267	1,224	1,182	1,139
2017 GH		1,649	1,605	1,562	1,518	1,474	1,430	1,386	1,343	1,299	1,255	1,211
2018 GH		1,735	1,690	1,645	1,601	1,556	1,511	1,466	1,421	1,376	1,331	1,286
2019 GH		1,825	1,779	1,733	1,687	1,641	1,595	1,549	1,503	1,457	1,410	1,364
2020 GH		1,957	1,870	1,823	1,776	1,729	1,682	1,634	1,587	1,540	1,493	1,446
2021 GH		2,134	2,006	1,917	1,869	1,820	1,772	1,724	1,675	1,627	1,579	1,530
2022 GH		2,320	2,188	2,056	1,965	1,915	1,866	1,816	1,767	1,717	1,668	1,618
2023 GH		2,513	2,378	2,243	2,107	2,014	1,963	1,912	1,862	1,811	1,760	1,709
2024 GH		2,715	2,576	2,437	2,299	2,160	2,064	2,012	1,960	1,908	1,856	1,804
2025 GH		2,925	2,783	2,641	2,498	2,356	2,214	2,116	2,063	2,009	1,956	1,903
2026 GH		3,144	2,998	2,852	2,707	2,561	2,415	2,269	2,169	2,114	2,060	2,005
2027 GH		3,372	3,223	3,073	2,924	2,774	2,625	2,475	2,326	2,223	2,167	2,111
2028 GH		3,617	3,456	3,303	3,150	2,997	2,844	2,690	2,537	2,384	2,279	2,221

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Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2029 GH		3,886	3,707	3,543	3,386	3,229	3,072	2,915	2,758	2,601	2,444	2,336
2030 GH		4,184	3,983	3,800	3,631	3,470	3,310	3,149	2,988	2,827	2,666	2,505
2031 GH		4,516	4,289	4,083	3,895	3,722	3,557	3,392	3,227	3,062	2,897	2,732
2032 GH		3,462	4,629	4,396	4,185	3,992	3,815	3,646	3,477	3,308	3,139	2,970
2033 GH			3,548	4,744	4,506	4,289	4,092	3,911	3,737	3,564	3,391	3,217
2034 GH				3,637	4,863	4,619	4,397	4,194	4,008	3,831	3,653	3,475
2035 GH					3,728	4,984	4,734	4,507	4,299	4,109	3,927	3,744
2036 GH						3,821	5,109	4,852	4,619	4,406	4,211	4,025
2037 GH							3,917	5,237	4,974	4,735	4,517	4,317
2038 GH								4,014	5,368	5,098	4,853	4,629
2039 GH									4,115	5,502	5,226	4,974
2040 GH										4,218	5,639	5,356
2011 BR		271	262	253	244	235	226	218	209	200	191	182
2012 BR		286	277	268	259	250	241	232	223	214	205	196
2013 BR		303	293	284	275	266	256	247	238	229	219	210
2014 BR		320	310	301	291	282	272	263	253	244	234	225
2015 BR		338	328	318	308	299	289	279	269	260	250	240
2016 BR		356	346	336	326	316	306	296	286	276	266	256
2017 BR		375	365	355	344	334	324	314	303	293	283	273
2018 BR		395	385	374	364	353	343	332	322	311	301	290
2019 BR		416	405	394	383	373	362	351	340	330	319	308
2020 BR		437	426	415	404	393	382	371	360	349	338	327
2021 BR		469	448	437	425	414	403	391	380	369	358	346
2022 BR		513	481	459	448	436	424	413	401	390	378	367
2023 BR		559	526	493	471	459	447	435	423	411	399	388
2024 BR		606	573	539	505	482	470	458	446	434	422	409
2025 BR		656	621	587	552	518	495	482	470	457	445	432
2026 BR		708	672	637	602	566	531	507	494	481	469	456
2027 BR		761	725	689	653	617	580	544	520	506	493	480
2028 BR		818	781	743	706	669	632	595	558	533	519	506
2029 BR		881	839	800	762	724	686	648	610	572	546	532
2030 BR		952	903	860	820	781	742	703	664	625	586	559
2031 BR		1,031	975	926	881	841	801	761	721	681	641	601

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2032 BR		787	1,056	1,000	949	903	862	821	780	739	698	657
2033 BR			806	1,083	1,025	973	926	883	841	799	757	715
2034 BR				827	1,110	1,050	997	949	905	862	819	776
2035 BR					847	1,138	1,077	1,022	973	928	884	840
2036 BR						868	1,166	1,104	1,048	997	951	906
2037 BR							890	1,195	1,131	1,074	1,022	975
2038 BR								912	1,225	1,160	1,101	1,047
2039 BR									935	1,256	1,189	1,128
2040 BR										959	1,287	1,218
2011 GR		52	49	47	45	42	40	38	0	0	0	0
2012 GR		55	53	51	48	46	44	41	39	0	0	0
2013 GR		59	57	54	52	49	47	45	42	40	0	0
2014 GR		63	61	58	56	53	51	48	46	43	41	0
2015 GR		67	65	62	60	57	54	52	49	47	44	42
2016 GR		71	69	66	64	61	58	56	53	51	48	45
2017 GR		76	73	70	68	65	63	60	57	55	52	49
2018 GR		80	78	75	72	70	67	64	61	59	56	53
2019 GR		85	82	80	77	74	71	68	66	63	60	57
2020 GR		90	87	84	82	79	76	73	70	67	64	62
2021 GR		97	92	90	87	84	81	78	75	72	69	66
2022 GR		107	100	95	92	89	86	83	80	77	74	71
2023 GR		117	110	102	97	94	91	88	85	82	79	76
2024 GR		127	120	112	105	100	96	93	90	87	84	81
2025 GR		138	130	123	115	107	102	99	96	92	89	86
2026 GR		149	141	134	126	118	110	105	101	98	95	91
2027 GR		161	153	145	137	129	121	113	107	104	100	97
2028 GR		173	165	157	149	140	132	124	116	110	106	103
2029 GR		187	178	169	161	152	144	135	127	119	113	109
2030 GR		202	192	182	173	165	156	148	139	130	122	115
2031 GR		219	207	197	187	178	169	160	151	142	133	125
2032 GR		157	225	212	201	191	182	173	164	155	146	137
2033 GR			161	230	218	206	196	187	177	168	159	150
2034 GR				165	236	223	212	201	191	182	172	163

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Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2035 GR					169	242	229	217	206	196	186	177
2036 GR						174	248	235	222	211	201	191
2037 GR							178	254	240	228	217	206
2038 GR								182	261	246	234	222
2039 GR									187	267	253	239
2040 GR										192	274	259
2011 TY		51	48	46	43	41	0	0	0	0	0	0
2012 TY		55	52	49	47	44	42	0	0	0	0	0
2013 TY		59	56	53	51	48	46	43	0	0	0	0
2014 TY		63	60	57	55	52	49	47	44	0	0	0
2015 TY		67	64	61	59	56	53	51	48	45	0	0
2016 TY		71	69	66	63	60	57	55	52	49	46	0
2017 TY		76	73	70	67	65	62	59	56	53	50	47
2018 TY		81	78	75	72	69	66	63	60	57	54	52
2019 TY		86	83	80	77	74	71	68	65	62	59	56
2020 TY		91	88	85	82	79	76	73	70	66	63	60
2021 TY		99	93	90	87	84	81	78	74	71	68	65
2022 TY		108	101	96	93	89	86	83	80	76	73	70
2023 TY		119	111	104	98	95	92	88	85	82	78	75
2024 TY		129	122	114	106	101	97	94	90	87	84	80
2025 TY		140	133	125	117	109	103	100	96	93	89	86
2026 TY		152	144	136	128	120	112	106	102	99	95	91
2027 TY		164	156	148	139	131	123	114	108	105	101	97
2028 TY		177	168	160	151	143	134	126	117	111	107	104
2029 TY		191	181	172	164	155	146	138	129	120	114	110
2030 TY		206	196	186	177	168	159	150	141	132	123	117
2031 TY		224	212	201	190	181	172	163	154	145	135	126
2032 TY		157	229	217	206	195	186	176	167	158	148	139
2033 TY			161	235	222	211	200	190	181	171	161	152
2034 TY			165		241	228	216	205	195	185	175	165
2035 TY					169	247	234	221	210	200	190	180
2036 TY						174	253	239	227	215	205	195
2037 TY							178	259	245	233	221	210

MTPCapital

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	2038 TY							182	266	252	238	226
	2039 TY								187	273	258	244
	2040 TY									192	279	264

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
BR1	101	2,239	2,145	2,055	1,969	1,867	1,770	1,678	1,591	1,510	1,434	1,361
BR2	167	3,703	3,546	3,397	3,255	3,087	2,926	2,774	2,631	2,496	2,371	2,251
BR3	416	9,223	8,833	8,463	8,109	7,689	7,289	6,910	6,553	6,218	5,906	5,607
CR4	155	2,102	1,921	1,747	1,580	1,421	1,269	1,125	988	859	738	623
CR5	168	2,278	2,082	1,893	1,713	1,540	1,375	1,219	1,071	931	800	675
CR6	240	3,255	2,974	2,705	2,447	2,200	1,965	1,741	1,529	1,330	1,143	965
GH1	475	16,688	15,994	15,334	14,702	14,098	13,375	12,686	12,033	11,415	10,834	10,291
GH2	484	17,004	16,297	15,624	14,981	14,365	13,628	12,927	12,261	11,631	11,039	10,486
GH3	480	16,863	16,163	15,495	14,857	14,246	13,516	12,820	12,159	11,535	10,948	10,399
GH4	479	16,828	16,129	15,463	14,826	14,217	13,488	12,793	12,134	11,511	10,925	10,378
GR3	68	1,203	1,128	1,056	988	922	860	801	745	692	643	595
GR4	95	1,680	1,575	1,476	1,380	1,288	1,201	1,118	1,040	967	898	832
MC1	303	9,375	8,758	8,166	7,598	7,053	6,531	6,033	5,559	5,110	4,687	4,290
MC2	301	9,313	8,700	8,112	7,548	7,007	6,488	5,993	5,523	5,077	4,656	4,262
MC3	391	12,097	11,301	10,538	9,805	9,102	8,428	7,785	7,174	6,595	6,048	5,536
MC4	477	14,758	13,787	12,856	11,962	11,104	10,282	9,498	8,752	8,045	7,379	6,754
TC1	383	3,771	3,623	3,483	3,349	3,222	3,101	2,986	2,878	2,777	2,652	2,536
TC2	549	5,405	5,193	4,992	4,801	4,618	4,445	4,280	4,125	3,980	3,802	3,636
TY3	71	2,815	2,629	2,451	2,281	2,117	1,962	1,814	1,675	1,543	1,420	1,303

2.50%

2011 CR	0	0	0	0	0	0	0	0	0	0	0	0
2012 CR	0	0	0	0	0	0	0	0	0	0	0	0
2013 CR	0	0	0	0	0	0	0	0	0	0	0	0
2014 CR	0	0	0	0	0	0	0	0	0	0	0	0
2015 CR	0	0	0	0	0	0	0	0	0	0	0	0
2016 CR	0	0	0	0	0	0	0	0	0	0	0	0
2017 CR	0	0	0	0	0	0	0	0	0	0	0	0
2018 CR	0	0	0	0	0	0	0	0	0	0	0	0
2019 CR	0	0	0	0	0	0	0	0	0	0	0	0

MTPCapital

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2020 CR		0	0	0	0	0	0	0	0	0	0	0
2021 CR		0	0	0	0	0	0	0	0	0	0	0
2022 CR		0	0	0	0	0	0	0	0	0	0	0
2023 CR		0	0	0	0	0	0	0	0	0	0	0
2024 CR		0	0	0	0	0	0	0	0	0	0	0
2025 CR		239	0	0	0	0	0	0	0	0	0	0
2026 CR		260	245	0	0	0	0	0	0	0	0	0
2027 CR		282	267	252	0	0	0	0	0	0	0	0
2028 CR		305	289	273	258	0	0	0	0	0	0	0
2029 CR		329	312	296	280	264	0	0	0	0	0	0
2030 CR		353	337	320	304	287	271	0	0	0	0	0
2031 CR		379	362	345	328	311	294	278	0	0	0	0
2032 CR		414	388	371	354	336	319	302	285	0	0	0
2033 CR		458	424	398	380	363	345	327	309	292	0	0
2034 CR		504	469	434	408	390	372	353	335	317	299	0
2035 CR		552	516	481	445	418	400	381	362	344	325	306
2036 CR		602	566	529	493	456	429	410	390	371	352	333
2037 CR		654	617	580	542	505	468	439	420	400	381	361
2038 CR		709	671	633	594	556	518	480	450	430	410	390
2039 CR		766	727	688	648	609	570	531	492	462	441	421
2040 CR		829	786	745	705	665	624	584	544	504	473	452
2011 MC		0	0	0	0	0	0	0	0	0	0	0
2012 MC		0	0	0	0	0	0	0	0	0	0	0
2013 MC		0	0	0	0	0	0	0	0	0	0	0
2014 MC		0	0	0	0	0	0	0	0	0	0	0
2015 MC		0	0	0	0	0	0	0	0	0	0	0
2016 MC		0	0	0	0	0	0	0	0	0	0	0
2017 MC		0	0	0	0	0	0	0	0	0	0	0
2018 MC		777	0	0	0	0	0	0	0	0	0	0
2019 MC		845	797	0	0	0	0	0	0	0	0	0
2020 MC		915	866	816	0	0	0	0	0	0	0	0
2021 MC		989	938	887	837	0	0	0	0	0	0	0
2022 MC		1,065	1,013	962	910	858	0	0	0	0	0	0

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2023 MC		1,145	1,092	1,039	986	932	879	0	0	0	0	0
2024 MC		1,228	1,174	1,119	1,065	1,010	956	901	0	0	0	0
2025 MC		1,315	1,259	1,203	1,147	1,091	1,035	980	924	0	0	0
2026 MC		1,405	1,348	1,290	1,233	1,176	1,119	1,061	1,004	947	0	0
2027 MC		1,499	1,440	1,381	1,323	1,264	1,205	1,147	1,088	1,029	970	0
2028 MC		1,597	1,536	1,476	1,416	1,356	1,296	1,235	1,175	1,115	1,055	995
2029 MC		1,698	1,636	1,575	1,513	1,451	1,390	1,328	1,266	1,205	1,143	1,081
2030 MC		1,804	1,741	1,677	1,614	1,551	1,488	1,424	1,361	1,298	1,235	1,172
2031 MC		1,951	1,849	1,784	1,719	1,655	1,590	1,525	1,460	1,395	1,330	1,266
2032 MC		2,143	2,000	1,895	1,829	1,762	1,696	1,629	1,563	1,497	1,430	1,364
2033 MC		2,344	2,197	2,050	1,943	1,874	1,806	1,738	1,670	1,602	1,534	1,466
2034 MC		2,553	2,402	2,252	2,101	1,991	1,921	1,852	1,782	1,712	1,642	1,572
2035 MC		2,771	2,617	2,462	2,308	2,154	2,041	1,969	1,898	1,826	1,755	1,683
2036 MC		2,998	2,840	2,682	2,524	2,366	2,208	2,092	2,019	1,945	1,872	1,799
2037 MC		3,236	3,073	2,911	2,749	2,587	2,425	2,263	2,144	2,069	1,994	1,919
2038 MC		3,483	3,316	3,150	2,984	2,818	2,652	2,486	2,319	2,198	2,121	2,044
2039 MC		3,746	3,570	3,399	3,229	3,059	2,888	2,718	2,548	2,377	2,253	2,174
2040 MC		4,036	3,840	3,659	3,484	3,310	3,135	2,961	2,786	2,611	2,437	2,309
2011 TC		114	110	105	101	96	91	87	82	77	0	0
2012 TC		122	117	113	108	103	98	94	89	84	79	0
2013 TC		130	125	120	115	111	106	101	96	91	86	81
2014 TC		138	133	128	123	118	113	108	103	98	93	88
2015 TC		147	142	137	131	126	121	116	111	106	101	96
2016 TC		156	150	145	140	135	130	124	119	114	109	103
2017 TC		165	160	154	149	144	138	133	127	122	117	111
2018 TC		175	169	164	158	153	147	142	136	131	125	120
2019 TC		185	179	173	168	162	156	151	145	139	134	128
2020 TC		195	189	183	178	172	166	160	155	149	143	137
2021 TC		206	200	194	188	182	176	170	164	158	152	147
2022 TC		217	211	205	199	193	187	181	175	168	162	156
2023 TC		229	223	216	210	204	198	191	185	179	173	166
2024 TC		241	234	228	222	215	209	203	196	190	183	177
2025 TC		253	247	240	234	227	221	214	208	201	194	188

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2026 TC		266	260	253	246	240	233	226	219	213	206	199
2027 TC		280	273	266	259	253	246	239	232	225	218	211
2028 TC		294	287	280	273	266	259	252	245	238	231	224
2029 TC		309	301	294	287	280	273	265	258	251	244	236
2030 TC		324	316	309	302	294	287	279	272	265	257	250
2031 TC		347	332	324	317	309	302	294	286	279	271	264
2032 TC		377	355	340	332	325	317	309	301	293	286	278
2033 TC		410	387	364	349	341	333	325	317	309	301	293
2034 TC		443	420	396	373	357	349	341	333	325	317	308
2035 TC		478	454	430	406	382	366	358	350	341	333	324
2036 TC		515	490	466	441	417	392	376	367	358	350	341
2037 TC		553	527	502	477	452	427	402	385	376	367	358
2038 TC		592	566	541	515	489	463	438	412	395	385	376
2039 TC		634	607	580	554	528	501	475	449	422	404	395
2040 TC		681	650	622	595	568	541	514	487	460	433	414
2011 GH		780	742	704	667	629	0	0	0	0	0	0
2012 GH		838	800	761	722	683	645	0	0	0	0	0
2013 GH		899	859	819	780	740	700	661	0	0	0	0
2014 GH		962	921	881	840	799	759	718	677	0	0	0
2015 GH		1,028	986	944	903	861	819	778	736	694	0	0
2016 GH		1,096	1,053	1,011	968	925	882	840	797	754	712	0
2017 GH		1,167	1,124	1,080	1,036	992	948	905	861	817	773	729
2018 GH		1,241	1,197	1,152	1,107	1,062	1,017	972	927	882	837	792
2019 GH		1,318	1,272	1,226	1,180	1,134	1,088	1,042	996	950	904	858
2020 GH		1,399	1,351	1,304	1,257	1,210	1,163	1,116	1,068	1,021	974	927
2021 GH		1,482	1,434	1,385	1,337	1,289	1,240	1,192	1,143	1,095	1,047	998
2022 GH		1,569	1,519	1,469	1,420	1,370	1,321	1,271	1,222	1,172	1,123	1,073
2023 GH		1,659	1,608	1,557	1,506	1,455	1,405	1,354	1,303	1,252	1,201	1,151
2024 GH		1,752	1,700	1,648	1,596	1,544	1,492	1,440	1,388	1,336	1,283	1,231
2025 GH		1,849	1,796	1,742	1,689	1,636	1,582	1,529	1,476	1,422	1,369	1,316
2026 GH		1,950	1,895	1,841	1,786	1,731	1,677	1,622	1,567	1,513	1,458	1,403
2027 GH		2,055	1,999	1,943	1,887	1,831	1,775	1,719	1,662	1,606	1,550	1,494
2028 GH		2,164	2,106	2,049	1,991	1,934	1,876	1,819	1,762	1,704	1,647	1,589

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Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2029 GH		2,277	2,218	2,159	2,100	2,041	1,982	1,923	1,864	1,806	1,747	1,688
2030 GH		2,394	2,334	2,273	2,213	2,153	2,092	2,032	1,971	1,911	1,851	1,790
2031 GH		2,567	2,454	2,392	2,330	2,268	2,206	2,144	2,083	2,021	1,959	1,897
2032 GH		2,801	2,632	2,515	2,452	2,388	2,325	2,262	2,198	2,135	2,071	2,008
2033 GH		3,044	2,871	2,697	2,578	2,513	2,448	2,383	2,318	2,253	2,188	2,123
2034 GH		3,298	3,120	2,942	2,765	2,643	2,576	2,509	2,443	2,376	2,309	2,243
2035 GH		3,562	3,380	3,198	3,016	2,834	2,709	2,640	2,572	2,504	2,435	2,367
2036 GH		3,838	3,651	3,465	3,278	3,091	2,905	2,776	2,706	2,636	2,566	2,496
2037 GH		4,125	3,934	3,743	3,551	3,360	3,169	2,977	2,846	2,774	2,702	2,630
2038 GH		4,425	4,228	4,032	3,836	3,640	3,444	3,248	3,052	2,917	2,843	2,770
2039 GH		4,745	4,535	4,334	4,133	3,932	3,731	3,530	3,329	3,128	2,990	2,914
2040 GH		5,099	4,864	4,649	4,443	4,236	4,030	3,824	3,618	3,412	3,206	3,065
2011 BR		173	165	156	147	0	0	0	0	0	0	0
2012 BR		187	178	169	160	151	0	0	0	0	0	0
2013 BR		201	191	182	173	164	154	0	0	0	0	0
2014 BR		215	206	196	187	177	168	158	0	0	0	0
2015 BR		230	221	211	201	191	182	172	162	0	0	0
2016 BR		246	236	226	216	206	196	186	176	166	0	0
2017 BR		263	252	242	232	222	211	201	191	181	170	0
2018 BR		280	269	259	248	238	227	217	206	196	185	175
2019 BR		297	287	276	265	254	244	233	222	211	201	190
2020 BR		316	305	294	283	272	261	250	239	228	217	206
2021 BR		335	324	312	301	290	278	267	256	245	233	222
2022 BR		355	343	332	320	309	297	285	274	262	251	239
2023 BR		376	364	352	340	328	316	304	293	281	269	257
2024 BR		397	385	373	361	349	336	324	312	300	288	276
2025 BR		420	407	395	382	370	357	345	332	320	307	295
2026 BR		443	430	417	405	392	379	366	353	341	328	315
2027 BR		467	454	441	428	415	402	388	375	362	349	336
2028 BR		492	479	465	452	438	425	412	398	385	371	358
2029 BR		518	505	491	477	463	449	436	422	408	394	381
2030 BR		545	531	517	503	489	475	461	447	432	418	404
2031 BR		573	559	545	530	516	501	487	472	458	443	429

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2032 BR		616	588	573	558	543	529	514	499	484	469	454
2033 BR		673	631	603	587	572	557	542	527	511	496	481
2034 BR		733	690	647	618	602	586	571	555	540	524	509
2035 BR		795	751	707	663	633	617	601	585	569	553	537
2036 BR		861	815	770	725	680	649	632	616	600	583	567
2037 BR		928	882	836	789	743	697	665	648	632	615	598
2038 BR		999	952	904	857	809	762	714	682	664	647	630
2039 BR		1,074	1,024	975	927	878	829	781	732	699	681	663
2040 BR		1,156	1,100	1,050	1,000	950	900	850	800	750	716	698
2011 GR		0	0	0	0	0	0	0	0	0	0	0
2012 GR		0	0	0	0	0	0	0	0	0	0	0
2013 GR		0	0	0	0	0	0	0	0	0	0	0
2014 GR		0	0	0	0	0	0	0	0	0	0	0
2015 GR		0	0	0	0	0	0	0	0	0	0	0
2016 GR		43	0	0	0	0	0	0	0	0	0	0
2017 GR		47	44	0	0	0	0	0	0	0	0	0
2018 GR		50	48	45	0	0	0	0	0	0	0	0
2019 GR		55	52	49	46	0	0	0	0	0	0	0
2020 GR		59	56	53	50	47	0	0	0	0	0	0
2021 GR		63	60	57	54	51	48	0	0	0	0	0
2022 GR		68	65	62	59	56	53	50	0	0	0	0
2023 GR		72	69	66	63	60	57	54	51	0	0	0
2024 GR		77	74	71	68	65	62	59	55	52	0	0
2025 GR		83	79	76	73	70	66	63	60	57	54	0
2026 GR		88	85	81	78	75	71	68	65	61	58	55
2027 GR		94	90	87	83	80	77	73	70	66	63	60
2028 GR		99	96	92	89	86	82	79	75	72	68	65
2029 GR		105	102	98	95	91	88	84	81	77	73	70
2030 GR		112	108	104	101	97	93	90	86	83	79	75
2031 GR		118	115	111	107	103	100	96	92	88	85	81
2032 GR		128	121	117	114	110	106	102	98	94	91	87
2033 GR		140	131	124	120	116	113	109	105	101	97	93
2034 GR		153	144	134	127	123	119	115	111	107	103	99

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2035 GR		167	157	147	138	131	126	122	118	114	110	106
2036 GR		181	171	161	151	141	134	130	125	121	117	113
2037 GR		196	186	175	165	155	145	137	133	129	124	120
2038 GR		211	201	190	180	169	159	148	141	136	132	127
2039 GR		228	217	206	195	184	173	163	152	144	140	135
2040 GR		245	233	222	211	200	189	178	167	156	148	143
2011 TY		0	0	0	0	0	0	0	0	0	0	0
2012 TY		0	0	0	0	0	0	0	0	0	0	0
2013 TY		0	0	0	0	0	0	0	0	0	0	0
2014 TY		0	0	0	0	0	0	0	0	0	0	0
2015 TY		0	0	0	0	0	0	0	0	0	0	0
2016 TY		0	0	0	0	0	0	0	0	0	0	0
2017 TY		0	0	0	0	0	0	0	0	0	0	0
2018 TY		49	0	0	0	0	0	0	0	0	0	0
2019 TY		53	50	0	0	0	0	0	0	0	0	0
2020 TY		57	54	51	0	0	0	0	0	0	0	0
2021 TY		62	59	55	52	0	0	0	0	0	0	0
2022 TY		67	63	60	57	54	0	0	0	0	0	0
2023 TY		72	68	65	62	58	55	0	0	0	0	0
2024 TY		77	73	70	67	63	60	56	0	0	0	0
2025 TY		82	79	75	72	68	65	61	58	0	0	0
2026 TY		88	84	81	77	73	70	66	63	59	0	0
2027 TY		94	90	86	83	79	75	72	68	64	61	0
2028 TY		100	96	92	89	85	81	77	73	70	66	62
2029 TY		106	102	98	95	91	87	83	79	75	71	68
2030 TY		113	109	105	101	97	93	89	85	81	77	73
2031 TY		120	116	112	107	103	99	95	91	87	83	79
2032 TY		129	123	118	114	110	106	102	98	94	89	85
2033 TY		142	133	126	121	117	113	109	104	100	96	92
2034 TY		156	146	136	129	124	120	116	111	107	103	98
2035 TY		170	160	149	139	132	128	123	119	114	110	105
2036 TY		184	174	164	153	143	135	131	126	122	117	112
2037 TY		199	189	178	168	157	146	139	134	129	125	120

MTPCapital

Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2038 TY		215	204	194	183	172	161	150	142	137	133	128
2039 TY		232	221	210	198	187	176	165	154	146	141	136
2040 TY		250	238	226	215	203	192	180	169	158	149	144

Unit	Capacity	2054	2055	2056	2057	2058	2059
BR1	101	1,290	1,219	1,149	1,080	1,013	946
BR2	167	2,132	2,015	1,900	1,787	1,675	1,564
BR3	416	5,312	5,021	4,733	4,450	4,171	3,897
CR4	155	511	402	297	194	95	0
CR5	168	554	436	322	211	103	0
CR6	240	792	623	459	301	148	0
GH1	475	9,770	9,256	8,749	8,249	7,755	7,269
GH2	484	9,956	9,432	8,915	8,405	7,902	7,407
GH3	480	9,873	9,354	8,841	8,336	7,837	7,346
GH4	479	9,853	9,334	8,823	8,318	7,821	7,331
GR3	68	549	504	459	415	373	331
GR4	95	767	704	641	580	521	462
MC1	303	3,910	3,538	3,173	2,817	2,468	2,128
MC2	301	3,884	3,515	3,152	2,798	2,452	2,114
MC3	391	5,046	4,565	4,095	3,635	3,185	2,746
MC4	477	6,156	5,570	4,996	4,434	3,886	3,350
TC1	383	2,425	2,315	2,206	2,099	1,993	1,888
TC2	549	3,476	3,319	3,163	3,009	2,857	2,706
TY3	71	1,187	1,074	964	855	749	646

2.50%

2011 CR	0	0	0	0	0	0	0
2012 CR	0	0	0	0	0	0	0
2013 CR	0	0	0	0	0	0	0
2014 CR	0	0	0	0	0	0	0
2015 CR	0	0	0	0	0	0	0
2016 CR	0	0	0	0	0	0	0
2017 CR	0	0	0	0	0	0	0
2018 CR	0	0	0	0	0	0	0
2019 CR	0	0	0	0	0	0	0

MTPCapital

Unit	Capacity	2054	2055	2056	2057	2058	2059
2020 CR		0	0	0	0	0	0
2021 CR		0	0	0	0	0	0
2022 CR		0	0	0	0	0	0
2023 CR		0	0	0	0	0	0
2024 CR		0	0	0	0	0	0
2025 CR		0	0	0	0	0	0
2026 CR		0	0	0	0	0	0
2027 CR		0	0	0	0	0	0
2028 CR		0	0	0	0	0	0
2029 CR		0	0	0	0	0	0
2030 CR		0	0	0	0	0	0
2031 CR		0	0	0	0	0	0
2032 CR		0	0	0	0	0	0
2033 CR		0	0	0	0	0	0
2034 CR		0	0	0	0	0	0
2035 CR		0	0	0	0	0	0
2036 CR		314	0	0	0	0	0
2037 CR		342	322	0	0	0	0
2038 CR		370	350	330	0	0	0
2039 CR		400	379	359	338	0	0
2040 CR		431	410	389	368	347	0
2011 MC		0	0	0	0	0	0
2012 MC		0	0	0	0	0	0
2013 MC		0	0	0	0	0	0
2014 MC		0	0	0	0	0	0
2015 MC		0	0	0	0	0	0
2016 MC		0	0	0	0	0	0
2017 MC		0	0	0	0	0	0
2018 MC		0	0	0	0	0	0
2019 MC		0	0	0	0	0	0
2020 MC		0	0	0	0	0	0
2021 MC		0	0	0	0	0	0
2022 MC		0	0	0	0	0	0

MTPCapital

Unit	Capacity	2054	2055	2056	2057	2058	2059
2023 MC		0	0	0	0	0	0
2024 MC		0	0	0	0	0	0
2025 MC		0	0	0	0	0	0
2026 MC		0	0	0	0	0	0
2027 MC		0	0	0	0	0	0
2028 MC		0	0	0	0	0	0
2029 MC		1,020	0	0	0	0	0
2030 MC		1,108	1,045	0	0	0	0
2031 MC		1,201	1,136	1,071	0	0	0
2032 MC		1,297	1,231	1,164	1,098	0	0
2033 MC		1,398	1,330	1,262	1,194	1,125	0
2034 MC		1,503	1,433	1,363	1,293	1,223	1,154
2035 MC		1,612	1,540	1,469	1,397	1,325	1,254
2036 MC		1,725	1,652	1,579	1,505	1,432	1,359
2037 MC		1,844	1,768	1,693	1,618	1,543	1,468
2038 MC		1,967	1,890	1,813	1,736	1,659	1,581
2039 MC		2,095	2,016	1,937	1,858	1,779	1,700
2040 MC		2,228	2,147	2,066	1,985	1,904	1,823
2011 TC		0	0	0	0	0	0
2012 TC		0	0	0	0	0	0
2013 TC		0	0	0	0	0	0
2014 TC		83	0	0	0	0	0
2015 TC		91	85	0	0	0	0
2016 TC		98	93	88	0	0	0
2017 TC		106	101	95	90	0	0
2018 TC		114	109	103	98	92	0
2019 TC		123	117	111	106	100	94
2020 TC		131	126	120	114	108	102
2021 TC		141	135	129	123	117	111
2022 TC		150	144	138	132	126	120
2023 TC		160	154	148	141	135	129
2024 TC		171	164	158	151	145	139
2025 TC		181	175	168	162	155	149

Unit	Capacity	2054	2055	2056	2057	2058	2059
2026 TC	193	186	179	173	166	159	
2027 TC	204	197	191	184	177	170	
2028 TC	217	209	202	195	188	181	
2029 TC	229	222	215	207	200	193	
2030 TC	242	235	227	220	213	205	
2031 TC	256	248	241	233	226	218	
2032 TC	270	262	255	247	239	231	
2033 TC	285	277	269	261	253	245	
2034 TC	300	292	284	276	267	259	
2035 TC	316	308	299	291	283	274	
2036 TC	333	324	315	307	298	290	
2037 TC	350	341	332	323	314	306	
2038 TC	367	358	349	340	331	322	
2039 TC	386	377	367	358	349	340	
2040 TC	405	396	386	377	367	358	
2011 GH	0	0	0	0	0	0	0
2012 GH	0	0	0	0	0	0	0
2013 GH	0	0	0	0	0	0	0
2014 GH	0	0	0	0	0	0	0
2015 GH	0	0	0	0	0	0	0
2016 GH	0	0	0	0	0	0	0
2017 GH	0	0	0	0	0	0	0
2018 GH	748	0	0	0	0	0	0
2019 GH	812	766	0	0	0	0	0
2020 GH	880	833	785	0	0	0	0
2021 GH	950	902	853	805	0	0	0
2022 GH	1,023	974	924	875	825	0	0
2023 GH	1,100	1,049	998	947	897	846	846
2024 GH	1,179	1,127	1,075	1,023	971	919	919
2025 GH	1,262	1,209	1,155	1,102	1,049	995	995
2026 GH	1,348	1,294	1,239	1,184	1,130	1,075	1,075
2027 GH	1,438	1,382	1,326	1,270	1,214	1,158	1,158
2028 GH	1,532	1,474	1,417	1,359	1,302	1,244	1,244

MTPCapital

Unit	Capacity	2054	2055	2056	2057	2058	2059
2029 GH	1,629	1,570	1,511	1,452	1,393	1,334	
2030 GH	1,730	1,670	1,609	1,549	1,488	1,428	
2031 GH	1,835	1,773	1,711	1,649	1,588	1,526	
2032 GH	1,944	1,881	1,818	1,754	1,691	1,627	
2033 GH	2,058	1,993	1,928	1,863	1,798	1,733	
2034 GH	2,176	2,109	2,043	1,976	1,910	1,843	
2035 GH	2,299	2,231	2,162	2,094	2,026	1,957	
2036 GH	2,426	2,356	2,286	2,216	2,146	2,076	
2037 GH	2,559	2,487	2,415	2,343	2,272	2,200	
2038 GH	2,696	2,623	2,549	2,476	2,402	2,328	
2039 GH	2,839	2,764	2,688	2,613	2,537	2,462	
2040 GH	2,987	2,910	2,833	2,755	2,678	2,601	
2011 BR	0	0	0	0	0	0	0
2012 BR	0	0	0	0	0	0	0
2013 BR	0	0	0	0	0	0	0
2014 BR	0	0	0	0	0	0	0
2015 BR	0	0	0	0	0	0	0
2016 BR	0	0	0	0	0	0	0
2017 BR	0	0	0	0	0	0	0
2018 BR	0	0	0	0	0	0	0
2019 BR	179	0	0	0	0	0	0
2020 BR	195	183	0	0	0	0	0
2021 BR	211	199	188	0	0	0	0
2022 BR	228	216	204	193	0	0	0
2023 BR	245	233	221	209	198	0	0
2024 BR	263	251	239	227	215	203	203
2025 BR	282	270	257	245	233	220	220
2026 BR	302	290	277	264	251	238	238
2027 BR	323	310	297	284	271	257	257
2028 BR	344	331	318	304	291	277	277
2029 BR	367	353	339	326	312	298	298
2030 BR	390	376	362	348	334	320	320
2031 BR	414	400	385	371	356	342	342

Unit	Capacity	2054	2055	2056	2057	2058	2059
2032 BR		440	425	410	395	380	365
2033 BR		466	451	435	420	405	390
2034 BR		493	477	462	446	431	415
2035 BR		521	505	489	473	457	441
2036 BR		551	534	518	502	485	469
2037 BR		581	564	548	531	514	497
2038 BR		613	596	579	561	544	527
2039 BR		646	628	611	593	575	558
2040 BR		680	662	644	626	608	590
2011 GR		0	0	0	0	0	0
2012 GR		0	0	0	0	0	0
2013 GR		0	0	0	0	0	0
2014 GR		0	0	0	0	0	0
2015 GR		0	0	0	0	0	0
2016 GR		0	0	0	0	0	0
2017 GR		0	0	0	0	0	0
2018 GR		0	0	0	0	0	0
2019 GR		0	0	0	0	0	0
2020 GR		0	0	0	0	0	0
2021 GR		0	0	0	0	0	0
2022 GR		0	0	0	0	0	0
2023 GR		0	0	0	0	0	0
2024 GR		0	0	0	0	0	0
2025 GR		0	0	0	0	0	0
2026 GR		0	0	0	0	0	0
2027 GR		56	0	0	0	0	0
2028 GR		61	58	0	0	0	0
2029 GR		66	63	59	0	0	0
2030 GR		72	68	64	61	0	0
2031 GR		77	73	70	66	62	0
2032 GR		83	79	75	71	67	64
2033 GR		89	85	81	77	73	69
2034 GR		95	91	87	83	79	75

Unit	Capacity	2054	2055	2056	2057	2058	2059
2035 GR	102	98	93	89	85	81	
2036 GR	108	104	100	96	91	87	
2037 GR	115	111	107	102	98	94	
2038 GR	123	118	114	109	105	101	
2039 GR	130	126	121	117	112	108	
2040 GR	138	134	129	124	120	115	
2011 TY	0	0	0	0	0	0	
2012 TY	0	0	0	0	0	0	
2013 TY	0	0	0	0	0	0	
2014 TY	0	0	0	0	0	0	
2015 TY	0	0	0	0	0	0	
2016 TY	0	0	0	0	0	0	
2017 TY	0	0	0	0	0	0	
2018 TY	0	0	0	0	0	0	
2019 TY	0	0	0	0	0	0	
2020 TY	0	0	0	0	0	0	
2021 TY	0	0	0	0	0	0	
2022 TY	0	0	0	0	0	0	
2023 TY	0	0	0	0	0	0	
2024 TY	0	0	0	0	0	0	
2025 TY	0	0	0	0	0	0	
2026 TY	0	0	0	0	0	0	
2027 TY	0	0	0	0	0	0	
2028 TY	0	0	0	0	0	0	
2029 TY	64	0	0	0	0	0	
2030 TY	69	65	0	0	0	0	
2031 TY	75	71	67	0	0	0	
2032 TY	81	77	73	69	0	0	
2033 TY	87	83	79	75	70	0	
2034 TY	94	90	85	81	76	72	
2035 TY	101	96	92	87	83	78	
2036 TY	108	103	99	94	89	85	
2037 TY	115	111	106	101	96	92	

MTPCapital

Unit	Capacity	2054	2055	2056	2057	2058	2059
2038 TY		123	118	113	108	104	99
2039 TY		131	126	121	116	111	106
2040 TY		139	134	129	124	119	114

Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
BR	BR1	101	0	0	0	0	0	441	454	590	616	785
BR	BR2	167	0	0	0	0	0	729	751	975	1,018	1,299
BR	BR3	416	0	0	0	0	0	1,816	1,870	2,430	2,536	3,235
CR	CR4	155	258	840	1,124	1,095	1,216	1,960	1,949	1,644	1,927	2,572
CR	CR5	168	279	910	1,219	1,187	1,318	2,124	2,112	1,782	2,089	2,788
CR	CR6	240	399	1,300	1,741	1,696	1,882	5,221	5,152	4,566	4,899	5,799
GH	GH1	475	0	0	0	0	0	5,620	5,988	6,566	7,371	8,085
GH	GH2	484	0	0	0	0	0	5,727	6,101	6,691	7,510	8,238
GH	GH3	480	0	0	0	0	0	5,680	6,051	6,635	7,448	8,170
GH	GH4	479	0	0	0	0	0	5,668	6,038	6,622	7,433	8,153
GR	GR3	68										
GR	GR4	95										
MC	MC1	303										
MC	MC2	301										
MC	MC3	391										
MC	MC4	477										
TC	TC1	383	0	0	0	0	0	1,965	2,066	2,172	2,216	2,260
TC	TC2	549	0	0	0	0	0	2,817	2,961	3,114	3,176	3,240
TY	TY3	71										
	BR Landfill Phase 2 Savings		0	0	0	0	0	0	0	828	908	1,960
	BR Landfill Phase 3 Savings		0	0	0	0	0	0	0	0	0	0
	BR Landfill O&M Savings		0	0	0	0	0	2,985	3,075	3,167	3,262	3,360
	CR Landfill Capital Savings	936	936	3,049	4,083	3,979	4,416	4,938	4,772	3,579	4,464	6,617
	CR Landfill O&M Savings		0	0	0	0	0	2,181	2,307	2,393	2,537	2,726
	CR6 Stator Rewind Savings		0	0	0	0	0	2,187	2,135	2,020	1,914	1,816
	GH Landfill Capital Savings		0	0	0	0	0	61	188	1,083	2,805	4,044
	GH Landfill O&M Savings		0	0	0	0	0	22,633	23,991	25,431	26,957	28,601
	TC Landfill Capital Savings		0	0	0	0	0	0	0	0	0	0
	TC Landfill O&M Savings		0	0	0	0	0	4,782	5,027	5,286	5,392	5,500

LandfillCapital

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
BR1	101	787	789	1,035	1,054	1,357	1,337	1,319	1,301	1,285	1,267	1,122
BR2	167	1,301	1,305	1,711	1,743	2,245	2,211	2,180	2,151	2,124	2,095	1,855
BR3	416	3,242	3,252	4,261	4,342	5,591	5,508	5,431	5,359	5,291	5,219	4,620
CR4	155	2,560	2,096	2,059	2,073	1,531	1,768	1,810	1,869	1,932	2,000	1,861
CR5	168	2,774	2,272	2,232	2,247	1,659	1,916	1,962	2,025	2,094	2,168	2,017
CR6	240	5,682	4,867	4,712	4,637	3,700	3,969	3,960	4,000	4,047	4,101	3,833
GH1	475	8,761	9,219	9,707	10,790	12,508	14,281	15,439	15,604	16,273	16,860	17,332
GH2	484	8,927	9,394	9,891	10,994	12,745	14,551	15,732	15,900	16,581	17,180	17,660
GH3	480	8,854	9,316	9,809	10,904	12,640	14,431	15,602	15,769	16,444	17,038	17,514
GH4	479	8,835	9,297	9,789	10,881	12,614	14,401	15,569	15,736	16,410	17,002	17,478
GR3	68											
GR4	95											
MC1	303											
MC2	301											
MC3	391											
MC4	477											
TC1	383	2,305	2,351	2,398	2,446	2,495	2,545	2,596	2,648	5,363	8,239	8,294
TC2	549	3,304	3,371	3,438	3,507	3,577	3,648	3,721	3,796	7,687	11,809	11,888
TY3	71											
andfill Phase 2 Savings		1,870	1,782	1,697	1,613	1,531	1,451	1,372	1,294	1,215	1,123	156
andfill Phase 3 Savings		0	0	1,638	1,745	3,767	3,594	3,426	3,261	3,101	2,943	2,789
Landfill O&M Savings		3,461	3,564	3,671	3,781	3,895	4,012	4,132	4,256	4,384	4,515	4,651
Landfill Capital Savings		6,353	4,493	4,170	4,023	1,844	2,496	2,513	2,483	2,455	2,429	1,631
Landfill O&M Savings		2,944	3,121	3,308	3,507	3,717	3,925	4,061	4,305	4,563	4,837	5,128
Stator Rewind Savings		1,719	1,621	1,524	1,427	1,329	1,232	1,158	1,106	1,055	1,004	952
Landfill Capital Savings		4,399	4,388	4,387	6,672	11,397	16,206	18,397	18,341	18,358	17,892	16,784
Landfill O&M Savings		30,979	32,838	34,808	36,897	39,110	41,457	43,944	44,668	47,348	50,189	53,201
Landfill Capital Savings		0	0	0	0	0	0	0	0	6,478	13,344	13,344
Landfill O&M Savings		5,610	5,722	5,836	5,953	6,072	6,194	6,318	6,444	6,573	6,704	6,838

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040
BR1	101	410	385	360	331	54	46	38	30	23
BR2	167	678	636	595	547	89	76	63	50	39
BR3	416	1,688	1,585	1,482	1,363	222	189	157	124	97
CR4	155	1,810	1,778	1,748	1,719	1,692	1,708	1,727	1,747	1,771
CR5	168	1,962	1,927	1,895	1,864	1,834	1,851	1,872	1,894	1,919
CR6	240	3,704	3,602	2,777	2,662	2,620	2,645	2,674	2,705	2,742
GH1	475	17,856	18,548	19,372	20,254	21,186	21,692	2,492	1,854	1,700
GH2	484	18,195	18,899	19,739	20,637	21,587	22,103	2,539	1,889	1,733
GH3	480	18,044	18,743	19,576	20,467	21,409	21,921	2,518	1,874	1,718
GH4	479	18,007	18,704	19,535	20,424	21,364	21,875	2,513	1,870	1,715
GR3	68									
GR4	95									
MC1	303									
MC2	301									
MC3	391									
MC4	477									
TC1	383	12,354	12,003	11,666	11,343	11,031	10,731	10,442	10,162	9,886
TC2	549	17,709	17,206	16,723	16,259	15,812	15,382	14,967	14,567	14,170
TY3	71									
andfill Phase 2 Savings		138	120	101	83	64	46	28	9	0
andfill Phase 3 Savings		2,638	2,487	2,336	2,158	301	265	230	194	159
Landfill O&M Savings										
Landfill Capital Savings		1,345	1,123	908	695	485	430	384	338	303
Stator Rewind Savings		5,230	5,335	5,441	5,550	5,661	5,774	5,890	6,008	6,128
Landfill Capital Savings		901	850	70	0	0	0	0	0	0
Landfill O&M Savings		15,709	15,118	14,860	14,617	14,352	12,126	9,906	7,329	6,705
Landfill Capital Savings		56,393	59,776	63,363	67,165	71,194	75,466	155	158	161
Landfill O&M Savings		23,088	22,094	21,132	20,199	19,293	18,412	17,554	16,717	15,883
Landfill Capital Savings		6,975	7,115	7,257	7,402	7,550	7,701	7,855	8,012	8,172

LandfillCapital

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Station	Unit	Capacity	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
BR	BR1	101	0	0	0	553	743	703	668	635	606	577
BR	BR2	167	0	0	0	915	1,228	1,163	1,104	1,050	1,002	954
BR	BR3	416	0	0	0	2,279	3,060	2,897	2,749	2,616	2,496	2,377
CR	CR4	155	0	0	0	980	1,582	1,494	1,413	1,339	1,269	1,201
CR	CR5	168	0	0	0	1,062	1,715	1,619	1,532	1,451	1,376	1,302
CR	CR6	240	0	0	0	1,518	2,449	2,313	2,188	2,073	1,966	1,860
GH	GH1	475	0	0	0	1,462	1,954	1,856	1,767	1,686	1,611	1,540
GH	GH2	484	0	0	0	1,489	1,991	1,891	1,800	1,718	1,642	1,569
GH	GH3	480	0	0	0	1,477	1,975	1,876	1,786	1,703	1,628	1,556
GH	GH4	479	0	0	0	1,474	1,971	1,872	1,782	1,700	1,625	1,553
GR	GR3	68	0	0	0	586	837	792	751	713	679	645
GR	GR4	95	0	0	0	819	1,169	1,106	1,049	996	948	901
MC	MC1	303	0	0	0	1,215	1,774	1,682	1,598	1,521	1,449	1,380
MC	MC2	301	0	0	0	1,207	1,762	1,671	1,588	1,511	1,440	1,371
MC	MC3	391	0	0	0	1,568	2,289	2,171	2,063	1,963	1,870	1,781
MC	MC4	477	0	0	0	1,913	2,792	2,648	2,516	2,394	2,281	2,172
TC	TC1	383	0	0	0	770	1,008	958	912	871	833	797
TC	TC2	549	0	0	0	1,104	1,445	1,373	1,307	1,248	1,194	1,142
TY	TY3	71	0	0	0	586	837	792	751	713	679	645
	BRWATER		0	0	0	3,747	5,032	4,763	4,521	4,302	4,104	3,908
	CRWATER		0	0	0	3,560	5,746	5,427	5,134	4,863	4,611	4,362
	MCWATER		0	0	0	5,902	8,617	8,173	7,765	7,389	7,040	6,704
	TCWATER		0	0	0	1,874	2,453	2,331	2,220	2,119	2,026	1,938
	GHWATER		0	0	0	5,902	7,892	7,495	7,135	6,806	6,505	6,217
	GRWATER		0	0	0	1,405	2,006	1,898	1,799	1,709	1,627	1,546

WaterCapital

Unit	Capacity	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
BR1	101	548	519	491	462	433	413	403	393	382	372	361
BR2	167	907	859	811	764	716	684	666	649	632	615	597
BR3	416	2,258	2,140	2,021	1,902	1,784	1,703	1,660	1,617	1,574	1,531	1,488
CR4	155	1,132	1,064	996	927	859	806	770	735	699	663	627
CR5	168	1,227	1,153	1,079	1,005	931	874	835	796	757	718	679
CR6	240	1,754	1,647	1,541	1,435	1,329	1,249	1,193	1,137	1,082	1,026	970
GH1	475	1,468	1,397	1,325	1,254	1,183	1,111	1,062	1,035	1,008	982	955
GH2	484	1,496	1,423	1,350	1,278	1,205	1,132	1,082	1,055	1,028	1,000	973
GH3	480	1,484	1,411	1,339	1,267	1,195	1,123	1,073	1,046	1,019	992	965
GH4	479	1,481	1,409	1,337	1,265	1,193	1,121	1,071	1,044	1,017	990	963
GR3	68	611	577	544	510	476	452	438	423	409	395	380
GR4	95	854	807	759	712	665	631	611	591	571	551	531
MC1	303	1,311	1,242	1,173	1,103	1,034	965	915	882	850	818	786
MC2	301	1,302	1,234	1,165	1,096	1,027	959	908	877	845	813	781
MC3	391	1,692	1,602	1,513	1,424	1,335	1,245	1,180	1,139	1,097	1,056	1,015
MC4	477	2,064	1,955	1,846	1,737	1,628	1,519	1,440	1,389	1,339	1,288	1,238
TC1	383	760	724	688	652	616	579	555	542	529	517	504
TC2	549	1,090	1,038	986	934	882	830	795	777	759	741	723
TY3	71	611	577	544	510	476	452	438	423	409	395	380
BRWATER		3,713	3,518	3,323	3,128	2,933	2,800	2,729	2,659	2,588	2,517	2,447
CRWATER		4,113	3,865	3,616	3,367	3,118	2,929	2,798	2,668	2,537	2,407	2,277
MCWATER		6,368	6,032	5,696	5,361	5,025	4,689	4,443	4,287	4,131	3,976	3,820
TCWATER		1,850	1,762	1,674	1,586	1,498	1,410	1,350	1,319	1,288	1,258	1,227
GHWATER		5,928	5,640	5,352	5,063	4,775	4,487	4,288	4,180	4,072	3,964	3,856
GRWATER		1,465	1,384	1,303	1,222	1,141	1,083	1,049	1,015	980	946	912

Unit	Capacity	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
BR1	101	351	340	330	320	309	299	288	278	267	257	247
BR2	167	580	563	546	528	511	494	477	459	442	425	408
BR3	416	1,445	1,402	1,359	1,316	1,273	1,230	1,187	1,144	1,101	1,058	1,016
CR4	155	591	0	0	0	0	0	0	0	0	0	0
CR5	168	640	0	0	0	0	0	0	0	0	0	0
CR6	240	915	0	0	0	0	0	0	0	0	0	0
GH1	475	928	901	875	848	821	794	767	741	714	687	660
GH2	484	946	918	891	864	837	809	782	755	727	700	673
GH3	480	938	911	884	857	830	803	776	748	721	694	667
GH4	479	936	909	882	855	828	801	774	747	720	693	666
GR3	68	366	352	337	323	309	294	280	266	251	237	0
GR4	95	511	491	471	451	431	411	391	371	351	331	0
MC1	303	754	722	690	658	626	594	562	530	0	0	0
MC2	301	749	717	686	654	622	590	558	526	0	0	0
MC3	391	973	932	891	849	808	766	725	684	0	0	0
MC4	477	1,187	1,137	1,086	1,036	986	935	885	834	0	0	0
TC1	383	491	479	466	453	441	428	415	403	390	377	364
TC2	549	704	686	668	650	632	613	595	577	559	541	522
TY3	71	366	352	337	323	309	294	280	266	251	237	0
BRWATER		2,376	2,305	2,235	2,164	2,094	2,023	1,952	1,882	1,811	1,740	1,670
CRWATER		2,146	0	0	0	0	0	0	0	0	0	0
MCWATER		3,664	3,508	3,353	3,197	3,041	2,886	2,730	2,574	0	0	0
TCWATER		1,196	1,165	1,134	1,103	1,072	1,041	1,010	979	949	918	887
GHWATER		3,748	3,640	3,531	3,423	3,315	3,207	3,099	2,991	2,883	2,774	2,666
GRWATER		877	843	809	774	740	706	671	637	603	568	0

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Unit	Capacity	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
BR1	101	236	226	215	205	194	184	174	0	0	0	0
BR2	167	390	373	356	339	321	304	287	0	0	0	0
BR3	416	973	930	887	844	801	758	715	0	0	0	0
CR4	155	0	0	0	0	0	0	0	0	0	0	0
CR5	168	0	0	0	0	0	0	0	0	0	0	0
CR6	240	0	0	0	0	0	0	0	0	0	0	0
GH1	475	634	607	580	553	526	500	473	446	0	0	0
GH2	484	646	618	591	564	536	509	482	454	0	0	0
GH3	480	640	613	586	559	532	505	478	451	0	0	0
GH4	479	639	612	585	558	531	504	477	450	0	0	0
GR3	68	0	0	0	0	0	0	0	0	0	0	0
GR4	95	0	0	0	0	0	0	0	0	0	0	0
MC1	303	0	0	0	0	0	0	0	0	0	0	0
MC2	301	0	0	0	0	0	0	0	0	0	0	0
MC3	391	0	0	0	0	0	0	0	0	0	0	0
MC4	477	0	0	0	0	0	0	0	0	0	0	0
TC1	383	352	339	326	314	301	288	276	263	250	237	225
TC2	549	504	486	468	450	431	413	395	377	359	340	322
TY3	71	0	0	0	0	0	0	0	0	0	0	0

BRWATER	1,599	1,529	1,458	1,387	1,317	1,246	1,175	0	0	0	0	0
CRWATER	0	0	0	0	0	0	0	0	0	0	0	0
MCWATER	0	0	0	0	0	0	0	0	0	0	0	0
TCWATER	856	825	794	763	732	701	670	609	640	609	578	547
GHWATER	2,558	2,450	2,342	2,234	2,125	2,017	1,909	0	1,801	0	0	0
GRWATER	0	0	0	0	0	0	0	0	0	0	0	0

WaterCapital

Unit	Capacity	2054	2055	2056	2057	2058	2059
BR1	101	0	0	0	0	0	0
BR2	167	0	0	0	0	0	0
BR3	416	0	0	0	0	0	0
CR4	155	0	0	0	0	0	0
CR5	168	0	0	0	0	0	0
CR6	240	0	0	0	0	0	0
GH1	475	0	0	0	0	0	0
GH2	484	0	0	0	0	0	0
GH3	480	0	0	0	0	0	0
GH4	479	0	0	0	0	0	0
GR3	68	0	0	0	0	0	0
GR4	95	0	0	0	0	0	0
MC1	303	0	0	0	0	0	0
MC2	301	0	0	0	0	0	0
MC3	391	0	0	0	0	0	0
MC4	477	0	0	0	0	0	0
TC1	383	212	0	0	0	0	0
TC2	549	304	0	0	0	0	0
TY3	71	0	0	0	0	0	0

BRWATER	0	0	0	0	0	0	0
CRWATER	0	0	0	0	0	0	0
MCWATER	0	0	0	0	0	0	0
TCWATER	516	0	0	0	0	0	0
GHWATER	0	0	0	0	0	0	0
GRWATER	0	0	0	0	0	0	0

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