



City of Palo Alto

(ID # 11953)

Utilities Advisory Commission Staff Report

Report Type: New Business**Meeting Date: 3/3/2021****Summary Title: Presentation on REC Exchange Program****Title: Informational Update on REC Exchange Program for 2020 and 2021 in Accordance With the City's Amended Electric Supply Portfolio Carbon Neutral Plan****From: City Manager****Lead Department: Utilities****Executive Summary**

On August 24, 2020 the Council approved amendments to the electric utility's Carbon Neutral Plan that clarified and modified policies regarding the sales and exchanges of renewable energy credits (RECs) ([Staff Report #11556](#)). The amendments permitted the exchange of Bucket 1 (primarily in-state) RECs for Bucket 3 (primarily out of state) RECs, provided the City maintains compliance with State Renewable Portfolio Standard (RPS) regulations. A portion of the earnings from the program would be used to mitigate the economic impacts of the coronavirus pandemic, and the remainder would be reserved for local decarbonization programs. The amendments also adopted an hourly accounting methodology for managing the City's electric portfolio and permitted the use of Bucket 3 RECs for managing any emissions impacts identified by the use of the hourly accounting methodology.

Since then, staff has been purchasing and selling RECs for Calendar Year 2020 in accordance with the Carbon Neutral Plan amendments. The attached presentation summarizes the net earnings for 2020 from the program and its impacts on the City's Power Content Label. It also provides projections for the program's net earnings and Power Content Label impacts for 2021.

For 2020, net earnings from the REC exchanges were \$2.94 million, which is in line with staff's projections from the time the Carbon Neutral Plan amendments were adopted in August. Staff was able to sell more Bucket 1 RECs than initially projected; however, Bucket 1 REC prices were lower than expected, and Bucket 3 REC prices were slightly higher than expected. For 2021, staff projects slightly lower net earnings from the program (\$2.80 million), primarily due to higher RPS requirement levels and higher Bucket 3 REC prices.

This is an informational item and no Utilities Advisory Commission action is requested.

Attachments:

- Attachment A: Presentation

A photograph of a long wooden boardwalk extending from the foreground into the distance, crossing a grassy field and leading towards a body of water. The sky is a mix of purple and blue, suggesting a sunset or sunrise. The boardwalk has a wooden railing with a metal handrail on top.

REC EXCHANGE: CY 2020 UPDATE #2

March 3, 2021

www.cityofpaloalto.org



PART 1: CY 2020 REC EXCHANGE SUMMARY

March 3, 2021

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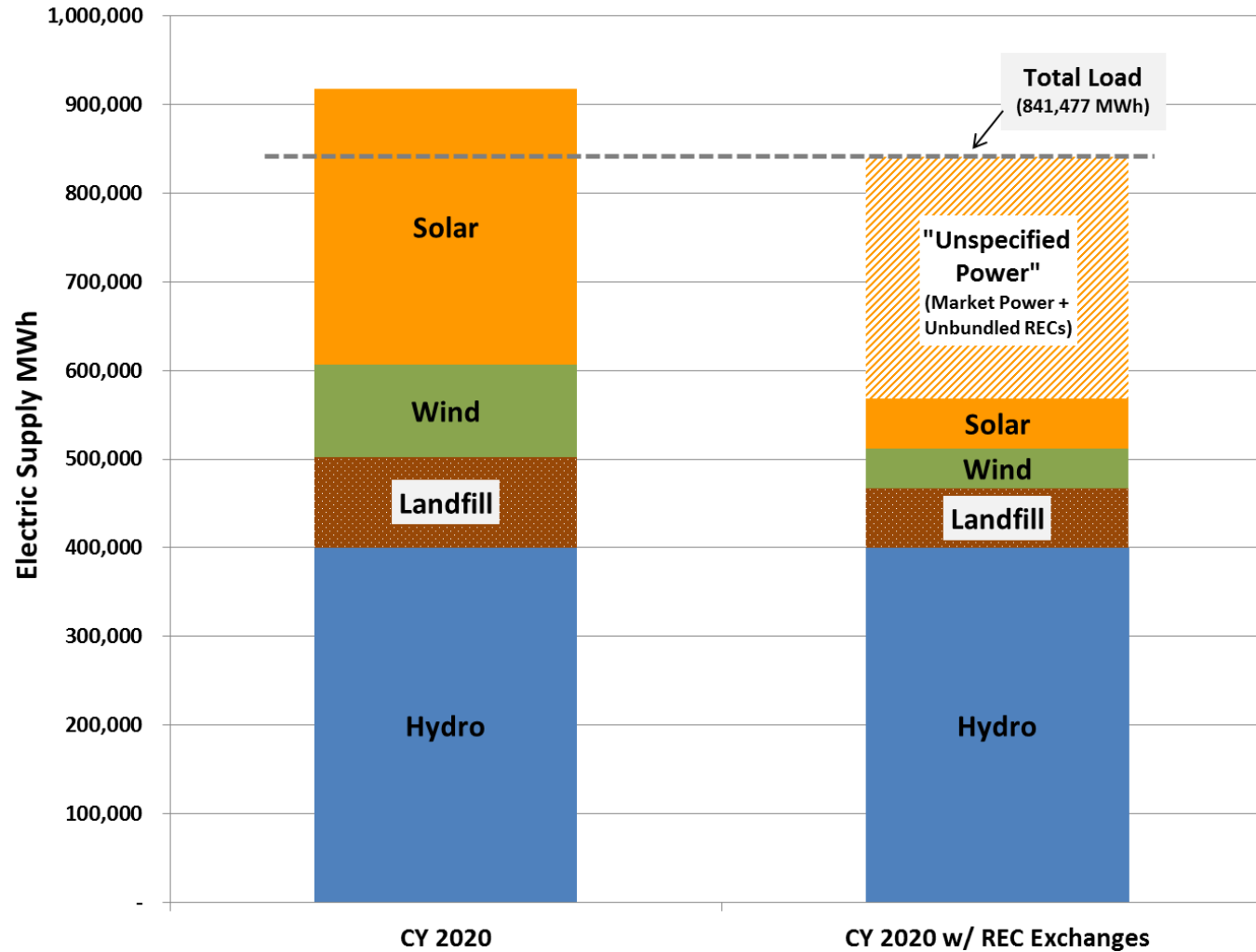
REC EXCHANGE SUMMARY FOR CY 2020

	Baseline (No Sales)	REC Exchange Program (August Update)	REC Exchange Program (Final Update)
Total REC Sales Volume (MWh)	--	324,400	348,700
Bucket 3 REC Purchase Volume (MWh)	--	298,830	325,186
Total REC Sales Revenue (\$M)	--	\$3.70	\$4.04
Bucket 3 REC Purchase Cost (\$M)	--	\$0.79	\$1.10
Net Revenue (\$M)	--	\$2.91	\$2.94
Bucket 1 RPS Level	67%	23%	22%

Projected REC Prices: \$15.25 for Bucket 1, \$2.65 for Bucket 3

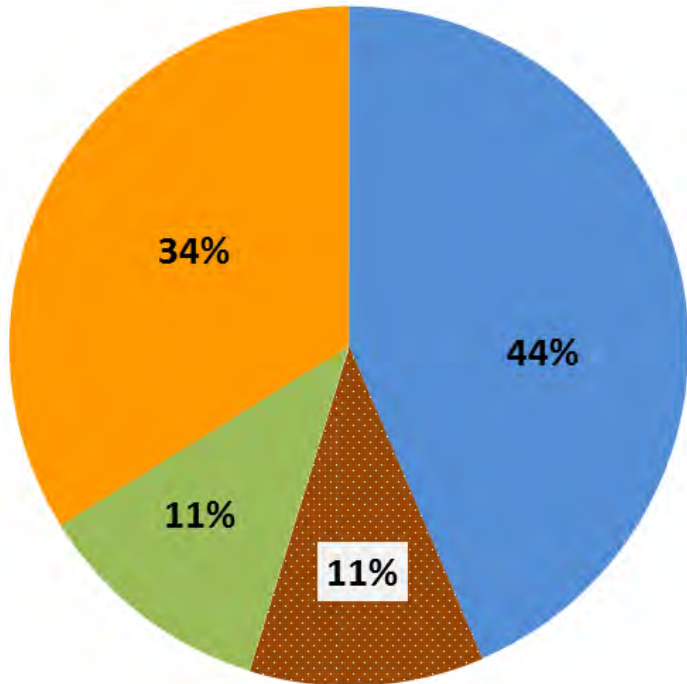
Actual REC Prices: \$13.70 for Bucket 1, \$3.40 for Bucket 3

ELECTRIC SUPPLY PORTFOLIO IMPACT (CY 2020)



POWER CONTENT LABEL IMPACT (CY 2020)

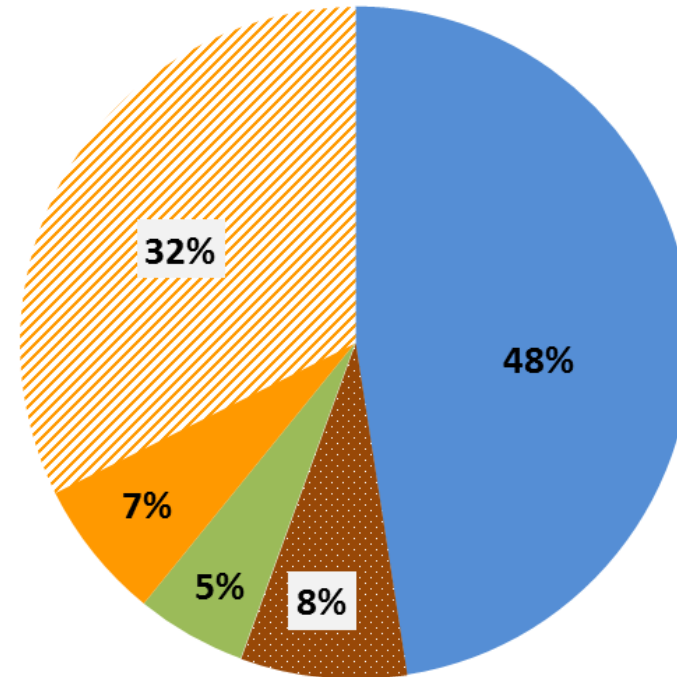
Base Portfolio



RPS Level: 69%

Emissions Intensity: 7 kg CO₂/MWh

With REC Exchange



RPS Level: 23%

Emissions Intensity: 128 kg CO₂/MWh

■ Large Hydro ■ Landfill Gas ■ Wind ■ Solar ■ Unspecified Power



POWER CONTENT LABEL IMPACT (CY 2020)

	Base Portfolio	After REC Exchange
Eligible Renewable	67%	23%
Biomass	13%	9%
Geothermal	0%	0%
Small Hydro	1%	1%
Solar	40%	8%
Wind	13%	5%
Coal	0%	0%
Large Hydro	33%	48%
Natural Gas	0%	0%
Nuclear	0%	0%
Unspecified Sources	0%	29%

Emissions Intensity (kg CO2/MWh)	7.0	128.0
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PART 2: CY 2021 REC EXCHANGE PROJECTIONS

March 3, 2021

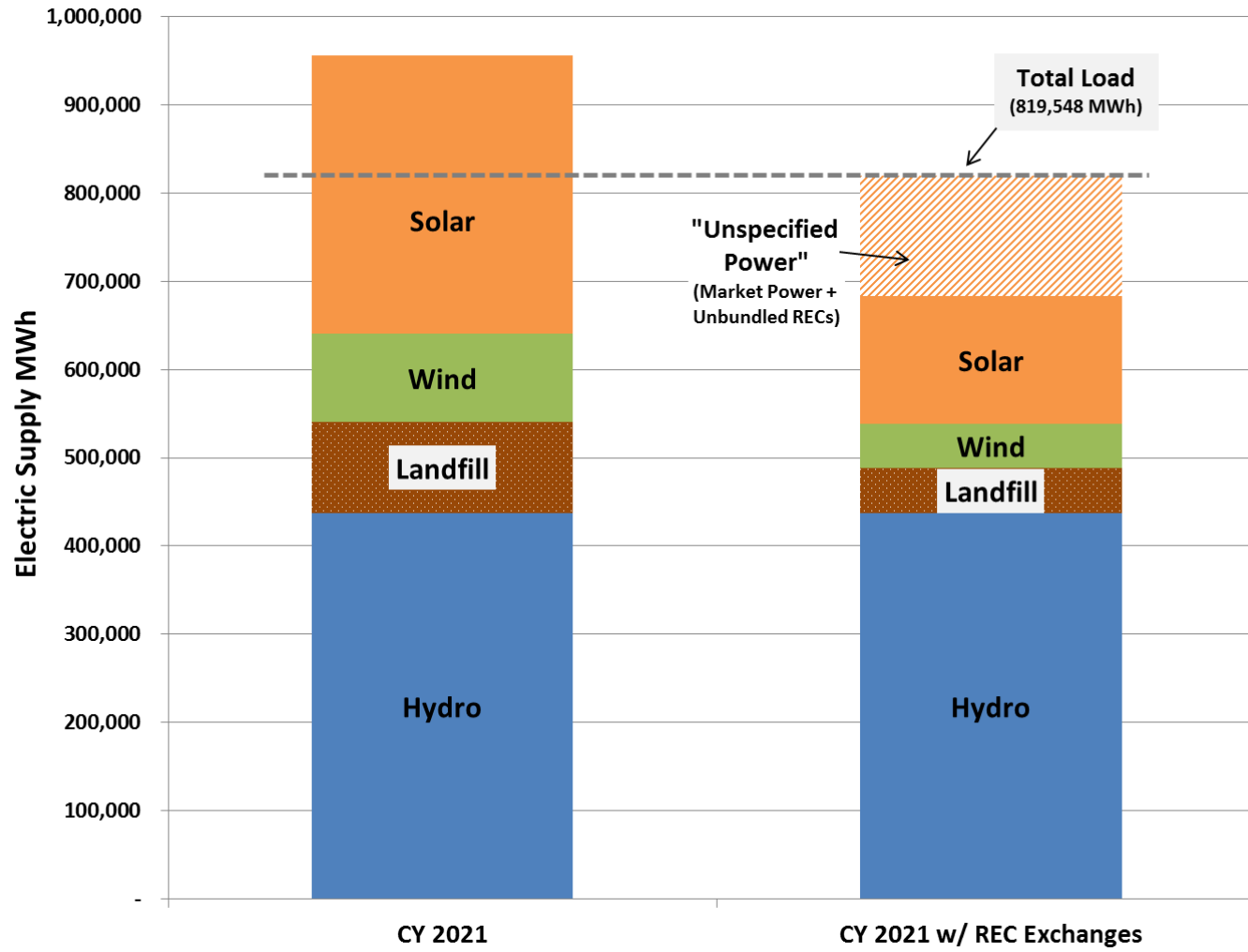
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REC EXCHANGE PROJECTIONS FOR CY 2021

	Baseline (No Sales)	REC Exchange Program
Total REC Sales Volume (MWh)	--	273,025
Bucket 3 REC Purchase Volume (MWh)	--	176,674
Total REC Sales Revenue (\$M)	--	\$3.69
Bucket 3 REC Purchase Cost (\$M)	--	\$0.88
Net Revenue (\$M)	--	\$2.80
Bucket 1 RPS Level	71%	34%

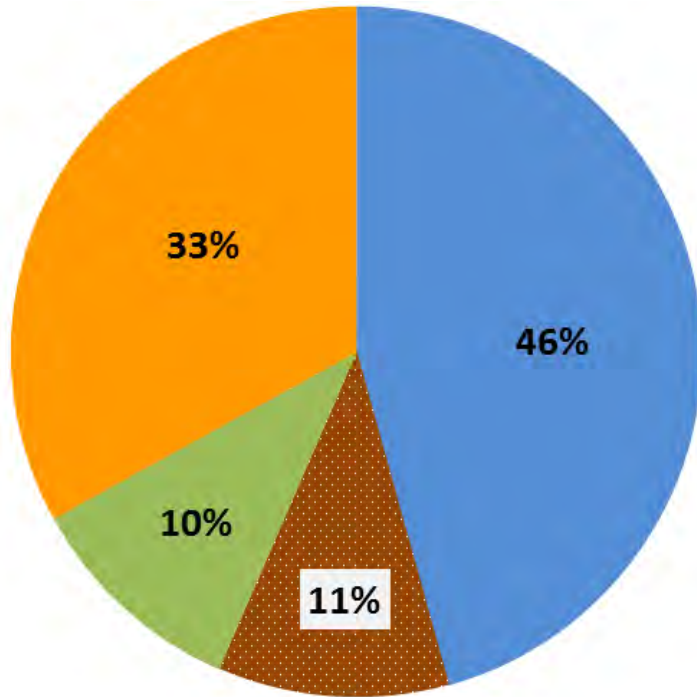
Projected REC Prices: \$13.50 for Bucket 1, \$5.00 for Bucket 3

ELECTRIC SUPPLY PORTFOLIO IMPACT (CY 2021)



POWER CONTENT LABEL IMPACT (CY 2021)

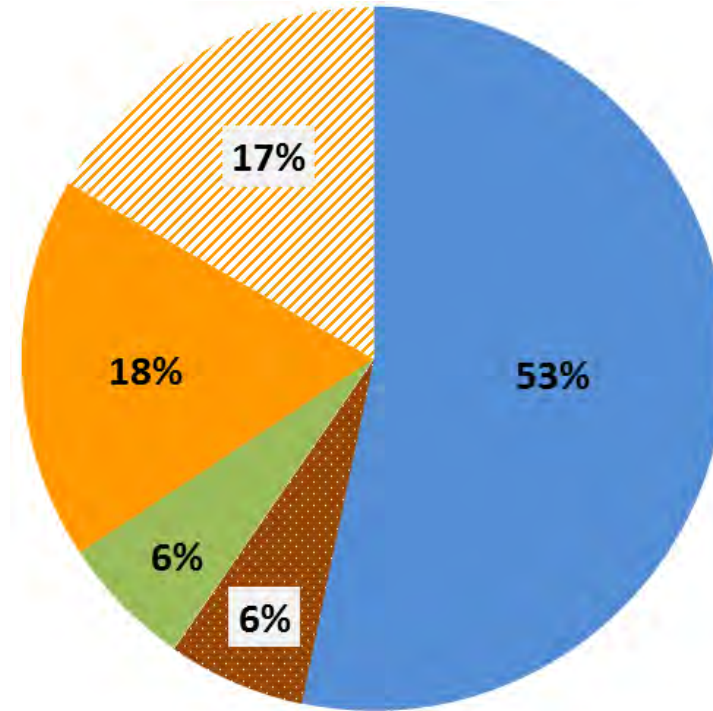
Base Portfolio



RPS Level: 71%

Emissions Intensity: 7 kg CO₂/MWh

With REC Exchange



RPS Level: 34%

Emissions Intensity: 62 kg CO₂/MWh

■ Large Hydro ■ Landfill Gas ■ Wind ■ Solar ■ Unspecified Power



POWER CONTENT LABEL IMPACT (CY 2021)

	Base Portfolio	After REC Exchange
Eligible Renewable	67%	32%
Biomass	13%	7%
Geothermal	0%	0%
Small Hydro	1%	1%
Solar	40%	18%
Wind	13%	6%
Coal	0%	0%
Large Hydro	33%	54%
Natural Gas	0%	0%
Nuclear	0%	0%
Unspecified Sources	0%	14%

Emissions Intensity (kg CO2/MWh)	7.0	62.0
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