

2022-2025 RENEWABLE ENERGY STANDARD PLAN

Public Service Company of Colorado
December 2021
Volume 2

Colorado PUC E-Filings System



Table 4-1 - Renewable Energy Standard (RES) Forecast
Public Service Company of Colorado
2022 Renewable Energy Standard Compliance Plan

Row	Calendar Year	Retail Sales (MWhs)	RES ¹ (RECs)	RES DG Requirement (RECs Only)	Retail DG Minimum (RECs Only)	Wholesale DG Minimum (RECs Only)	RES Non-DG Recommendation (RECs)
1	2021	29,078,752	8,723,625	872,363	436,181	436,181	7,851,263
2	2022	28,424,513	8,527,354	852,735	426,368	426,368	7,674,619
3	2023	28,410,492	8,523,148	852,315	426,157	426,157	7,670,833
4	2024	28,785,390	8,635,617	863,562	431,781	431,781	7,772,055
5	2025	28,971,990	8,691,597	869,160	434,580	434,580	7,822,437
6	2026	29,362,701	8,808,810	880,881	440,441	440,441	7,927,929
7	2027	29,787,765	8,936,329	893,633	446,816	446,816	8,042,696
8	2028	30,434,125	9,130,238	913,024	456,512	456,512	8,217,214
9	2029	30,768,183	9,230,455	923,045	461,523	461,523	8,307,409
10	2030	31,281,734	9,384,520	938,452	469,226	469,226	8,446,068
11	2031	31,876,834	9,563,050	956,305	478,153	478,153	8,606,745
12	RES Requirements						
13	Year		RES %	DG%	Retail DG%	Wholesale%	Non-DG%
14	2019						
15	2020			3.00%			
16	2021		30%	3.00%	1.50%	1.50%	27.00%
17	2022		30%	3.00%	1.50%	1.50%	27.00%
18	2023		30%	3.00%	1.50%	1.50%	27.00%
19	2024		30%	3.00%	1.50%	1.50%	27.00%
20	2025		30%	3.00%	1.50%	1.50%	27.00%
21	2026		30%	3.00%	1.50%	1.50%	27.00%
22	2027		30%	3.00%	1.50%	1.50%	27.00%
23	2028		30%	3.00%	1.50%	1.50%	27.00%
24	2029		30%	3.00%	1.50%	1.50%	27.00%
25	2030		30%	3.00%	1.50%	1.50%	27.00%
26	2031		30%	3.00%	1.50%	1.50%	27.00%
27	2032		30%	3.00%	1.50%	1.50%	27.00%
28	2033		30%	3.00%	1.50%	1.50%	27.00%
29	2034		30%	3.00%	1.50%	1.50%	27.00%
30	2035		30%	3.00%	1.50%	1.50%	27.00%
31	2036		30%	3.00%	1.50%	1.50%	27.00%
32	2037		30%	3.00%	1.50%	1.50%	27.00%
				Retail Sales × DG%	50%	50%	

Retail Sales Forecast from: Jannell Marks & Ralph Pacheco [Sales Energy & Demand Forecast]

Non-DG Audit
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Year		Sales (MWh) @Meter								
Month	Residential	Small C&I	Large C&I	Street Light	Public Authority	Interdept.	Total Retail	Wholesale	Total Obligation	
2019	9,446,626	12,997,496	6,417,592	184,073	107,569		29,153,356	2,053,059	31,206,415	
2020	9,992,279	12,313,669	6,298,197	144,043	96,345		28,844,533	3,449,407	32,293,941	
2021	10,098,576	12,493,709	6,240,331	156,404	89,732		29,078,752	2,101,909	31,180,660	
2022	9,525,558	12,705,692	5,927,585	153,358	112,320		28,424,513	1,995,101	30,419,614	
2023	9,591,735	12,615,078	5,938,536	152,229	112,914		28,410,492	1,919,001	30,329,493	
2024	9,768,352	12,716,790	6,033,690	153,645	112,914		28,785,390	1,767,226	30,552,616	
2025	9,886,674	12,783,798	6,034,724	153,880	112,914		28,971,990	1,879,232	30,851,222	
2026	10,107,881	12,880,105	6,107,706	154,095	112,914		29,362,701	956,943	30,319,644	
2027	10,354,100	13,018,401	6,148,058	154,293	112,914		29,787,765	973,825	30,761,589	
2028	10,696,176	13,243,002	6,227,617	154,416	112,914		30,434,125	956,762	31,390,887	
2029	10,926,117	13,344,190	6,230,874	154,089	112,914		30,768,183	962,749	31,730,931	
2030	11,242,689	13,505,420	6,266,471	154,241	112,914		31,281,734	978,753	32,260,488	
2031	11,621,481	13,682,125	6,305,934	154,380	112,914		31,876,834	970,773	32,847,607	
2032	-	-	-	-	-		-	-	-	
2033	-	-	-	-	-		-	-	-	
2034	0	(0)	(0)	(0)	0		0	(0)	0	
2035	0	0	0	0	0		0	(0)	(0)	

<u>Renewable Resources</u>	<u>Capacity (MW) (4)</u>	<u>RECs Carried Forward After 2020 RES Compliance</u> a	<u>CY RECs Available less Transfers 2021</u> b	<u>Bonus Credits Available (1) (2)</u> c	<u>Additional Community REC Bonus Available</u> d	<u>RECs & Bonus Credits Available for 2021 RES Compliance</u> e	<u>The Renewable Energy Standard 2021</u> f	<u>Lecacy and/or CY RECs Retired For 2021 RES Compliance (3)</u> g	<u>Bonus Credits Retired For 2021 RES Compliance (3)</u> h	<u>RECs w/o Bonus Carried Forward After 2021 RES Compliance</u> i
Column Reference										
Row 1 Retail DG				$c \leq (b \times 25\%)$		$e = (a + b + c + d)$				$i = a + b - g$
2 Total Retail DG	589	996,893	740,083	24,774	1,480	1,763,230	436,181	423,096	13,085	1,313,880
3										
4 Wholesale DG				$c \leq (b \times 25\%)$		$e = (a + b + c + d)$				$i = a + b - g$
5										
6 Total Utility Solar	85		161,563							
7 Total Biomass	3		16,739							
8 Total Small Hydropower	67		162,284							
9 Total Wholesale DG Wind	55		112,073							
10										
11 Total Wholesale DG		1,675,626	452,659	113,166		2,241,451	436,181	327,135	109,046	1,801,150
12										
13 Non-DG				$c \leq (b \times 25\%)$		$e = (a + b + c + d)$				$i = a + b - g$
14 Total Non-DG Wind	4,071		7,670,170							
15 Total Non-DG Solar	1,282		313,548							
16										
17 Total Non-DG		21,512,656	7,983,719	798,372		30,294,747	7,851,263	7,066,137	785,126	22,430,238
18										
19 Total Non Retail DG Renewable Resources		23,188,282	8,436,378	911,538	0	32,536,198	8,287,444	7,393,272	894,172	24,231,387
20 Total Renewable Resources		24,185,175	9,176,461	936,312	1,480	34,299,428	8,723,625	7,816,368	907,257	25,545,268

Notes:
 (1) Includes bonus for Non Retail facilities COD prior to 01/01/2015 (1.25x for all Non-Retail resources in service $\leq$ 12/31/2014) and bonus for Community Based Solar Garden Projects (1.50x)
 (2) Bonus applied to Retail DG based on purchase transactions entered into prior to August 11, 2010
 (3) Estimated; final values will be determined in the 2021 RES Compliance Report; Retail DG & Wholesale DG RECs could be retired in excess of RES requirement thereby reducing Non-DG RECs retirement
 (4) Retail DG capacity presented in DC; all others in AC

	Capacity (MW) (4)	RECs Carried Forward After 2021 RES Compliance	CY RECs Available less Transfers 2022	Bonus Credits Available (1) (2)	Additional Community REC Bonus Available d	RECs & Bonus Credits Available for 2022 RES Compliance e	The Renewable Energy Standard 2022 f	Lecacy and/or CY RECs Retired For 2022 RES Compliance (3) g	Bonus Credits Retired For 2022 RES Compliance (3) h	RECs w/o Bonus Carried Forward After 2022 RES Compliance i
<u>Renewable Resources</u> Column Reference		a	b	c	d	e	f	g	h	i
1 Retail DG				$c \leq (b \times 25\%)$		$e = (a + b + c + d)$				$i = a + b - g$
2 Total Retail DG	669	1,313,880	840,671	24,749	1,681	2,180,981	426,368	413,577	12,791	1,740,975
3										
4 Wholesale DG				$c \leq (b \times 25\%)$		$e = (a + b + c + d)$				$i = a + b - g$
5										
6 Total Utility Solar	85		161,357							
7 Total Biomass	3		16,975							
8 Total Small Hydropower	67		162,209							
9 Total Wholesale DG Wind	55		113,641							
10										
11 Total Wholesale DG		1,801,150	454,183	113,547		2,368,880	426,368	319,775	106,593	1,935,558
12										
13 Non-DG				$c \leq (b \times 25\%)$		$e = (a + b + c + d)$				$i = a + b - g$
14 Total Non-DG Wind	4,071		6,567,596							
15 Total Non-DG Solar	1,282		1,155,644							
16										
17 Total Non-DG		22,430,238	7,723,240	772,324		30,925,801	7,674,619	6,907,157	767,462	23,246,321
18										
19 Total Non Retail DG Renewable Resources		24,231,387	8,177,423	885,871	0	33,294,681	8,100,986	7,226,931	874,055	25,181,879
20 Total Renewable Resources		25,545,268	9,018,094	910,620	1,681	35,475,662	8,527,354	7,640,508	886,846	26,922,853

Notes:
(1) Includes bonus for Non Retail facilities COD prior to 01/01/2015 (1.25x for all Non-Retail resources in service $\leq$ 12/31/2014) and bonus for Community Based Solar Garden Projects (1.50x)
(2) Bonus applied to Retail DG based on purchase transactions entered into prior to August 11, 2010
(3) Estimated; final values will be determined in the 2022 RES Compliance Report; Retail DG & Wholesale DG RECs could be retired in excess of RES requirement thereby reducing Non-DG RECs retirement
(4) Retail DG capacity presented in DC; all others in AC

Table 4-2 - Renewable Energy Credit Compliance Summary
Public Service Company of Colorado
2023 Renewable Energy Standard Compliance Plan

<u>Renewable Resources</u>	<u>Capacity (MW) (4)</u>	<u>RECs Carried Forward After 2022 RES Compliance</u>	<u>CY RECs Available less Transfers 2023</u>	<u>Bonus Credits Available (1) (2)</u>	<u>Additional Community REC Bonus Available</u>	<u>RECs & Bonus Credits Available for 2023 RES Compliance</u>	<u>The Renewable Energy Standard 2023</u>	<u>Lecacy and/or CY RECs Retired For 2023 RES Compliance (3)</u>	<u>Bonus Credits Retired For 2023 RES Compliance (3)</u>	<u>RECs w/o Bonus Carried Forward After 2023 RES Compliance</u>
Column Reference		a	b	c	d	e	f	g	h	i
Row 1	Retail DG			$c \leq (b \times 25\%)$		$e = (a + b + c + d)$				$i = a + b - g$
2	Total Retail DG	751	1,740,975	24,724	1,886	2,710,580	426,157	413,372	12,785	2,270,598
3										
4	Wholesale DG			$c \leq (b \times 25\%)$		$e = (a + b + c + d)$				$i = a + b - g$
5										
6	Total Utility Solar	85	162,000							
7	Total Biomass	3	9,821							
8	Total Small Hydropower	67	162,379							
9	Total Wholesale DG Wind	55	58,097							
10										
11	Total Wholesale DG		1,935,558	392,297	98,075	2,425,930	426,157	328,082	98,075	1,999,772
12										
13	Non-DG			$c \leq (b \times 25\%)$		$e = (a + b + c + d)$				$i = a + b - g$
14	Total Non-DG Wind	4,071	6,612,875							
15	Total Non-DG Solar	1,282	3,302,266							
16										
17	Total Non-DG		23,246,321	9,915,140	991,514	34,152,975	7,670,833	6,903,750	767,083	26,257,711
18										
19	Total Non Retail DG Renewable Resources		25,181,879	10,307,437	1,089,589	36,578,905	8,096,990	7,231,832	865,158	28,257,483
20	Total Renewable Resources		26,922,853	11,250,433	1,114,313	39,289,485	8,523,148	7,645,205	877,943	30,528,081

Notes:

- (1) Includes bonus for Non Retail facilities COD prior to 01/01/2015 (1.25x for all Non-Retail resources in service $\leq$ 12/31/2014) and bonus for Community Based Solar Garden Projects (1.50x)
 (2) Bonus applied to Retail DG based on purchase transactions entered into prior to August 11, 2010
 (3) Estimated; final values will be determined in the 2023 RES Compliance Report; Retail DG & Wholesale DG RECs could be retired in excess of RES requirement thereby reducing Non-DG RECs retirement
 (4) Retail DG capacity presented in DC; all others in AC

Table 4-2 - Renewable Energy Credit Compliance Summary
Public Service Company of Colorado
2024 Renewable Energy Standard Compliance Plan

	Capacity (MW) (4)	RECs Carried Forward After 2023 RES Compliance	CY RECs Available less Transfers 2024	Bonus Credits Available (1) (2)	Additional Community REC Bonus Available	RECs & Bonus Credits Available for 2024 RES Compliance	The Renewable Energy Standard 2024	Lecacy and/or CY RECs Retired For 2024 RES Compliance (3)	Bonus Credits Retired For 2024 RES Compliance (3)	RECs w/o Bonus Carried Forward After 2024 RES Compliance
Renewable Resources		a	b	c	d	e	f	g	h	i
Column Reference										
Row										
1	Retail DG			c ≤ (b × 25%)		e = (a + b + c + d)				i = a + b - g
2	Total Retail DG	751	2,270,598	24,699	2,060	3,327,555	431,781	418,828	12,953	2,881,968
3										
4	Wholesale DG			c ≤ (b × 25%)		e = (a + b + c + d)				i = a + b - g
5										
6	Total Utility Solar	85		160,302						
7	Total Biomass	3		0						
8	Total Small Hydropower	67		162,165						
9	Total Wholesale DG Wind	55		57,994						
10										
11	Total Wholesale DG		1,999,772	380,461	95,116	2,475,350	431,781	336,665	95,116	2,043,569
12										
13	Non-DG			c ≤ (b × 25%)		e = (a + b + c + d)				i = a + b - g
14	Total Non-DG Wind	4,071		6,936,077						
15	Total Non-DG Solar	1,282		3,215,836						
16										
17	Total Non-DG		26,257,711	10,151,913	1,015,191	37,424,815	7,772,055	6,994,849	777,206	29,414,775
18										
19	Total Non Retail DG Renewable Resources		28,257,483	10,532,375	1,110,307	39,900,165	8,203,836	7,331,514	872,322	31,458,344
20	Total Renewable Resources		30,528,081	11,562,573	1,135,006	43,227,720	8,635,617	7,750,342	885,275	34,340,312

Notes:

(1) Includes bonus for Non Retail facilities COD prior to 01/01/2015 (1.25x for all Non-Retail resources in service $\leq$ 12/31/2014) and bonus for Community Based Solar Garden Projects (1.50x)

(2) Bonus applied to Retail DG based on purchase transactions entered into prior to August 11, 2010

(3) Estimated; final values will be determined in the 2024 RES Compliance Report; Retail DG & Wholesale DG RECs could be retired in excess of RES requirement thereby reducing Non-DG RECs retirement

(4) Retail DG capacity presented in DC; all others in AC

Table 4-2 - Renewable Energy Credit Compliance Summary
Public Service Company of Colorado
2025 Renewable Energy Standard Compliance Plan

Renewable Resources Column Reference	Capacity (MW) (4)	RECs Carried Forward After 2024 RES Compliance a	CY RECs Available less Transfers 2025 b	Bonus Credits Available (1) (2) c	Additional Community REC Bonus Available d	RECs & Bonus Credits Available for 2025 RES Compliance e	The Renewable Energy Standard 2025 f	Lecacy and/or CY RECs Retired For 2025 RES Compliance (3) g	Bonus Credits Retired For 2025 RES Compliance (3) h	RECs w/o Bonus Carried Forward After 2025 RES Compliance i
Row										
1	Retail DG			$c \leq (b \times 25\%)$		$e = (a + b + c + d)$				$i = a + b - g$
2	Total Retail DG	751	2,881,968	24,674	2,182	3,999,984	434,580	421,543	13,037	3,551,585
3										
4	Wholesale DG			$c \leq (b \times 25\%)$		$e = (a + b + c + d)$				$i = a + b - g$
5										
6	Total Utility Solar	85	155,728							
7	Total Biomass	3	0							
8	Total Small Hydropower	67	158,153							
9	Total Wholesale DG Wind	55	58,180							
10										
11	Total Wholesale DG		2,043,569	372,061		2,508,645	434,580	341,564	93,016	2,074,066
12										
13	Non-DG			$c \leq (b \times 25\%)$		$e = (a + b + c + d)$				$i = a + b - g$
14	Total Non-DG Wind	4,071	6,735,784							
15	Total Non-DG Solar	1,282	3,011,845							
16										
17	Total Non-DG		29,414,775	9,747,629		40,137,167	7,822,437	7,040,193	782,244	32,122,211
18										
19	Total Non Retail DG Renewable Resources		31,458,344	10,119,690	0	42,645,813	8,257,017	7,381,757	875,260	34,196,276
20	Total Renewable Resources		34,340,312	11,210,849	1,092,453	46,645,796	8,691,597	7,803,300	888,297	37,747,861

Notes:

- (1) Includes bonus for Non Retail facilities COD prior to 01/01/2015 (1.25x for all Non-Retail resources in service $\leq$ 12/31/2014) and bonus for Community Based Solar Garden Projects (1.50x)
 (2) Bonus applied to Retail DG based on purchase transactions entered into prior to August 11, 2010
 (3) Estimated; final values will be determined in the 2025 RES Compliance Report; Retail DG & Wholesale DG RECs could be retired in excess of RES requirement thereby reducing Non-DG RECs retirement
 (4) Retail DG capacity presented in DC; all others in AC

			City of Boulder	Wholesale REC	RECs Retired	RECs Retired for Renewable*	RECs Retired for CRP	RECs	Total Recycled Energy & RECs
Renewable Resources	Capacity (MW) (1)	RECs Acquired 2021	Transfers 2021	Allocation 2021 (2)	for Windsource 2021 (3)	Connect 2021	2021 e3	Sold 2021 (4)	Available 2021
Column Reference	a	b	c	d	e1	e2	e3	f	g
Row									
1	Retail DG								g = (b - c - d - e - f)
2	Small Net Metered	196.57	172,191						
3	Small Third Party Developer	124.99	153,288						
4	Medium	142.99	162,836						
5	RFP Large* (RecTracker)	6.51	23,395						
6	RFP Large* (WREGIS COSR facilities)	11.70	42,021						
7	REC Only	0.00	0						
8	SR Community (RecTracker)	27.07	47,426						
9	SR Community (WREGIS)	79.30	138,927						
10									
11									
12	Total Retail DG	589.12	740,083	0	0	0	0	0	740,083
13	Wholesale DG								
14	Wholesale DG Solar								g = (b - c - d - e - f)
15	Power Purchase w/RECs:								
16	SunE Alamosa	6.20	14,755		1,231		1,352		
17	Cogentrix	30.00	59,053		4,925		5,413		
18	SanLuis Solar	30.00	75,581		6,304		6,928		
19	Greater Sandhill	19.00	46,460		3,875		4,258		
20	SolarTAC	0.25	0		0		0		
21									
22									
23									
24	Total Wholesale DG Solar	85.45	195,849	0	16,335	0	17,951	0	161,563
25	Wholesale DG Biomass								g = (b - c - d - e - f)
26	Power Purchase w/RECs:								
27	Waste Management	3.28	20,291		1,692		1,860		
28	Total Wholesale DG Biomass	3.28	20,291	0	1,692	0	1,860	0	16,739
29	Wholesale DG Small Hydropower								g = (b - c - d - e - f)
30	Company-Owned Generation:								
31	Ames	2.80	6,998		584		641		
32	Georgetown	1.44	4,430		369		406		
33	Salida	0.65	1,712		143		157		
34	Shoshone	14.40	84,969		7,086		7,786		
35	Tacoma	8.00	9,487		791		870		
36	Power Purchase w/RECs:								
37	Betasso/SLLakewood	7.50	8,719				872		
38	SilverLake	3.30	8,719	1,318					
39	Dillon Dam	1.90	9,327	1,410					
40	Foothills	2.30	5,332				533		
41	Roberts Tunnel	6.10	11,580	1,751					
42	Strontia Springs	1.20	6,246	944					
43	Hillcrest	2.30	5,745	868					
44	Gross Reservoir	8.10	16,061	2,428					
45	Redlands	1.40	7,592				759		
46	Grand Valley/Orchard Mesa	3.00	0				0		
47	Mt. Elbert	2.50	4,251				425		
48	UTE	0.23	1,400				140		
49									
50	Total Wholesale DG Small Hydropower	67.12	192,567	8,719	8,973	0	12,591	0	162,284
51	Wholesale DG Wind								g = (b - c - d - e - f)
52	Company-Owned Generation:								
53	Pompequin II-VI								
54	Power Purchase w/RECs:								
55	Ridgecrest	29.70	66,464		5,543		6,092		</

		Capacity (MW) (1)	RECs Acquired 2022 b	City of Boulder Transfers 2022 c	Wholesale REC Allocation 2022 (2) d	RECs Retired for Windsource 2022 (3) e1	RECs Retired for Renewable* Connect 2022 e2	RECs Retired for CRP 2022 e3	RECs Sold 2022 (4) f	Total Recycled Energy & RECs Available 2022 g
Renewable Resources	Column Reference	a	b	c	d	e1	e2	e3	f	g
Retail DG										$g = (b - c - d - e - f)$
Small Net Metered		223.28	195,595							
Small Third Party Developer		141.98	174,122							
Medium		162.42	184,967							
RFP Large* (RecTracker)		7.40	26,574							
RFP Large* (WREGIS COSR facilities)		13.29	47,732							
REC Only		0.00	0							
SR Community (RecTracker)		30.75	53,871							
SR Community (WREGIS)		90.07	157,810							
Total Retail DG		669.19	840,671	0	0	0	0	0	0	840,671
Wholesale DG										
Wholesale DG Solar										$g = (b - c - d - e - f)$
Power Purchase w/RECs:										
SunE Alamosa		6.20	14,864		1,034				1,363	
Cogentrix		30.00	57,919		4,083				5,384	
San Luis Solar		30.00	74,124		5,225				6,890	
Greater Sandhill		19.00	46,177		3,255				4,292	
SolarTAC		0.25	0		0				0	
Total Wholesale DG Solar		85.45	192,883	0	13,597	0	0	17,029	0	161,357
Wholesale DG Biomass										$g = (b - c - d - e - f)$
Power Purchase w/RECs:										
Waste Management		3.28	20,291		1,430			1,886		
Total Wholesale DG Biomass		3.28	20,291	0	1,430	0	0	1,886	0	16,975
Wholesale DG Small Hydropower										$g = (b - c - d - e - f)$
Company-Owned Generation:										
Ames		2.80	6,994		493				650	
Georgetown		1.44	4,430		312				412	
Salida		0.85	1,712		121				159	
Shoshone		14.40	84,906		5,985				7,892	
Tacoma		8.00	9,480		668				881	
Power Purchase w/RECs:										
Betasso/SULakewood		7.50	8,719						872	
SilverLake		3.30	8,719	1,318						
Dillon Dam		1.90	9,327	1,410						
Footfalls		2.30	5,332						533	
Roberts Tunnel		6.10	11,580		1,751					
Strontia Springs		1.20	6,246		944					
Hillcrest		2.30	5,745		868					
Gross Reservoir		8.10	16,061	2,428						
Redlands		1.40	7,588						759	
Grand Valley/Orchard Mesa		3.00	0							
Mt. Elbert		2.50	4,251						425	
UTE		0.23	0						0	
Total Wholesale DG Small Hydropower		67.12	191,090	8,719	7,579	0	0	12,583	0	162,209
Wholesale DG Wind										$g = (b - c - d - e - f)$
Company-Owned Generation										
Ponnequin II-VI										
Power Purchase w/RECs:										
Ridgecrest		29.70	66,451		4,684				6,177	
Northern Colorado Wind II		22.50	69,392		4,891				6,450	
NREL Siemens		2.30	0		0				0	
Total Wholesale DG Wind		54.50	135,843	0	9,575	0	0	12,627	0	113,64

Renewable Resources Column Reference	Capacity (MW) (1) a	RECs Acquired 2023 b	City of Boulder Transfers 2023 c	Wholesale REC Allocation 2023 (2) d	RECs Retired for Windsource 2023 (3) e1	RECs Retired for Renewable* Connect 2023 e2	RECs Retired for CRP 2023 e3	RECs Sold 2023 (4) f	Total Recycled Energy & RECs Available 2023 g
Retail DG									$g = (b - c - d - e - f)$
Small Net Metered	250.46	219,402							
Small Third Party Developer	159.26	195,316							
Medium	182.19	207,481							
RFP Large* (RecTracker)	8.30	29,809							
RFP Large* (WREGIS COSR facilities)	14.91	53,542							
REC Only	0.00	0							
SR Community (RecTracker)	34.49	60,428							
SR Community (WREGIS)	101.04	177,017							
Total Retail DG	750.65	942,996	0	0	0	0	0	0	942,996
Wholesale DG									
Wholesale DG Solar									$g = (b - c - d - e - f)$
Power Purchase w/RECs:									
SunE Alamosa	6.20	14,606		1,019			1,359		
Cogentrix	30.00	58,284		4,065			5,422		
SanLuis Solar	30.00	74,615		5,204			6,941		
Greater Sandhill	19.00	45,990		3,208			4,278		
SolarTAC	0.25	0		0			0		
Total Wholesale DG Solar	85.45	193,496	0	13,496	0	0	18,000	0	162,000
Wholesale DG Biomass									$g = (b - c - d - e - f)$
Power Purchase w/RECs:									
Waste Management	3.28	11,730		818			1,091		
Total Wholesale DG Biomass	3.28	11,730	0	818	0	0	1,091	0	9,821
Wholesale DG Small Hydropower									$g = (b - c - d - e - f)$
Company-Owned Generation:									
Ames	2.80	7,000		488			651		
Georgetown	1.44	4,430		309			412		
Salida	0.65	1,712		119			159		
Shoshone	14.40	85,000		5,929			7,907		
Tacoma	8.00	9,491		662			883		
Power Purchase w/RECs:									
Betasso/S/Lakewood	7.50	8,719					872		
SilverLake	3.30	8,719	1,318						
Dillon Dam	1.90	9,327	1,410						
Foothills	2.30	5,352					533		
Roberts Tunnel	6.10	11,580	1,751						
Strontia Springs	1.20	6,246	944						
Hillcrest	2.30	5,745	868						
Gross Reservoir	8.10	16,061	2,428						
Redlands	1.40	7,593					759		
Grand Valley/Orchard Mesa	3.00	0					0		
Mt. Elbert	2.50	4,251					425		
UTE	0.23	0					0		
Total Wholesale DG Small Hydropower	67.12	191,206	8,719	7,507	0	0	12,601	0	162,379
Wholesale DG Wind									$g = (b - c - d - e - f)$
Company-Owned Generation:									
Ponsequin II-VI									
Power Purchase w/RECs:									
Ridgecrest	29.70	0		0			0		
Northern Colorado Wind II	22.50	69,392		4,840			6,455		
NREL Siemens	2.30	0		0			0		
Total Wholesale DG Wind	54.50	69,392	0	4,840	0	0	6,455	0	58,097
Total Wholesale DG	210.35	465,824	8,719	26,661	0	0	38,147	0	392,297
Non-DG									
Non-DG Wind									$g = (b - c - d - e - f)$
Company Owned Generation:									
Rush Creek	600.00	1,952,830			220,270		1,952,830		
Cheyenne Ridge	499.00	1,975,060					1,975,060		
Power Purchase w/RECs:									
Colorado Green	162.00	527,338						350,000	
Spring Canyon	60.00	174,560						0	
Cedar Creek	300.50	785,092						0	
Twin Buttes	75.00	200,049						0	
Logan	201.00	539,069						0	
Peeetz Table	199.50	620,052						0	
Northern Colorado Wind I	151.80	473,255						0	
Limon I	200.00	723,527		177,463				0	
Cedar Creek II	250.80	683,873		167,737				0	
Cedar Point	252.00	815,437		200,007				0	
Limon II	200.00	610,872		149,832				0	
Limon III	200.60	794,249		194,810				0	
Multiband Golden West	249.90	828,905					828,905		
Mountain Breeze	169.00	634,856					634,856		
Broncos Plains	300.00	1,125,622							
Total Non-DG Wind	4,071.10	13,464,646	0	889,849	220,270	0	5,391,652	350,000	6,612,875
Non-DG Solar									$g = (b - c - d - e - f)$
Comanche Solar	120.00	289,781		71,076					
Solar Star III	50.00	121,195		29,726					
Hartsel Solar	72.00	172,191							
Neptune Solar	250.00	769,593							
Bighorn Solar	240.00	597,257							
Thunder Wolf	200.00	594,381							
Midway	100.00	294,676							
Sun Mountain Solar	200.00	563,994				116,920			
Titan Solar	50.00	116,920				116,920			
Total Non-DG Solar	1,282.00	3,519,988	0	100,802	0		0	0	3,302,266
Total Non-DG	5,353.10	16,984,634	0	990,651	220,270		5,391,652	350,000	9,915,140
Total Non Retail DG Renewables (WDG + NDG)		17,450,458	8,719	1,017,312	220,270	116,920	5,429,799	350,000	10,307,437
Total Renewable Resources		18,393,453	8,719	1,017,312	220,270	116,920	5,429,799	350,000	11,250,433

Notes:

- (1) Retail DG capacity presented in DC; all others in AC
 (2) Wholesale RECs transferred based on projected production and forecast wholesale load ratio share. Actual RECs transferred will be presented in the 2023 RES Report.
 (3) Windsource retirement method will use proportional allocation of Wholesale DG and Non-DG plus third-party verified generation.
 REC vintages from the last half of the prior year could be used for the Standard Windsource retirement, per Green-e Standards. Actual RECs retired will be presented in the 2023 RES Report.
 (4) Currently executed REC sales. Actual REC sales will be sourced from multiple wind generators, but generation from specific generators is unknown at the time of this filing.

Table 4-3 - Renewable Energy Credits Acquired/Transferred										Total Recycled Energy & RECs
Public Service Company of Colorado										
2024 Renewable Energy Standard Compliance Plan										
Renewable Resources	Capacity (MW) (1)	RECs Acquired 2024	City of Boulder Transfers 2024	Wholesale REC Allocation 2024 (2)	RECs Retired for Windsource 2024 (3)	RECs Retired for Renewable* Connect 2024 e2	RECs Retired for CRP 2024 e3	RECs Sold 2024 (4)	Available 2024	
Column Reference	a	b	c	d	e1	e2	e3	f	g	
1										
2	Retail DG								g = (b - c - d - e - f)	
3	Small Net Metered	273.62	239,691							
4	Small Third Party Developer	173.99	213,377							
5	Medium	199.04	226,668							
6	RFP Large* (RecTracker)	9.07	32,566							
7	RFP Large* (WREGIS COSR facilities)	16.29	58,493							
8	REC Only	0.00	0							
9	SR Community (RecTracker)	37.68	66,017							
10	SR Community (WREGIS)	110.38	193,386							
11										
12	Total Retail DG	820.06	1,030,198	0	0	0	0	0	1,030,198	
13										
14	Wholesale DG									
15										
16	Wholesale DG Solar								g = (b - c - d - e - f)	
17	Power Purchase w/RECs:									
18	SunE Alamosa	6.20	14,576		1,092		1,348			
19	Cogentrix	30.00	57,833		4,333		5,350			
20	SanLuis Solar	30.00	74,225		5,561		6,866			
21	Greater Sandhill	19.00	45,903		3,439		4,246			
22	SolarTAC	0.25	0		0		0			
23										
24	Total Wholesale DG Solar	85.45	192,537	0	14,425	0	17,810	0	160,302	
25										
26	Wholesale DG Biomass								g = (b - c - d - e - f)	
27	Power Purchase w/RECs:									
28	Waste Management	3.28	0		0		0			
29										
30	Total Wholesale DG Biomass	3.28	0	0	0	0	0	0	0	
31										
32	Wholesale DG Small Hydropower								g = (b - c - d - e - f)	
33	Company-Owned Generation:									
34	Ames	2.80	7,014		526		649			
35	Georgetown	1.44	4,433		332		410			
36	Salida	0.85	1,714		128		159			
37	Shoshone	14.40	85,167		6,380		7,879			
38	Tacoma	8.00	9,517		713		880			
39	Power Purchase w/RECs:									
40	Betasso/SULakewood	7.50	8,738				874			
41	SilverLake	3.30	8,741	1,322						
42	Dillon Dam	1.90	9,337	1,413						
43	Footfalls	2.30	5,333				533			
44	Roberts Tunnel	6.10	11,580		1,752					
45	Strontia Springs	1.20	6,251	946						
46	Hillcrest	2.30	5,748	870						
47	Gross Reservoir	8.10	16,106	2,437						
48	Redlands	1.40	7,625				763			
49	Grand Valley/Orchard Mesa	3.00	0							
50	Mt. Elbert	2.50	4,251				425			
51	UTE	0.23	0				0			
52										
53	Total Wholesale DG Small Hydropower	67.12	191,556	8,740	8,079	0	12,572	0	162,165	
54										
55	Wholesale DG Wind								g = (b - c - d - e - f)	
56	Company-Owned Generation									
57	Ponnonquin II-VI									
58	Power Purchase w/RECs:									
59	Ridgecrest	29.70	0		0		0			
60	Northern Colorado Wind II	22.50	69,656		5,218		6,444			
61	NREL Siemens	2.30	0		0		0			
62										
63	Total Wholesale DG Wind	54.50	69,656	0	5,218	0	6,444	0	57,994	
64										
65	Total Wholesale DG	210.35	453,749	8,740	27,722	0	36,826	0	380,461	
66										
67	Non-DG									
68										
69	Non-DG Wind								g = (b - c - d - e - f)	
70	Company-Owned Generation									
71	Rush Creek	600.00	1,986,946			224,078	1,986,946			
72	Cheyenne Ridge	499.00	2,003,839				2,003,839			
73	Power Purchase w/RECs:									
74	Colorado Green	162.00	528,399				0			
75	Spring Canyon	60.00	175,283				0			
76	Cedar Creek	300.50	788,299				0			
77	Twin Buttes	75.00	200,290				0			
78	Logan	201.00	541,303				0			
79	Peezet Table	199.50	622,585				0			
80	Northern Colorado Wind I	151.80	475,175				0			
81	Limon I	200.00	724,911		189,808		0			
82	Cedar Creek II	250.80	686,771		179,821					
83	Cedar Point	252.00	818,044		214,193					
84	Limon II	200.00	612,417		160,353					
85	Limon III	200.60	796,194		208,472					
86	Multiband Golden West	87	249.90	831,704			831,704			
87	Mountain Breeze	88	169.00	637,032			637,032			
88	Broncos Plains	89	300.00	1,143,131						
89										
90	Total Non-DG Wind	4,071.10	13,572,324	0	952,647	224,078	0	5,459,522	6,936,077	
91										
92	Non-DG Solar								g = (b - c - d - e - f)	
93	Comanche Solar	120.00	288,675		75,586					
94	Solar Star III	50.00	120,446		31,537					
95	Hartsel Solar	72.00	171,318							
96	Neptune Solar	250.00	731,405							
97	Bighorn Solar	240.00	594,978							
98	Thunder Wolf	200.00	559,636							
99	Midway	100.00	295,671							
100	Sun Mountain Solar	200.00	560,829							
101	Titan Solar	50.00	116,540			116,540				
102	Total Non-DG Solar	1,282.00	3,439,499	0	107,123	0	116,540	0	3,215,836	
103										
104	Total Non-DG	5,353.10	17,011,822	0	1,059,770	224,078	116,540	5,459,522	10,151,913	
105										
106	Total Non Retail DG Renewables (WDG + NDG)		17,465,572	8,740	1,087,492	224,078	116,540	5,496,348	10,532,375	
107										
108	Total Renewable Resources		18,495,770	8,740	1,087,492	224,078	116,540	5,496,348	11,562,573	
109										
110										
111	Notes:									
112	(1) Retail DG capacity presented in DC; all others in AC									
113	(2) Wholesale RECs transferred based on projected production and forecast wholesale load ratio share. Actual RECs transferred will be presented in the 2024 RES Report.									
114	(3) Windsource retirement method will use proportional allocation of Wholesale DG and Non-DG plus third-party verified generation.									
115	REC vintages from the last half of the prior year could be used for the Standard Windsource retirement, per Green-e Standards. Actual RECs retired will be presented in the 2024 RES Report.									
116	(4) Currently executed REC sales. Actual REC sales will be sourced from multiple wind generators, but generation from specific generators is unknown at the time of this filing.									

	City of Boulder	Wholesale REC	RECs Retired	RECs Retired for Renewable*	RECs Retired	RECs	Total Recycled Energy & RECs
Renewable Resources	Capacity (MW) (1)	RECs Acquired 2025	Transfers 2025	Allocation 2025 (2)	for Windsource 2025 (3)	for CRP 2025	Available 2025
Column Reference	a	b	c	d	e1	e2	g
Row							
1	Retail DG						g = (b - c - d - e - f)
2	Small Net Metered	289.81	253,874				
3	Small Third Party Developer	184.28	226,004				
4	Medium	210.82	240,081				
5	RFP Large* (RecTracker)	9.60	34,493				
6	RFP Large* (WREGIS COSR facilities)	17.25	61,954				
7	REC Only	0.00	0				
8	SR Community (RecTracker)	39.91	69,923				
9	SR Community (WREGIS)	116.91	204,830				
10							
11							
12	Total Retail DG	868.59	1,091,159	0	0	0	1,091,159
13	Wholesale DG						
14	Wholesale DG Solar						g = (b - c - d - e - f)
15	Power Purchase w/RECs:						
16	SunE Alamosa	6.20	14,363		983	1,338	
17	Cogentrix	30.00	55,350		3,786	5,156	
18	San Luis Solar	30.00	70,785		4,842	6,594	
19	Greater Sandhill	19.00	45,237		3,094	4,214	
20	SolarTAC	0.25	0		0	0	
21							
22							
23							
24	Total Wholesale DG Solar	85.45	185,735	0	12,705	0	155,728
25							
26	Wholesale DG Biomass						g = (b - c - d - e - f)
27	Power Purchase w/RECs:						
28	Waste Management	3.28	0		0	0	
29							
30	Total Wholesale DG Biomass	3.28	0	0	0	0	0
31							
32	Wholesale DG Small Hydropower						g = (b - c - d - e - f)
33	Company-Owned Generation:						
34	Ames	2.80	7,000		479	652	
35	Georgetown	1.44	4,430		303	413	
36	Salida	0.65	1,712		117	160	
37	Shoshone	14.40	85,000		5,814	7,919	
38	Tacoma	8.00	9,491		649	884	
39	Power Purchase w/RECs:						
40	Betasso/SULakewood	7.50	8,719			872	
41	SilverLake	3.30	8,719	1,318			
42	Dillon Dam	1.90	9,327	1,410			
43	Foothills	2.30	5,332			533	
44	Roberts Tunnel	6.10	11,580	1,751			
45	Strontia Springs	1.20	6,246	944			
46	Hillcrest	2.30	5,745	868			
47	Gross Reservoir	8.10	16,061	2,428			
48	Redlands	1.40	2,756			276	
49	Grand Valley/Orchard Mesa	3.00	0			0	
50	Mt. Elbert	2.50	4,251			425	
51	UTE	0.23	0			0	
52							
53	Total Wholesale DG Small Hydropower	67.12	186,368	8,719	7,362	0	158,153
54							
55	Wholesale DG Wind						g = (b - c - d - e - f)
56	Company-Owned Generation						
57	Pompequin II-VI						
58	Power Purchase w/RECs:						
59	Ridgecrest	29.70	0		0	0	
60	Northern Colorado Wind II	22.50	69,391		4,747	6,464	
61	NREL Siemens	2.30	0		0	0	
62							
63	Total Wholesale DG Wind	54.50	69,391	0	4,747	0	58,180
64							
65	Total Wholesale DG	210.35	441,494	8,719	24,814	0	372,061
66							
67	Non-DG						
68							
69	Non-DG Wind						g = (b - c - d - e - f)
70	Company-Owned Generation						
71	Rush Creek	600.00	1,647,980		227,955	1,647,980	
72	Cheyenne Ridge	499.00	1,710,544			1,710,544	
73	Power Purchase w/RECs:						
74	Colorado Green	162.00	456,091			0	0
75	Spring Canyon	60.00	171,880			0	0
76	Cedar Creek	300.50	773,312			0	0
77	Twin Buttes	75.00	173,243			0	0
78	Logan	201.00	531,479			0	0
79	Pietz Table	199.50	620,029			0	0
80	Northern Colorado Wind I	151.80	473,240			0	0
81	Limon I	200.00	723,501		163,782		
82	Cedar Creek II	250.80	683,851		154,806		
83	Cedar Point	252.00	803,830		181,966		
84	Limon II	200.00	610,848		138,280		
85	Limon III	200.60	794,224		179,792		
86	Multiband Golden West	249.90	828,876			828,876	
87	Mountain Breeze	169.00	634,839			634,839	
88	Broncos Plains	300.00	966,836				
89							
90	Total Non-DG Wind	4,071.10	12,604,604	0	818,626	4,822,239	6,735,784
91							
92	Non-DG Solar						g = (b - c - d - e - f)
93	Comanche Solar	120.00	274,728		62,191		
94	Solar Star III	50.00	114,873		26,004		
95	Hartsel Solar	72.00	163,159				
96	Neptune Solar	250.00	666,883				
97	Bighorn Solar	240.00	566,232				
98	Thunder Wolf	200.00	511,963				
99	Midway	100.00	266,216				
100	Sun Mountain Solar	200.00	535,986				
101	Titan Solar	50.00	110,920			110,920	
102							
103	Total Non-DG Solar	1,282.00	3,210,960	0	88,195	0	3,011,845
104							
105	Total Non-DG	5,353.10	15,815,564	0	906,821	110,920	9,747,629
106							
107	Total Non Retail DG Renewables (WDG + NDG)		16,257,058	8,719	931,635	110,920	10,119,690
108							
109	Total Renewable Resources		17,348,217	8,719	931,635	227,955	11,210,849
110							
Notes:							
(1)	Retail DG capacity presented in DG; all others in AC						
(2)	Wholesale RECs transferred based on projected production and forecast wholesale load ratio share. Actual RECs transferred will be presented in the 2025 RES Report.						
(3)	Windsource retirement method will use proportional allocation of Wholesale DG and Non-DG plus third-party verified generation.						
(4)	REC vintages from the last half of the prior year could be used for the Standard Windsource retirement, per Green-e Standards. Actual RECs retired will be presented in the 2025 RES Report.						
	Currently executed REC sales. Actual REC sales will be sourced from multiple wind generators, but generation from specific generators is unknown at the time of this filing.						

Table 4-4 - Planned Procurement of RECs
 Public Service Company of Colorado
 2022 Renewable Energy Standard Compliance Plan

Calendar Year	Retail DG	Retail DG RECs	Retail DG	Bonus	Community- Based	Retail DG	Wholesale	New Wholesale	Wholesale DG	Wholesale	Wholesale DG	Wholesale	Existing	New	Recycled	Non-DG RECs	Non-DG	Non-DG Bonus	Non-DG
	RECs (1)	Retired for Windsor, R* C, & CRP	RECs Sold (2)	RECs (3)	Bonus RECs	Total RECs	RECs (1)	RECs (1)	Retired for Windsor, R* C, & CRP	DG RECs	Bonus	DG	RECs (1)	RECs (1)	Energy	Retired for Windsor, R* C, & CRP	RECs Sold (2)	For RECs & Recycled Energy	
Column Reference Calculation	a	b	c	d	e	f f = (a - b - c + d + e)	g	h	i	j	k	L L = (g + h - i - j + k)	m	n	o	p	q	r	s (m + n + o - p - q + r)
Row																			
1	2021	740,083	-	-	24,774	1,480	766,337	-	44,855	-	113,166	565,825	12,958,708	-	-	4,124,989	850,000	1,247,637	9,231,356
2	2022	840,671	-	-	24,749	1,681	867,101	-	45,025	-	113,547	567,730	13,767,337	-	-	5,194,099	850,000	1,246,284	8,969,522
3	2023	942,996	-	-	24,724	1,886	969,606	-	38,147	-	98,075	490,371	15,993,983	-	-	5,728,843	350,000	1,253,862	11,169,002
4	2024	1,030,198	-	-	24,699	1,886	1,056,783	-	31,558	-	96,433	482,163	15,952,053	-	-	8,201,746	-	1,258,422	9,008,729
5	2025	1,091,159	-	-	24,674	1,886	1,117,719	-	27,519	-	95,110	475,551	14,908,742	-	-	7,193,952	-	1,232,118	8,946,908
6	2026	1,155,756	-	-	24,649	1,886	1,182,291	-	29,005	-	96,891	484,455	15,325,909	-	-	7,568,915	-	1,210,766	8,967,761
7	2027	1,224,167	-	-	24,624	1,886	1,250,677	-	25,539	-	85,349	426,746	14,536,146	-	-	6,702,790	-	1,159,597	8,992,953
8	2028	1,309,814	-	-	24,599	1,886	1,336,299	-	19,553	-	77,020	385,099	13,140,481	-	-	5,213,170	-	936,312	8,863,623
9	2029	1,425,520	-	-	24,574	1,886	1,451,980	-	19,359	-	71,667	358,334	13,096,745	-	-	5,166,640	-	938,650	8,868,756
10	2030	1,568,739	-	-	24,549	1,886	1,595,174	-	17,354	-	58,506	292,530	12,641,800	-	-	4,664,900	-	944,970	8,921,869
11	2031	1,703,558	-	-	24,524	1,886	1,729,968	-	16,575	-	48,271	241,356	12,523,831	-	-	4,470,194	-	923,665	8,977,302
12	2032	1,818,625	-	-	24,499	1,886	1,845,010	-	12,451	-	25,185	125,923	11,798,670	-	-	3,441,152	-	804,236	9,161,755
13	2033	1,938,884	-	-	24,474	1,886	1,965,244	-	9,754	-	23,165	115,826	11,103,069	-	-	2,768,224	-	700,245	9,035,090
14	2034	2,063,814	-	-	24,449	1,886	2,090,149	-	8,568	-	23,462	117,311	10,806,160	-	-	2,470,335	-	668,589	9,004,413
15	2035	2,193,310	-	-	24,424	1,886	2,219,620	-	7,284	-	23,783	118,914	10,518,626	-	-	2,151,514	-	616,540	8,983,652
16	2036	2,326,890	-	-	24,399	1,886	2,353,175	-	6,231	-	24,097	120,485	10,314,068	-	-	1,887,650	-	617,373	9,043,791
17	2037	2,464,623	-	-	24,374	1,886	2,490,883	-	1,222	-	24,227	121,137	9,043,608	-	-	635,015	-	445,698	8,854,291

Notes:
 (1) RECs presented are net of Wholesale Transfers and City of Boulder transfers (if applicable) and do not include in-state bonus
 (2) RECs sold based on executed transactions with Trading/Origination
 (3) Bonus applied to Retail DG based on purchase transactions entered into prior to August 11, 2010
 (4) Bonus applies to Non Retail facilities COD prior to 01/01/2015; a 1.25 bonus applies for all Non-Retail resources placed in service ≤ 12/31/2014

Table 4-5 - Planned Procurement of RECs Renewable*Connect Public Service Company of Colorado 2022 Renewable Energy Standard Compliance Plan				
		Renewable* Connect RECs	Non-DG RECs Retired for Renewable* Connect ⁽¹⁾	RECS Remaining
<u>Calendar Year</u>				
Column Reference Calculation		a	b	c c = a - b
Row				
1	2021	118,384	118,384	0
2	2022	116,189	116,189	0
3	2023	116,920	116,920	0
4	2024	116,540	116,540	0
5	2025	110,920	110,920	0
6	2026	111,808	111,808	0
7	2027	106,582	106,582	0
8	2028	104,660	104,660	0
9	2029	103,039	103,039	0
10	2030	97,264	97,264	0
11	2031	96,636	96,636	0

Table 7-1

**Public Service Company of Colorado
 Renewable Energy Standard Adjustment Estimate
 For the Years 2021-2030**

Table 7-1						
Renewable Resource Costs Base Case (NO CARBON) (\$000)						
UNLOCKED Renewable Resources				LOCKED Renewable Resources		
Year	<u>Total</u> Costs to be Recovered	<u>Incremental</u> Costs Recovered by RESA	<u>Avoided</u> Costs Recovered by ECA	<u>Total</u> Costs to be Recovered	<u>Incremental</u> Costs Recovered by RESA	<u>Avoided</u> Costs Recovered by ECA
2021	(\$0)	\$0	(\$0)	\$446,736	\$39,819	\$406,917
2022	\$14,748	\$12,169	\$2,579	\$443,267	\$29,738	\$413,530
2023	\$37,708	\$31,527	\$6,181	\$577,075	(\$57,825)	\$634,900
2024	\$59,179	\$42,968	\$16,211	\$579,808	(\$69,813)	\$649,621
2025	\$175,530	\$109,020	\$66,510	\$574,125	(\$83,149)	\$657,274
2026	\$195,237	\$130,063	\$65,174	\$572,775	(\$104,446)	\$677,221
2027	\$276,766	\$140,354	\$136,412	\$571,647	(\$131,147)	\$702,794
2028	\$393,880	\$196,815	\$197,065	\$588,236	(\$135,590)	\$723,826
2029	\$441,524	\$219,092	\$222,432	\$647,021	(\$99,642)	\$746,663
2030	\$575,361	\$285,405	\$289,955	\$643,965	(\$104,415)	\$748,381

Table 7-2 (a)

**Public Service Company of Colorado
 Renewable Energy Standard Adjustment Estimate
 For the Years 2021-2030**

2022-25 Renewable Energy Plan													
UNLOCKED Renewable Resources Incremental and Avoided Costs													
Base Case (NO CARBON)													
A	B	C	D	E	F	G	H	I	J	K	L	M	
	Unlocked Renewable Resources except On-Site Solar						Unlocked On-Site Solar			Unlocked Totals			
	Central Solar Total Cost	Wind Total Cost	Other Renewable Total Cost	Total Cost (B+C+D)	B, C, D Modeled Incremental Cost [1]	B,C,D Calculated Avoided Cost (E-F) [2]	On-Site Solar Total Cost	Modeled On-Site Solar Avoided Cost (H-J) [2]	Modeled On-Site Solar Incremental Cost [1]	Total Costs (E+H)	Incremental Costs (F+J) [1]	Avoided Costs (G+I) [2]	
2021	0	0	0	0	0	0	(0)	(0)	0	(0)	0	(0)	2021
2022	0	0	0	0	0	0	14,748,090	2,578,785	12,169,305	14,748,090	12,169,305	2,578,785	2022
2023	0	0	0	0	0	0	37,707,900	6,181,305	31,526,595	37,707,900	31,526,595	6,181,305	2023
2024	0	0	0	0	0	0	59,178,950	16,210,795	42,968,155	59,178,950	42,968,155	16,210,795	2024
2025	0	97,268,360	0	97,268,360	44,733,097	52,535,263	78,261,710	13,974,755	64,286,955	175,530,070	109,020,052	66,510,018	2025
2026	0	97,268,360	0	97,268,360	49,769,024	47,499,336	97,968,910	17,674,472	80,294,438	195,237,270	130,063,462	65,173,808	2026
2027	40,775,270	117,298,620	0	158,073,890	46,271,472	111,802,418	118,692,580	24,609,953	94,082,627	276,766,470	140,354,099	136,412,371	2027
2028	47,368,140	205,727,680	0	253,095,820	82,946,763	170,149,057	140,784,510	26,915,941	113,868,569	393,880,330	196,815,332	197,064,998	2028
2029	46,985,750	225,552,180	0	272,537,930	83,857,945	188,679,985	168,985,920	33,752,212	135,233,708	441,523,850	219,091,653	222,432,197	2029
2030	100,353,250	273,772,110	0	374,125,360	126,685,747	247,439,613	201,235,190	42,515,870	158,719,320	575,360,550	285,405,067	289,955,483	2030

[1] Incremental costs of renewable resources are recovered through the RESA.

[2] Avoided costs of renewable resources are recovered through the ECA.

Table 7-2 (b)

**Public Service Company of Colorado
 Renewable Energy Standard Adjustment Estimate
 For the Years 2021-2030**

2022-25 Renewable Energy Plan												
LOCKED Renewable Resources Incremental and Avoided Costs												
Base Case (NO CARBON)												
A	B	C	D	E	F	G	H	I	J	K	L	M
Locked Renewable Resources except On-Site Solar						Locked On-Site Solar			Locked Totals			
	Central Solar Total Cost	Wind Total Cost	Other Renewable Total Cost	Total Cost (B+C+D)	B, C, D Locked Incremental Cost [1]	B,C,D Calculated Avoided Cost (E-F) [2]	On-Site Solar Total Cost	Locked On-Site Solar Avoided Cost (H-J) [2]	Calculated On-Site Solar Incremental Cost [1]	Total Costs (E+H)	Incremental Costs (F+J) [1]	Avoided Costs (G+I) [2]
2021	61,528,701	330,577,988	0	392,106,689	36,170,653	355,936,036	54,629,117	50,980,963	3,648,153	446,735,806	39,818,806	406,917,000
2022	62,800,933	320,296,520	0	383,097,453	26,956,809	356,140,644	60,169,950	57,388,978	2,780,972	443,267,402	29,737,780	413,529,622
2023	127,465,440	327,737,700	0	455,203,140	(58,825,422)	514,028,562	121,871,890	120,871,515	1,000,375	577,075,030	(57,825,046)	634,900,076
2024	127,560,970	328,063,750	0	455,624,720	(69,538,017)	525,162,737	124,183,650	124,458,568	(274,918)	579,808,370	(69,812,936)	649,621,306
2025	127,058,180	322,050,630	0	449,108,810	(82,380,656)	531,489,466	125,016,280	125,784,662	(768,382)	574,125,090	(83,149,038)	657,274,128
2026	126,865,980	319,463,040	0	446,329,020	(102,819,403)	549,148,423	126,445,980	128,072,459	(1,626,479)	572,775,000	(104,445,882)	677,220,882
2027	126,680,510	316,950,580	0	443,631,090	(128,912,277)	572,543,367	128,015,870	130,250,764	(2,234,894)	571,646,960	(131,147,171)	702,794,131
2028	123,676,550	336,357,290	0	460,033,840	(134,261,245)	594,295,085	128,202,650	129,531,212	(1,328,562)	588,236,490	(135,589,807)	723,826,297
2029	123,226,590	394,143,010	0	517,369,600	(100,405,217)	617,774,817	129,651,070	128,888,321	762,749	647,020,670	(99,642,467)	746,663,137
2030	122,985,490	389,501,100	0	512,486,590	(104,964,385)	617,450,975	131,478,850	130,929,561	549,289	643,965,440	(104,415,096)	748,380,536

[1] Incremental costs of renewable resources are recovered through the RESA

[2] Avoided costs of renewable resources are recovered through the ECA

Table 7-2 (c)

Public Service Company of Colorado
 Renewable Energy Standard Adjustment Estimate
 For the Years 2021-2030

Rider Shut Off Year
 2030

RESA Revenue %	
2.000%	2016
1.000%	2021

2022-25 Renewable Energy Plan													
Estimated RESA Balance													
Base Case (NO CARBON)													

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	Renewable Resource Total Costs		RESA Related Costs						RESA Related Revenues/Credits			ECA Related Costs		
	Unlocked Costs (Table 7-2a, Col K)	Locked Costs (Table 7-2b, Col K)	Unlocked Incremental Costs (Table 7-2a, Col L)	Locked Incremental Costs (Table 7-2b, Col L)	RESA II Recovered through CEPR	Upfront REC Incentive and Battery Connect	Wholesale Customer RESA RJA Credit	RESA Program & Admin Costs	RESA Rider Revenue	WindSource Revenue	REC Margin Revenue	Unlocked Avoided Costs (Table 7-2a, Col M)	Locked Avoided Costs (Table 7-2b, Col M)	
2021	0	446,735,806	0	45,818,806		0	(2,289,488)	3,127,000	29,737,807	4,101,815	5,421,518	(0)	406,917,000	2021
2022	14,748,090	443,267,402	12,169,305	29,737,780		4,450,000	(1,751,563)	2,173,000	28,747,011	4,119,783		2,578,785	413,529,622	2022
2023	37,707,900	577,075,030	31,526,595	(57,825,046)		4,450,000	0	1,527,126	28,901,756	4,191,718		6,181,305	634,900,076	2023
2024	59,178,950	579,808,370	42,968,155	(69,812,936)		4,450,000	0	1,572,940	29,659,863	4,264,993		16,210,795	649,621,306	2024
2025	175,530,070	574,125,090	109,020,052	(83,149,038)	21,225,054	4,450,000	0	1,620,128	31,144,872	4,339,629		66,510,018	657,274,128	2025
2026	195,237,270	572,775,000	130,063,462	(104,445,882)	(6,428,369)	0	0	1,668,732	32,257,108	4,415,653		65,173,808	677,220,882	2026
2027	276,766,470	571,646,960	140,354,099	(131,147,171)	20,355,850	0	0	1,718,794	32,902,250	4,492,883		136,412,371	702,794,131	2027
2028	393,880,330	588,236,490	196,815,332	(135,589,807)	(3,113,565)	0	0	1,770,358	33,560,295	4,571,463		197,064,998	723,826,297	2028
2029	441,523,850	647,020,670	219,091,653	(99,642,467)	(19,580,620)	0	0	1,823,468	34,231,501	4,651,418		222,432,197	746,663,137	2029
2030	575,360,550	643,965,440	285,405,067	(104,415,096)	(67,431,220)	0	0	1,878,172	34,916,131	4,732,771		289,955,483	748,380,536	2030

P			Q			R			S			T			U			V		
Totals																				
Total Renewable Resource Costs (B+C)			Total RESA Costs (D+E+F+G+H+I)			Total RESA Revenue (J+K+L)			Annual Excess/ (Deficiency) (R-Q)		Interest		Annual Excess/ (Deficiency) w/ Interest (S+T)		RESA Rolling Balance (Deferred)					
2020																				
2021	446,735,806		46,656,319			39,261,140			(7,395,179)		3,110,112		(4,285,067)		51,325,651					
2022	458,015,492		46,778,522			32,866,794			(13,911,728)		2,617,532		(11,294,196)		47,040,584					
2023	614,782,930		0			33,093,474			33,093,474		3,414,741		36,508,215		72,254,603					
2024	638,987,320		0			33,924,856			33,924,856		5,825,872		39,750,728		112,005,331					
2025	749,655,160		53,166,196			35,484,501			(17,681,695)		6,736,641		(10,945,055)		101,060,277					
2026	768,012,270		20,857,943			36,672,761			15,814,817		7,115,590		22,930,407		123,990,684					
2027	848,413,430		31,281,573			37,395,133			6,113,560		8,296,199		14,409,759		138,400,443					
2028	982,116,820		59,882,317			38,131,758			(21,750,559)		8,327,393		(13,423,166)		124,977,277					
2029	1,088,544,520		101,692,034			38,882,919			(62,809,115)		6,110,299		(56,698,817)		68,278,460					
2030	1,219,325,990		115,436,922			39,648,902			(75,788,020)		1,984,105		(73,803,916)		(5,525,455)					

Interest Rate	6.530%
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Table 7-3 (a)
Public Service Company of Colorado
Renewable Energy Standard Adjustment Estimate
For the Years 2021-2030

Locked Incremental Costs (Transferred from the ECA to the RESA)

Total Incremental Cost (\$000)	
SunE Alamosa [1]	
2021	1,846
2022	1,947
2023	1,928
2024	1,837
2025	1,784
2026	1,722
2027	1,660
2028	1,598
2029	0
2030	0

Locked Avoided Costs (Transferred from the RESA to the ECA)

Total Avoided Cost (\$000)	
Solar Rewards Prior to 2009 [1]	
2021	3,510
2022	3,273
2023	3,291
2024	3,449
2025	3,534
2026	3,632
2027	3,421
2028	3,373
2029	47
2030	0

[1] Locked down costs in Docket No. 08A-532E were locked on a total dollar basis

Table 7-3 (b)

**Public Service Company of Colorado
 Renewable Energy Standard Adjustment Estimate
 For the Years 2021-2030**

Locked Incremental Costs (Transferred from the ECA to the RESA)

Approved Plan	Resource	Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2009 RES Plan	SunE Alamosa [1]	Incremental Cost (\$000)	\$ 1,846	\$ 1,947	\$ 1,928	\$ 1,837	\$ 1,784	\$ 1,722	\$ 1,660	\$ 1,598	\$ -	\$ -
Total Locked Incremental Costs			\$ 1,846	\$ 1,947	\$ 1,928	\$ 1,837	\$ 1,784	\$ 1,722	\$ 1,660	\$ 1,598	\$ -	\$ -

Locked Avoided Costs (Transferred from the RESA to the ECA)

Approved Plan	Resource	Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2009 RES Plan	On-Site Solar (Pre-2009) [1]	Locked Avoided Cost (\$000)	\$ 3,510	\$ 3,273	\$ 3,291	\$ 3,449	\$ 3,534	\$ 3,632	\$ 3,421	\$ 3,373	\$ 47	\$ -
Total Locked Avoided Costs			\$ 3,510	\$ 3,273	\$ 3,291	\$ 3,449	\$ 3,534	\$ 3,632	\$ 3,421	\$ 3,373	\$ 47	\$ -

[1] Locked down costs in Docket No. 08A-532E were locked on a total dollar basis