

Attachment C

2013 Renewable Energy Standard Compliance Report
Public Service Company of Colorado
Attachment C

2013 Forecasted Renewable Energy Standard Compliance Amounts

Row				<u>Notes</u>	
1	Colorado Retail Electric Sales	28,858,176	MWh		
2	Total RES Requirement	3,462,981	RECs	12% x (1)	
3	DG Requirement	360,727	RECs	1.25% x (1)	1.250%
4	Retail DG RES Requirement	180,364	RECs	50% x (3)	
5	Wholesale DG RES Requirement	180,363	RECs	(3) - (4)	0.625%
6	Non-DG RES Requirement	3,102,254	RECs	(2) - (3)	10.750%

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Row		RECs Carried Forward <u>2008-2012 (1)</u> a	REC Adjustments <u>2008-2012 (2)</u> b	Retail RECs Available <u>2013</u> c	RECs Retired for Windsource <u>2013</u> d	REC Sales <u>e</u>	Total RECs Available <u>2008-2013</u> f	In-State REC Bonus <u>Applied (3)</u> g (f x 0.25)	Additional Community REC Bonus <u>Applied</u> h	Total RECs Available for 2013 RES <u>Compliance</u> i (f + g + h)	Renewable Energy Standard <u>2013</u> j	RECs Retired For 2012 RES <u>Compliance</u> k	RECs Retired For 2013 RES <u>Compliance</u> l	RECs Carried Forward After 2013 RES <u>Compliance</u> m (i - k - l)
1	Retail DG Solar Systems													
2	Small Customer-Owned (<10 kW)	-		63,269			63,269	6,331		69,600			2,105	67,495
3	Small Third Party Developer (<10 kW)	20,736		47,322			68,058	7,348		75,406			23,349	52,057
4	Medium 1 (10 - 100 kW)	30,908		34,788			65,696	7,376		73,072			34,803	38,269
5	Medium 2 (101 - 500 kW)	29,137		38,181			67,318	7,493		74,811			32,809	42,002
6	RFP	75,406		41,196	6,146		110,456	15,965		126,421			85,610	40,811
7	REC Only	1,499		1,499			2,998	339		3,337			1,688	1,649
8	SR Community	-		1,195			1,195	-		1,195			-	1,195
9	Total Retail DG Solar	157,686	-	227,450	6,146	-	378,990	44,852	-	423,842	180,364	-	180,364	243,478
10														
11	Wholesale DG Solar Systems													
12	Power Purchase w/RECs:													
13	SunE Alamosa	19,515	(1)	14,059			33,573	8,393		41,966				41,966
14	Cameo Solar	-		-			-	-		-				0
15	Cogentrix	66,287		65,593			131,880	32,970		164,850				164,850
16	Greater Sandhill	83,557		35,891			119,448	29,862		149,310				149,310
17	San Luis Solar	81,207		72,494			153,701	38,425		192,126				192,126
18	SunE at SolarTAC	281		228			509	127		636				636
19	Amonix at SolarTAC	1,452		252			1,704	426		2,130				2,130
20	EPRI at SolarTAC	-		103			103	26		129				129
21	Total Wholesale DG Solar	252,299	(1)	188,620	-	-	440,918	110,229	-	551,147		-	-	551,147
22														
23	Wholesale DG Wind													
24	Company Owned Generation													
25	Ponneguin II-VI	87,074	(1)	54,394			141,467	35,367		176,834				176,834
26	Power Purchase w/RECs:													
27	Northern Colorado Wind II	180,488	(1)	72,367		-	252,854	63,214		316,068			16,028	300,041
28	NREL Siemens	5,488		2,271			7,759	1,940		9,699				9,699
29	Ponneguin I	17,132		2,129			19,261	4,815		24,076			3,268	20,809
30	Ridgecrest	212,711		70,574	15,904		267,381	66,845		334,226			1,495	332,731
31	Total Wholesale DG Wind	502,893	(2)	201,735	15,904	-	688,722	172,181	-	860,903			20,790	840,113
32														
33	Wholesale DG Biomass													
34	Power Purchase w/RECs:													
35	75th St Digester	-		-			-	-		-				0
36	WM Denver/Aurora Disposal Site	66,995		18,962			85,957	21,489		107,446			13,243	94,204
37	Total Wholesale DG Biomass	66,995	0	18,962	-	-	85,957	21,489	-	107,446			13,243	94,204
38														
39	Wholesale DG Hydropower													
40	Company-Owned Generation:													
41	Ames	30,661		3,974			34,635	8,659		43,294			6,393	36,902
42	Georgetown	13,487		6,056			19,543	4,886		24,429			2,704	21,725
43	Palisade	16,356		-			16,356	4,089		20,445			7,823	12,623
44	Salida	6,546		1,604			8,150	2,038		10,188			1,293	8,896
45	Shoshone	189,409	1	72,509			261,919	65,480		327,399			56,101	271,298
46	Tacoma	45,417		6,539			51,956	12,989		64,945			4,491	60,454

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	RECs Carried Forward	REC Adjustments	Retail RECs Available	RECs Retired for Windsource	REC Sales	Total RECs Available	In-State REC Bonus	Additional Community REC Bonus	Total RECs Available for 2013 RES Compliance	Renewable Energy Standard 2013	RECs Retired For 2012 RES Compliance	RECs Retired For 2013 RES Compliance	RECs Carried Forward After 2013 RES Compliance	
Renewable Resources	2008-2012 (1)	2008-2012 (2)	2013	2013		2008-2013	Applied (3)	Applied						
Column Reference	a	b	c	d	e	f	g	h	i	j	k	l	m	
Calculation						(a + b + c - d - e)	(f x 0.25)		(f + g + h)				(i - k - l)	
Row														
45	Power Purchase w/RECs:													
46	Bridal Veil	3,639		-		3,639	910		4,549			803	3,747	
47	Betasso/Silver Lake/Lakewood	50,429		12,887		63,316	15,829		79,145			9,700	69,445	
48	Boulder Canyon	12,980		-		12,980	3,245		16,225			3,493	12,733	
49	Kohler	1,161		310		1,471	368		1,839			238	1,602	
50	Maxwell	875		249		1,124	281		1,405			156	1,249	
51	Orodel	787	1	153		941	235		1,176			229	947	
52	Sunshine	5,871	1	1,450		7,322	1,831		9,153			1,139	8,014	
53	Dillon Dam	30,757		7,316		38,073	9,518		47,591			7,984	39,607	
54	Foothills	23,272		4,784		28,056	7,014		35,070			5,573	29,498	
55	Hillcrest	27,938		6,443		34,381	8,595		42,976			6,773	36,204	
56	Roberts Tunnel	58,558		12,285		70,843	17,711		88,554			5,696	82,858	
57	Strontia Springs	22,773	1	6,968		29,742	7,436		37,178			2,891	34,287	
58	Gross Reservoir	57,983		19,869		77,852	19,463		97,315			12,560	84,755	
59	Lake George	-		-		-	-		-				0	
60	Ouray	5,331		-		5,331	1,333		6,664				6,664	
61	Vallecito Dam	-		-		-	-		-				0	
62	Redlands	23,663	(1)	5,711		29,373	7,343		36,716			3,799	32,917	
63	Stagecoach	10,928	1	2,096		13,025	3,256		16,281			3,119	13,162	
64	Grand Valley	9,114		4,078		13,192	3,298		16,490				16,490	
65	Orchard Mesa	9,114		3,972		13,086	3,272		16,358				16,358	
66	Mt. Elbert	7,931		-		7,931	1,983		9,914			3,378	6,537	
67	Total Wholesale DG Hydropower	664,980	4	179,253	-	-	844,237.00	211,062.00	-	1,055,299		146,331	908,968	
68														
69	Total Wholesale DG	1,487,167	1	588,570	15,904	-	2,059,834	514,961	-	2,574,795	180,363	-	180,364	2,394,431
70														
71	Non-DG Wind													
72	Cedar Creek	953,423	(2)	802,382		258,927	1,496,876	374,219	1,871,095			473,343	1,397,753	
73	Cedar Creek II	1,200,178		795,810		229,169	1,766,819	441,705	2,208,524			314,605	1,893,919	
74	Cedar Point	1,166,718	(1)	757,473		202,026	1,722,164	430,541	2,152,705			218,004	1,934,701	
75	Colorado Green	490,501		365,592	161,166		694,927	173,732	868,659			236,369	632,290	
76	Foot Creek III	146,612		75,519			222,131	18,880	241,011			63,551	177,460	
77	Limon Wind	125,796		537,762		105,092	558,466	139,617	698,083				698,083	
78	Limon Wind II	77,971	(1)	573,708		95,127	556,551	139,138	695,689				695,689	
79	Logan	763,505		473,464		31,954	1,205,015	301,254	1,506,269			438,205	1,068,064	
80	Northern Colorado Wind I	729,414		444,960		27,505	1,146,869	286,717	1,433,586			364,721	1,068,865	
81	Peetz Table	958,413		667,602		135,578	1,490,437	372,609	1,863,046			532,431	1,330,615	
82	Spring Canyon	329,258		219,094			548,352	137,088	685,440			208,144	477,296	
83	Twin Buttes	488,572		251,050			739,622	184,906	924,528			252,881	671,647	
84	Total Non-DG Wind	7,430,361	(4)	5,964,416	161,166	1,085,378	12,148,229	3,000,406	15,148,635	3,102,254	0	3,102,254	12,046,382	
85														
86														
87	Total Renewable Resources	9,075,214	(3)	6,780,436	183,216	1,085,378	14,587,053	3,560,219	18,147,272	3,462,981	0	3,462,981	14,684,290	

Notes:

- (1) RECs presented are net of transfers and do not include in-state bonus
- (2) WREGIS adjustments
- (3) Grandfathered bonus only applied to 2011-2013 RECs for retail DG based on purchase transactions entered into prior to August 11, 2010.
Complete 25% bonus applied to RECs carried forward from 2010
25% bonus for Foote Creek III only applied to 2013 generation

Attachment C - Renewable Energy Credits Acquired/Transferred
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Row	<u>Renewable Resources</u> Column Reference Calculation	Capacity	RECs Acquired	City of Boulder	Wholesale Wind	Wholesale	Total Retail
		(MW) (1)	2013	Transfers	Purchases	Allocation	RECs Available
		a	b	2013 c	2013 d	2013 e	2013 f (b - c - d - e)
1	<u>Retail DG Solar Systems</u>						
2	Small Customer-Owned (<10 kW)	48.83	63,269	0	0	0	63,269
3	Small Third Party Developer (<10 kW)	47.24	47,322	0	0	0	47,322
4	Medium 1 (10 - 100 kW)	30.27	34,788	0	0	0	34,788
5	Medium 2 (101 - 500 kW)	35.06	38,181	0	0	0	38,181
6	RFP	24.64	41,196	0	0	0	41,196
7	REC Only	2.06	1,499	0	0	0	1,499
8	SR Community	3.39	1,195	0	0	0	1,195
9	Retail DG Solar		227,450	0	0	0	227,450
10							
11	<u>Wholesale DG Solar Systems</u>						
12	Power Purchase w/RECs:	Nameplate Capacity					
13	SunE Alamosa	6.95	16,937	0	0	2,878	14,059
14	Cameo Solar		0	0	0		0
15	Cogentrix	30.00	65,593	0	0		65,593
16	Greater Sandhill	19.00	47,672	0	0	11,781	35,891
17	San Luis Solar	30.00	72,705	0	0	211	72,494
18	SunE at SolarTAC	0.19	228	0	0		228
19	Amonix at SolarTAC	0.48	252	0	0		252
20	EPRI at SolarTAC	0.32	103	0	0		103
21	Total Wholesale DG Solar		203,490	0	0	14,870	188,620
22							
23	<u>Wholesale DG Wind</u>						
24	<u>Company Owned Generation</u>						
25	Ponnequin II-VI	26.40	58,644	0	4,250		54,394
26	Power Purchase w/RECs:						
27	Northern Colorado Wind II	22.50	75,071	0	0	2,704	72,367
28	NREL Siemens	2.30	2,271	0	0		2,271
29	Ponnequin I	5.25	2,266	0	137		2,129
30	Ridgecrest	29.70	78,063	0	0	7,489	70,574
31	Total Wholesale DG Wind		216,315	0	4,387	10,193	201,735
32							

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Row	Renewable Resources Column Reference Calculation	Capacity (MW) (1)	RECs Acquired 2013	City of Boulder Transfers 2013	Wholesale Wind Purchases 2013	Wholesale Allocation 2013	Total Retail RECs Available 2013 (b - c - d - e)
		a	b	c	d	e	f
33	Wholesale DG Biomass						
34	Power Purchase w/RECs:						
35	75th St Digester	0.69	0	0	0	0	0
36	WM Denver/Aurora Disposal Site	3.28	20,508	0	0	1,546	18,962
37	Total Wholesale DG Biomass		20,508	0	0	1,546	18,962
38							
39	Wholesale DG Hydropower						
40	Company-Owned Generation:						
41	Ames	3.60	3,974	0	0		3,974
42	Georgetown	1.44	6,056	0	0		6,056
43	Salida	1.31	1,604	0	0		1,604
44	Shoshone	14.40	86,132	0	0	13,623	72,509
45	Tacoma	4.50	6,539	0	0		6,539
46	Power Purchase w/RECs:						
47	Bridal Veil	-	0	0	0		0
48	Betasso/Silver Lake/Lakewood	10.00	25,775	12,888	0		12,887
49	Boulder Canyon	-	0	0	0		0
50	Kohler	0.15	622	312	0		310
51	Maxwell	0.07	500	251	0		249
52	Orodel	0.22	305	152	0		153
53	Sunshine	0.81	2,901	1,451	0		1,450
54	Dillon Dam	1.90	7,316	0	0		7,316
55	Foothills	2.30	4,784	0	0		4,784
56	Hillcrest	2.30	6,443	0	0		6,443
57	Roberts Tunnel	6.10	12,285	0	0		12,285
58	Strontia Springs	1.20	6,968	0	0		6,968
59	Gross Reservoir	8.10	20,168	0	0	299	19,869
60	Lake George	-	0	0	0		0
61	Ouray		0	0	0		0
62	Vallecito Dam	-	0	0	0		0
63	Redlands	1.40	5,711	0	0		5,711
64	Stagecoach	0.80	2,096	0	0		2,096
65	Grand Valley	1.50	4,206	0	0	128	4,078
66	Orchard Mesa	1.50	4,206	0	0	234	3,972
67	Mt. Elbert	-	0	0	0		0
68	Total Wholesale DG Hydropower		208,591	15,054	0	14,284	179,253
69							
70	Total Wholesale DG		648,904	15,054	4,387	40,893	588,570
71							

Attachment C - Renewable Energy Credits Acquired/Transferred
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Row	<u>Renewable Resources</u> Column Reference Calculation	<u>Capacity</u> <u>(MW) (1)</u>	<u>RECs Acquired</u> <u>2013</u>	<u>City of Boulder</u> <u>Transfers</u> <u>2013</u>	<u>Wholesale Wind</u> <u>Purchases</u> <u>2013</u>	<u>Wholesale</u> <u>Allocation</u> <u>2013</u>	<u>Total Retail</u> <u>RECs Available</u> <u>2013</u>
		a	b	c	d	e	f (b - c - d - e)
72	<u>Non-DG Wind</u>						
73	Cedar Creek	300.50	879,921	0	0	77,539	802,382
74	Cedar Creek II	250.80	795,810	0	0		795,810
75	Cedar Point	252.00	757,473	0	0		757,473
76	Colorado Green	162.00	478,578	0	0	112,986	365,592
77	Foote Creek III	24.75	81,162	0	0	5,643	75,519
78	Limon Wind	200.00	651,378	0	0	113,616	537,762
79	Limon Wind II	200.00	575,557	0	0	1,849	573,708
80	Logan	201.00	613,897	0	0	140,433	473,464
81	Northern Colorado Wind I	151.80	465,172	0	0	20,212	444,960
82	Peetz Table	199.50	667,602	0	0		667,602
83	Spring Canyon	60.00	219,094	0	0		219,094
84	Twin Buttes	75.00	251,050	0	0		251,050
85	Total Non-DG Wind		6,436,694	0	0	472,278	5,964,416
86							
	Total Renewable Resources		7,313,048	15,054	4,387	513,171	6,780,436

Notes:

- (1) Retail DG solar capacity presented in DC; all other generators presented in AC

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		RECs Acquired		
		2012 / 2013	2013	
		RES Compliance	RES Compliance	Percent
		<u>Plan*</u>	<u>Report</u>	<u>Difference</u>
Renewable Resources		a	b	c
Column Reference				(b-a)/a
Calculation				
Row				
1	<u>Retail DG Solar Systems</u>	321,640	227,450	-29%
2				
3	<u>Wholesale DG Solar Systems</u>	221,287	203,490	-8%
4				
5	<u>Wholesale DG Wind</u>	202,089	216,315	7%
6				
7	<u>Wholesale DG Biomass</u>	18,457	20,508	11%
8				
9	<u>Wholesale DG Hydro</u>	227,598	208,591	-8%
10				
11	<u>Non-DG Wind</u>	6,163,305	6,436,694	4%
12				
13	Total Renewable Resources	7,154,376	7,313,048	2%