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Project Title:	Integrated Resource Plan
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Description:	The Burbank IRP file was too large, so it had to be separated into multiple parts. This is the last part "Attachments."
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Organization:	City of Burbank
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2024 BWP IRP

Attachment 1

BWP Renewable Energy Resources Procurement Plan & Enforcement Program

BURBANK WATER AND POWER

RENEWABLE ENERGY RESOURCES PROCUREMENT PLAN & ENFORCEMENT PROGRAM (VERSION 3)

DECEMBER 2021

TABLE OF CONTENTS

PURPOSE

To fulfill unmet long-term generation resource needs, each publicly owned electric utility (POU) governing board must adopt and implement a renewable energy resources procurement plan pursuant to § 399.30 of the Public Utilities Code (PUC) that implements a 60% renewable resource procurement target by December 31, 2030 as required by Senate Bill 100 (SB 100), passed into law on September 10, 2018.

The regulations related to the procurement of renewable resources for local publicly owned electric utilities are established in Article 16 (commencing with section 399.11) of Chapter 2.3 of Part 1 of Division 1 of the PUC. The California Energy Commission (CEC) establishes the regulatory procedures for publicly owned utilities in conformance with the requirements in the PUC.

This document supplants Burbank's October 2012 RPS (Renewal Portfolio Standard) Procurement Plan and Enforcement Program to procure 33% by December 31, 2020 by restating it to continue procurement of eligible renewable resources to at least 60% of the electric utility's annual retail sales by December 31, 2030 and to remain at or greater than 60%, post 2030.

TARGET QUANTITIES OF RENEWABLE ENERGY RESOURCES

Consistent with § 399.15 of the PUC, Burbank Water and Power (BWP) shall continue procurement of eligible renewable resources consistent with the requirements in order to achieve a sustained level of 60 percent of its annual retail energy sales by December 31, 2030. Energy from eligible renewable sources will be procured to meet the following targets in the indicated compliance periods.

- **Compliance Period 4 -** January 1, 2021 - December 31, 2024. BWP will procure eligible renewable energy products within the period sufficient to meet the sum of 35.75% of its 2021 retail sales, 38.50% of its 2022 retail sales, 41.25% of its 2023 retail sales, and 44% percent of its 2024 retail energy sales.

- **Compliance Period 5 -** January 1, 2025 - December 31, 2027. BWP will procure eligible renewable energy products within the period sufficient to meet the sum of 46% percent of its 2025 retail sales, 50% percent of its 2026 retail sales, and 52% percent of its 2027 retail sales.

- **Compliance Period 6** - January 1, 2028 - December 31, 2030. BWP will procure eligible renewable energy products within the period sufficient to meet or exceed the sum of 54.67% of its 2028 retail sales, 57.33% of its 2029 retail sales, and 60% percent of its 2030 retail sales.

- **Compliance Periods 7** and beyond are three years in duration. BWP shall maintain procurement of eligible renewable energy products within each additional period sufficient to meet an average of 60% or greater of its retail sales in each compliance period as required by law

Consistent with regulations, BWP is not required to demonstrate a specific quantity of procurement in any of the intervening years between 2021 up to and including 2030, however, BWP must demonstrate procurement equal to the compliance period target. BWP will submit its annual and compliance period compliance reports, as required under the California Energy Commission (CEC).

Retail sales may exclude sales to customers taking service under the optional BWP Green Choice Program option or any shared renewable generation program. Sales

to retail customers taking Direct Access Service, energy consumption by BWP, electricity used by BWP for water pumping, and electricity produced for onsite consumption under(self-generation) that was not sold to the customer by BWP, shall not be included in this definition of Retail Sales.

For a customer participating in BWP's Green Choice Program option or any shared renewable generation project, if the renewable energy is excluded from the calculation of Retail Sales, the Portfolio Content Category ("PCC") 1 Renewable Energy Credits ("RECs") associated with the electricity credited to such customer under the program will not be used by BWP for compliance with state mandated RPS procurement requirements. The RECs will be retired on behalf of the participating customer, and may not be further sold, transferred, or otherwise monetized for any purpose. To the extent possible, the electricity products excluded from retail sales will be procured by BWP from eligible renewable energy resources that are located in close proximity to the BWP service territory.

ELIGIBLE RENEWABLE ENERGY RESOURCES

Renewable energy resources procured to comply with this Compliance Plan can be located anywhere along the high-voltage interconnected transmission systems known together as the Western Interconnection and shall meet the requirements defined in the Renewable Portfolio Standard (RPS) Eligibility guidebook published by the CEC in effect at the time the resource was procured. As of October 2021, this document is in its 9th edition.

In general, renewable energy resources allowed are from carbon neutral, and carbon free resources. The following types are examples of what constitute "eligible" resources: biomass, biomethane, solar thermal, solar photovoltaic, wind, geothermal, fuel cells using renewable fuels, low impact small hydroelectric generation, digester gas, municipal solid waste, landfill gas, ocean wave, ocean thermal, tidal current, or renewable distributed generation on the customer side of the meter.

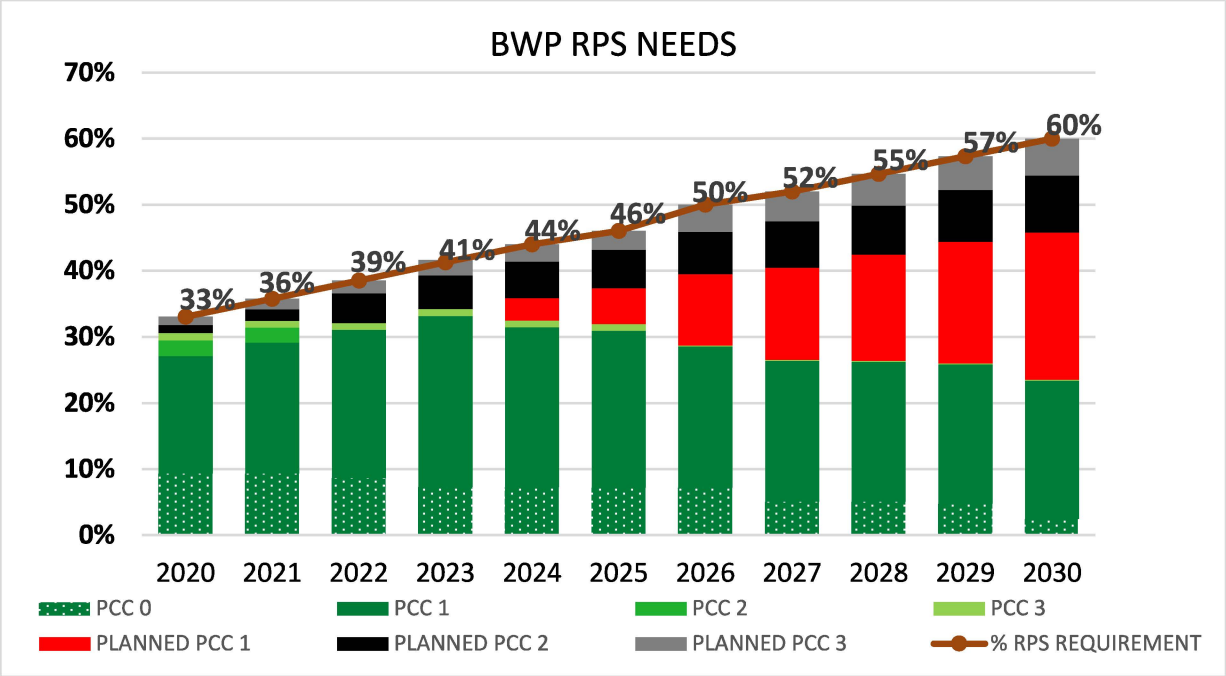
CURRENT RENEWABLE RESOURCES AND PROGRESS TO SB 100 TARGET

Burbank has a diverse portfolio of long term resources. The last contract BWP entered into was with EDF, which came online in 2021. The majority of these contracts were done with the assistance of the Southern California Public Power Authority (SCPPA) and partnering with other SCPPA affiliated public utilities.

Name	Resource Type	MW	Start Date	End Date
Copper Mountain	**Solar**	**40 MW**	2012	2033
Milford	**Wind**	**10 MW**	2009	2029
Pebble Springs	**Wind**	**10 MW**	2009	2027
Tieton	**Small Hydro**	**6.8MW**	2009	NA
Pleasant Valley/Wyoming Wind	**Wind**	**5 MW**	2006	2022
Don A. Campbell	**Geothermal**	**2.49 MW**	2013	2033
Ameresco	**Landfill Gas**	**1.7 MW**	2010	2026
Valley Pumping	**Small Hydro**	**550 kW**	2002	NA
EDF	**Solar**	**22 MW**	2021	2046

**Note: REC+Index refers to paying a set REC price plus market price for the energy.*

The chart below provides BWP's progress towards compliance with SB 100. BWP plans to procure at least two additional long-term contracts by the end of 2023. BWP will also seek to secure PCC 2 and PCC 3, on an annual basis, in order to mitigate costs.



BWP PROCUREMENT PROCESS

BWP solicits a majority of its long-term renewable resources through open Requests for Proposals (RFPs) conducted by its joint powers authority, SCPPA. This allows BWP (and other SCPPA members) to purchase the output of portions of multiple diverse projects and gain economies of scale, rather than limit the projects that they would be capable of participating in due to the comparatively small demand of most of the individual utilities.

Since BWP is part of the Los Angeles Balancing Authority, BWP aims to secure a majority of its renewable contracts, where transmission is available and already contracted for. BWP will secure resources in diverse location, with variable term lengths and ultimately, on a least-cost and best-fit basis.

BWP will divide its outstanding RPS procurement between base-load and peaking renewable resources and complying with the PUC. BWP will also seek products with energy pricing tied to electricity market indices as well as fixed-priced. The SCPPA RFPs are considered an open and "rolling" solicitation, generally issued in January, with responses accepted through December of each year. The SCPPA RFP solicits proposals for power purchase agreements with and without ownership options, and also invites energy storage and other innovative proposals. BWP initially screens prospective renewable resource proposals received through SCPPA and through direct contact with renewable project developers based on the levelized offer price ($/MWh) for resources with a project size and proposed delivery period that matches BWP's procurement targets. For larger projects, joint

participation with other SCPPA members may be desirable to obtain the best project economics and contract terms.

RENEWABLE PORTFOLIO REQUIREMENTS

The renewable energy generated by all renewable resources is tracked by associating each megawatt-hour of energy generated to a unique identification number, called a REC. The RECs are used to help ensure there is no double counting, and that each unit of energy generated by a renewable resource can only be claimed once by any load serving entity.

In conformance with §399.16 of the PUC, the RECs associated with the output of the resource are categorized as three types and named in regulation maintained by the CEC for POU as Portfolio Content Categories.

The Portfolio Content Category (PCC) of each REC is not assigned to a type of resource, rather they are differentiated by how the utility can use them to meet the requirements of law and how the electricity associated with the REC affected the day-to-day operation of the Western Interconnection. For example, a REC associated with energy generated in the past is in a different PCC than a REC associated with energy being generated in real-time with respect to how a utility obtained the RECs and/or any energy associated with it. BWP, and all other compliance entities under the law, have met their renewable resource procurement requirements through the procurement of renewable energy through all three PCC's in order to efficiently integrate renewable resources against their native electric load requirements. BWP will continue to use all three PCC's as provided in order to meet renewable resources to 60% of retail load by December 31, 2030 as cost effectively as possible.

The three Portfolio Content Categories are:

- **PCC 1 - Directly Scheduled:** A REC associated with a certified renewable resource AND the energy from the same resource, bundled together and procured, *at the same time*, *in real-time*. The eligible renewable energy resource must have a first point of interconnection with a California balancing authority or are scheduled into a California balancing authority without substituting electricity from another source.

- **PCC 2 - Firmed and Shaped:** A REC associated with the energy from a certified renewable resource, *that was generated in the past*, AND is bundled together with the energy from a different another resource, procured *at the same time*, *in real-time*.

- **PCC 3 - Unbundled RECs:** A REC associated with the energy from a certified renewable energy resource, *that was generated in the past,* purchased with zero associated energy. In this case the REC is unbundled from the energy and sold separately

There is also a PCC 0, which refers to resources procured prior to June 1, 2010. These resources were procured before the formal RPS regulations and are considered "grandfathered." The total RPS requirement (the % of retail sales that needs to be renewable), minus the PCC 0 resources that count in full, will result in a "Net" RPS Requirement, against which the other PCC requirements will apply (Net Procurement Requirement).

- Example of how a PCC 0 resource impacts the Net Procurement Requirement:
  - Using the following information for a given calendar year:

Description	**Numerical Example**
Retail Sales	100 Gigawatt hours(GWh)
PCC 0	25 GWh
RPS % Requirement	50%
Total GWh of PCC 1-3 RPS	100 GWh Retail-25 GWh PCC 0= 75 GWh. PCC 1-3 requirements apply to the remainder of the 75 GWH, based on 50% RPS RPS Needs= 75 GWh* 50%= 37.5 GWh which need to meet the PCC rules

Consistent with §399.13, at least 65 percent of the procurement applied towards any compliance period after January 1, 2021 shall be from contracts of 10 or more years in duration or through ownership agreements for the renewable energy resource. This Long-term Requirement (LTR) is discussed in detail under the CEC RPS Enforcement Regulations, titled "Modification of Regulations Specifying Enforcement Procedures for the Renewable Portfolio Standard for Local Publicly Owned Electric Utilities," which went into effect on July 12, 2021.

Consistent with the limits provided for in §399.16(c), the amount of renewable energy from each Portfolio Content Category that BWP can apply in each compliance period is as follows:

- PCC 1 - not less than 75 percent.
- PCC 2 - not more than 15 percent

- PCC 3 - not more than 10 percent

A streamlined table of all RPS procurement requirements is listed below.

Burbank Water and Power California Energy Commission RPS Procurement Requirements by Calendar Year				
California RPS Mandatory Procurement Requirement	Compliance Period 4	Compliance Period 5	Compliance Period 6	Compliance Period 7+
	1/1/2021-12/31/2024	1/1/2021-12/31/2027	1/1/2028-12/31/2030	3 calendar year blocks
	44% RPS by 12/31/2024	52% by 12/31/2027	60% RPS by 12/31/2030	60% RPS
PCC 1 Minimum	≥ 75% of Net Procurement Requirement			
PCC 2 Maximum	≤ 25% of Net Procurement Requirement			
PCC 3 Maximum	≤ 10% of Net Procurement Requirement			
LTR	At least 65% of all RPS contracts must be long-term in duration (at least 10 years in duration)			

CITY COUNCIL DISCRETION AND COST LIMITATIONS

The Burbank City Council has the responsibility and discretion to define and establish a cost limitation if it determines that committing to a new long-term resource, for the purposes satisfying BWP's procurement requirements under the law, would result in adverse cost impacts to the ratepayers of Burbank. Burbank Council reserves the authority to modify or delay compliance with the procurement targets set forth herein.

If Burbank City Council exercises such authority, it shall do so at a properly noticed public meeting consistent with the following:

- Council shall establish additional reporting requirements to satisfy future procurement requirements consistent with §399.15(b)(6).

- Council shall not waive enforcement unless all necessary reasonable efforts have been taken to achieve compliance §399.15(b)(7).

BWP RPS COMPLIANCE TO DATE AND PLANNED COMPLIANCE WITH LAW

Consistent with §399.15, occurrence of the following items, as well as others that are allowed under §399.15, are instances where City Council may delay timely procurement sufficient to reach 60% of retail sales by December 31, 2030 (or any interim target).

- Inadequate Transmission Capacity: BWP has limited transmission rights to market hubs and scheduling points within the Western Interconnection and

cannot on its own finance the development of high-voltage transmission projects to new resource developments. Burbank's ability to access new eligible renewable energy resource developments across the Western United State are constrained. A delay may apply if BWP has inadequate transmission capacity despite taking reasonable measures under its control to develop or otherwise obtain transmission for potential eligible renewable energy resources,

- Permitting or Interconnection delays. Delays affecting the completion, interconnection or operating date of new eligible renewable power projects or result in an inadequate supply of such projects beyond the control of the utility.
- Unanticipated Curtailment or unforeseeable circumstances. Unexpected and sudden loss of a resource.
- Unanticipated increase in retail sales due to transportation electrification. In the event that adoption of transportation electrification through 2030 greatly exceeds current load estimates, BWP may not be able to meet compliance period targets without disproportionate rate impacts.

ENFORCEMENT PROGRAM

The General Manager of Burbank Water and Power shall have the duty and responsibility of executing the Renewable Procurement Plan outlined above and ensuring that is done in full compliance with the law and any applicable regulations issued there under.

It is BWP's practice to discuss Burbank's renewable energy portfolio with the public during the annual budget meetings that take place with Burbank City Council and Utility Board. BWP shall maintain the practice of reporting on its renewable procurement progress during these public meetings.

The General Manager shall inform the City Council at a separate public meeting if they determine that BWP will not meet a procurement target set out above. The General Manager shall present a plan to bring the utility back into compliance at the same meeting for City Council's consideration for adoption.

VERSIONS

- VERSION 1: Initially Adopted – November 22, 2011
  - New mandate to comply with SBX1 2
- VERSION 2: Amended – October 30, 2012
  - Update on renewable energy contracts
- VERSION 3: Amended – December 14, 2021
  - Show compliance with SB 100
  - Incorporate RPS Regulations as approved on July 12, 2021

2024 BWP IRP

Attachment 2

IRP Survey Results

IRP SURVEY RESULTS

Attachment 2

CITY OF BURBANK
WATER AND POWER

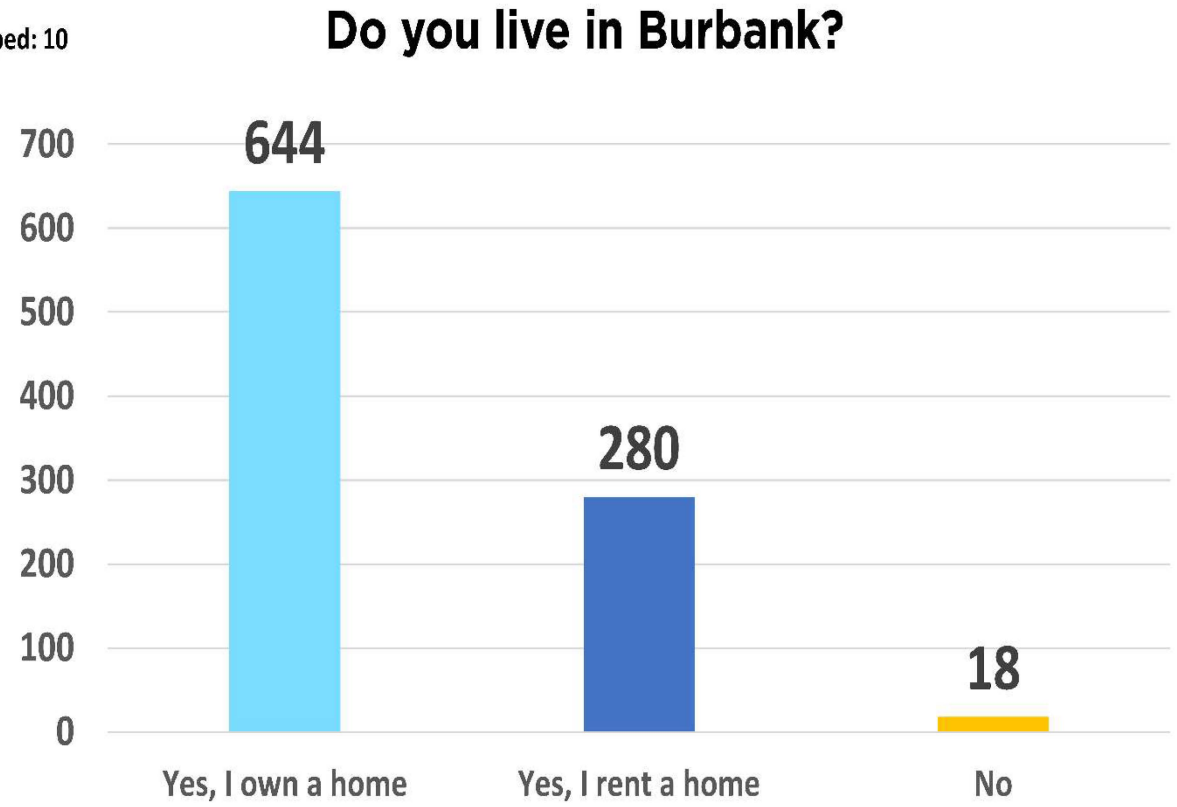
12 Question Survey with 952 Responses

- Where they work/live
- Their needs as a customer
- What BWP priorities should be
- What their perception of rates are
- Engagement with Green Choice

Attachment 2: IRP Survey-2

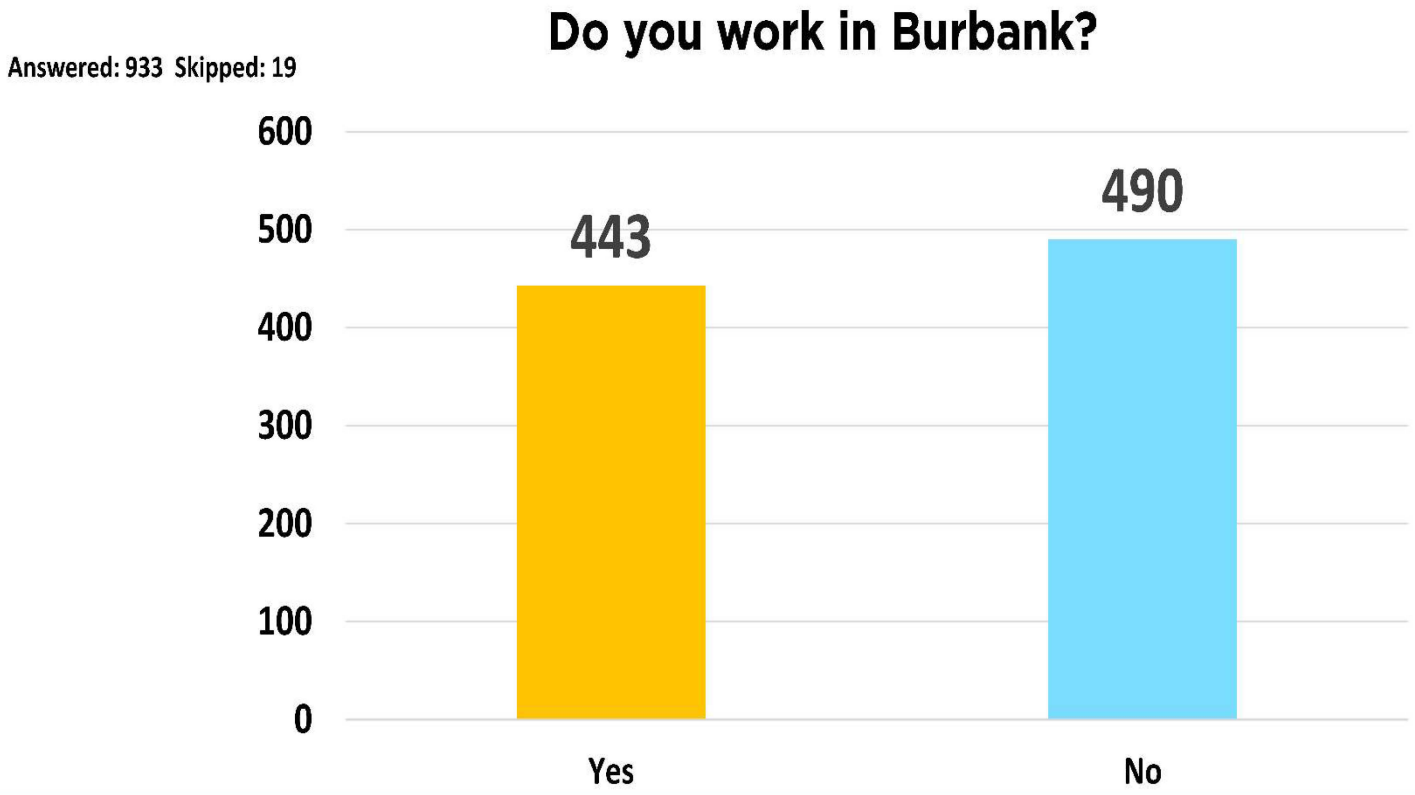
~68% of respondents are homeowners

Answered: 942 Skipped: 10



Attachment 2: IRP Survey-3

~47% of respondents work in Burbank

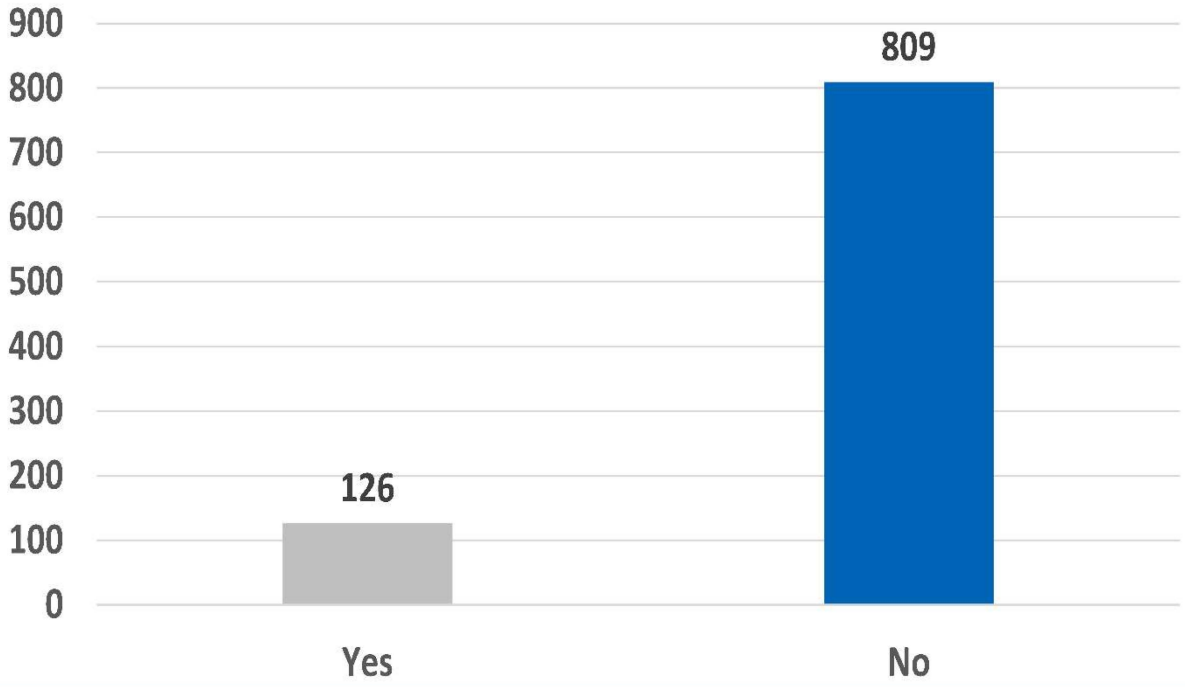


Attachment 2: IRP Survey-4

Most respondents do not own a business

Do you own a business in Burbank?

Answered: 935 Skipped: 17

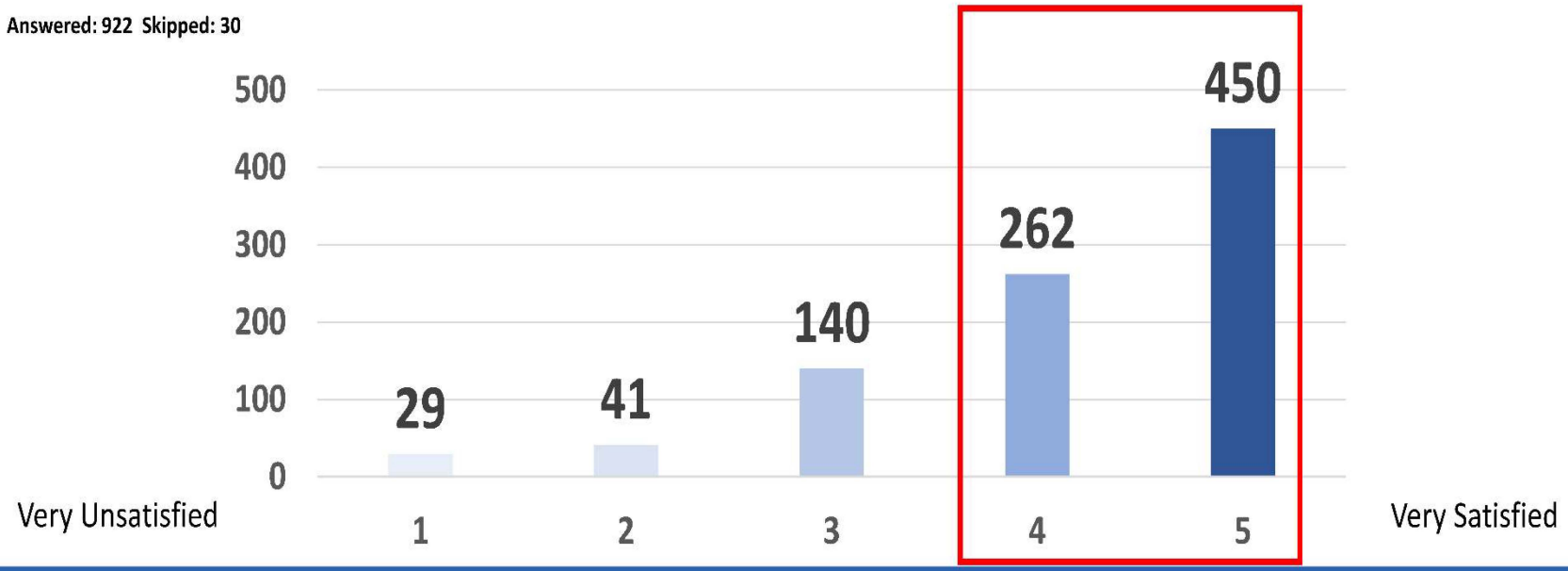


Attachment 2: IRP Survey-5

~75% of respondents are satisfied With BWP electric services

How satisfied are you with the electric services offered by BWP?
On a scale of 1-5, with 5 being "very satisfied" and 1 being "very unsatisfied"

Answered: 922 Skipped: 30



Attachment 2: IRP Survey-6

Maintaining high reliability and affordable rates are top priorities for respondents

What is most important to you?* Ranked in priority, 1st through 4th

High Reliability

Highest answer for both #1 and #2 priority

Affordable Rates

Runner up in #1 and #2 (within >5%)

Minimizing Environmental Impact

Not a clear majority in any rank

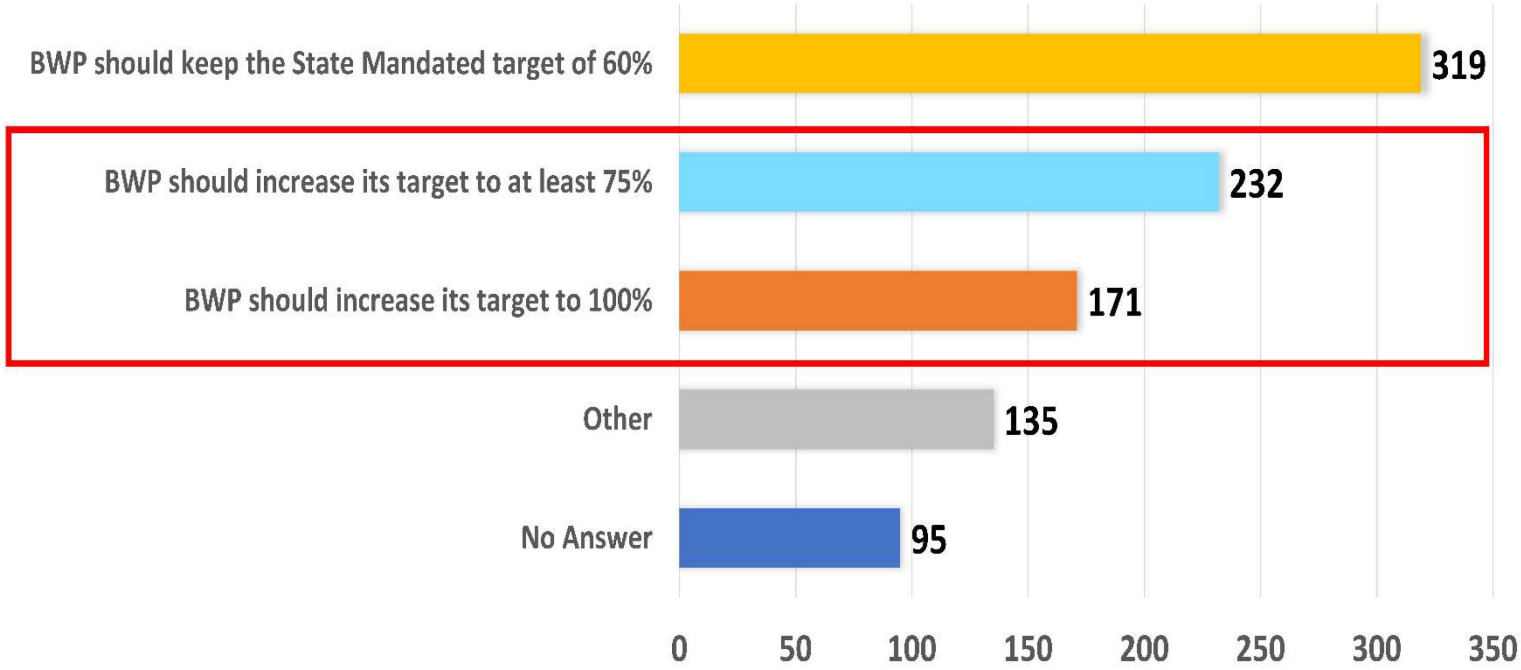
Quality of Customer Service

35% placed this last

Many left no answer

58% think the target should increase

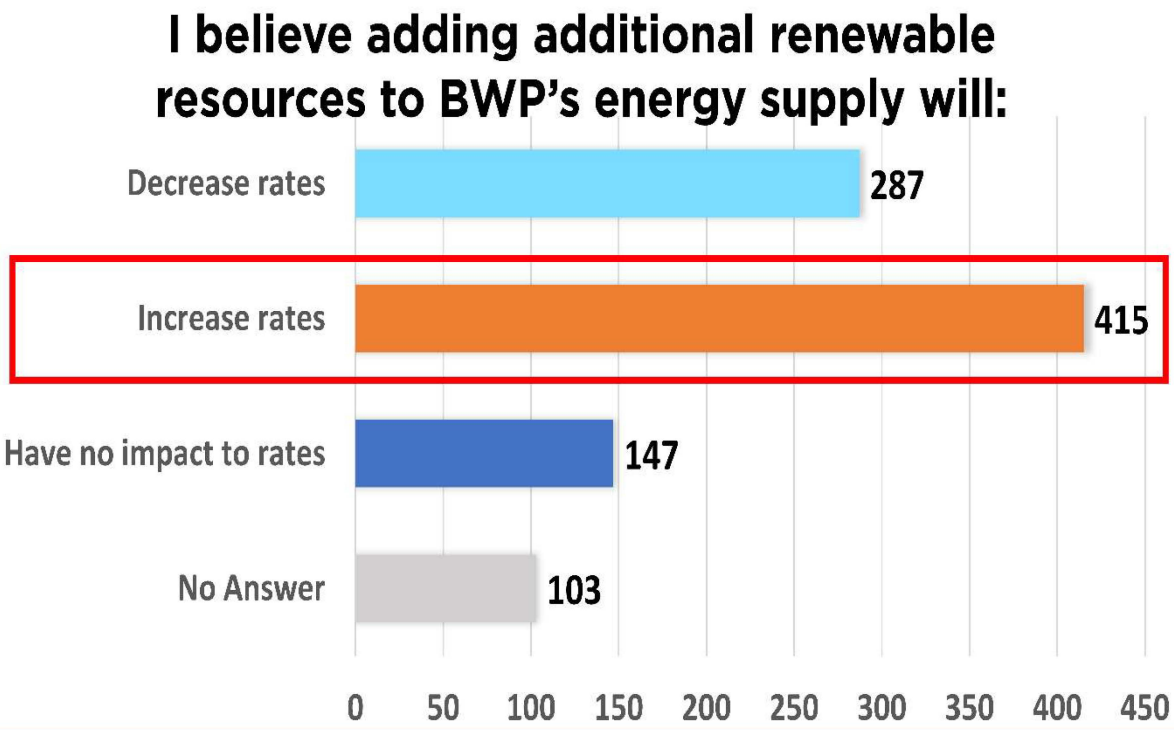
What do you think BWP's renewable resource target should be by 2030?



* Most Burbank residents want more renewables, but they also want lower electric rates, but they also understand that renewables cost more

Attachment 2: IRP Survey-8

44% of respondents think additional renewable resources will increase rates



Attachment 2: IRP Survey-9

Respondents want to "keep costs down" and "exceed compliance requirements"

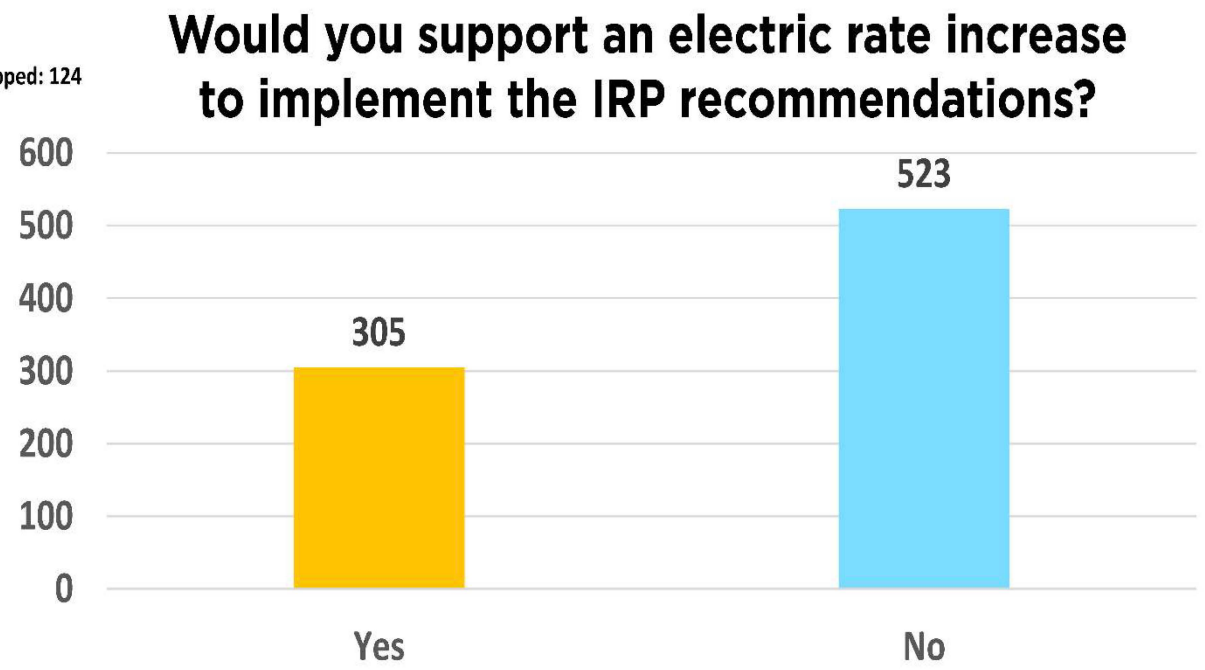
What do you think BWP should prioritize as it develops the IRP?

Answered: 839
Skipped: 113

Attachment 2: IRP Survey-10

55% of respondents would not support a rate increase to implement the IRP recommendations

Answered: 828 Skipped: 124



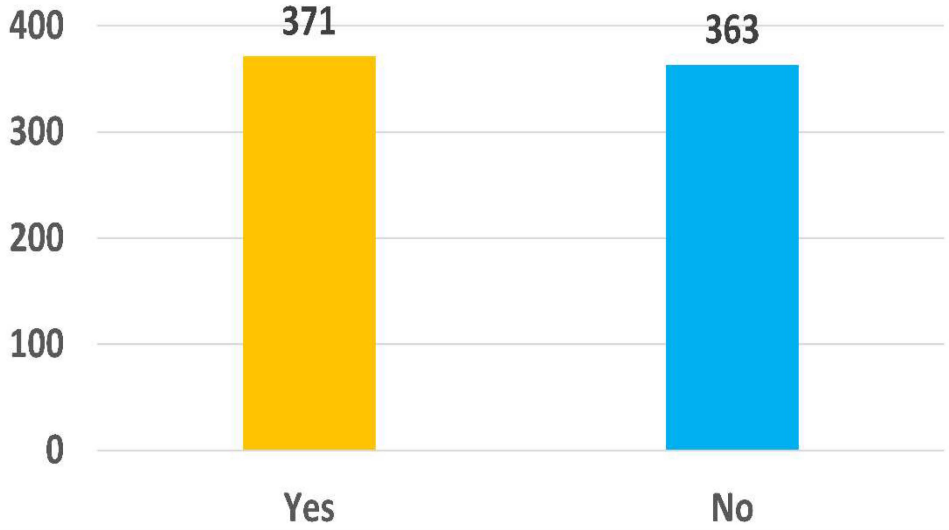
Attachment 2: IRP Survey-11

39% would support a rate increase to reduce fossil fuel reliance

Would you support a rate increase for investments in City renewable and energy storage projects that create resiliency for our community and reduce reliance on fossil fuels?

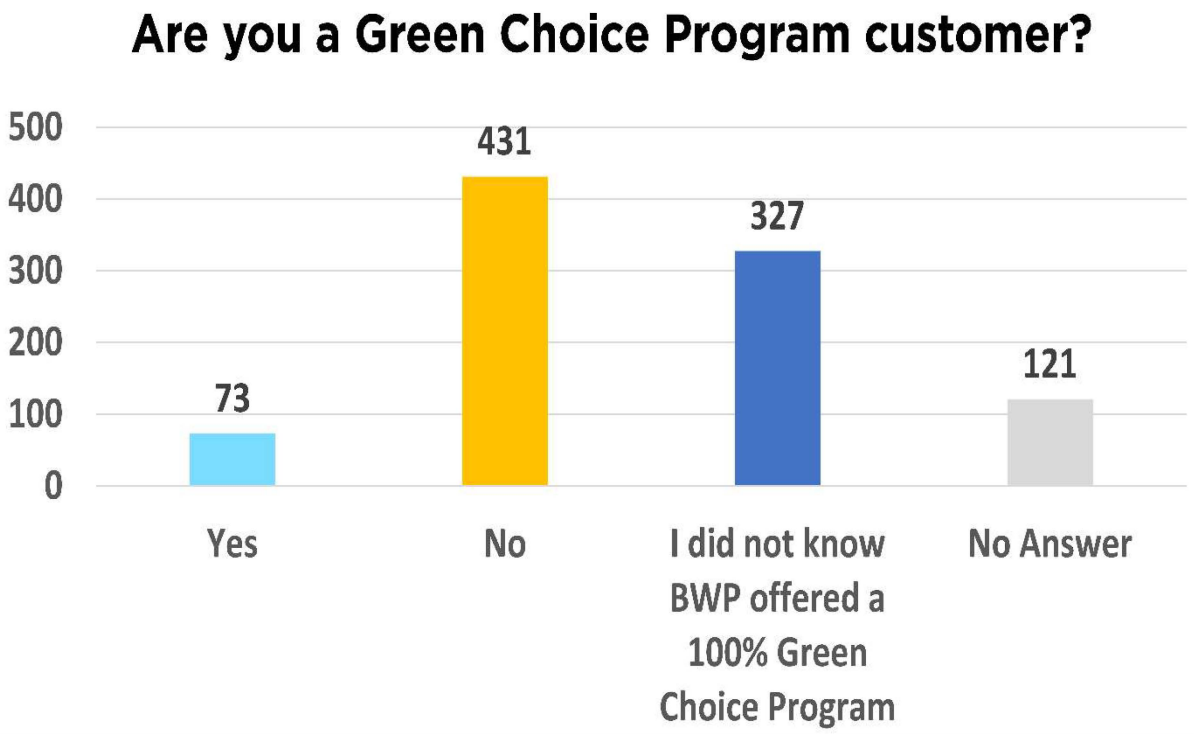
Answered: 734 Skipped: 218

The number of respondents skipping this question suggests that this topic presents a challenge for Burbank residents – on the one hand they want more renewables but the flip side is at what cost?



Attachment 2: IRP Survey-12

Most respondents are not Green Choice Program Participants



Attachment 2: IRP Survey-13

2024 BWP IRP

Attachment 3

List of Acronyms

List of Acronyms

AAEE	Additional Achievable Energy Efficiency
AAFS	Additional Achievable Fuel Substitution
AATE	Additional Achievable Transportation Electrification
ADMS	Advanced Distribution Management System
AMI	Advanced Metering Infrastructure
APPA	American Public Power Association
BA	Balancing Authority
BAASA	Balancing Authority Area Services Agreement
BESS	Battery Energy Storage Systems
BUGL	Burbank-Glendale Planning Area
BUSS	Burbank Utility Service Subsidy
BWP	Burbank Water and Power
BYOD	Bring Your Own Device
CAES	Compressed Air Energy Storage
CAGR	Compound Annual Growth Rate
CAISO	California Independent System Operator
CAPEX	Capital Expenditure
CARB	California Air Resources Board
CCS	Carbon Capture and Sequestration
CDD	Cooling Degree Days
CEC	California Energy Commission
CP	Coincident Peak
CY	Calendar Year
DAC	Disadvantaged Community
DCOH	Days Cash On Hand
DEED	Demonstration of Energy and Efficiency Development
DER	Distributed Energy Resources
DERMS	Distributed Energy Resource Management System
DEV	Development (specifically, demand related to new development)
DR	Demand Response
DSGS	Demand Side Grid Support
DSM	Demand-Side Management
ECAC	Energy Cost Adjustment Charge
EDAM	Extended Day-Ahead Market

EE	Energy Efficiency
EIA	Energy Information Administration
EIM	Energy Imbalance Market
ESG	Environmental, Social, and Governance
EV	Electric Vehicle
FY	Fiscal Year
GGRP	Greenhouse Gas Reduction Plan
GHG	Greenhouse Gas
GWh	Gigawatt-hour
GWP	Glendale Water and Power
HIP	Home Improvement Program
HPS	High-Pressure Sodium
HVDC	High Voltage Direct Current
IEPR	Integrated Energy Policy Report
IPA	Intermountain Power Agency
IPP	Intermountain Power Project
IRA	Inflation Reduction Act
IRP	Integrated Resource Plan
ITC	Investment Tax Credit
kWh	kilowatt-hour
LADWP	Los Angeles Department of Water and Power
LED	Light Emitting Diode
LNG	Liquified Natural Gas
LSE	Load Serving Entity
MPP	Magnolia Power Project
$MTCO_2e$	Metric Tonnes of Carbon Dioxide Equivalent
MW	Megawatt
MWD	Metropolitan Water District of Southern California
NCP	Non-Coincident Peak
NREL	National Renewable Energy Laboratory
O&M	Operations and Maintenance
PAYGO	Pay-As-You-Go (type of capital)
PCC	Portfolio Content Category
PCC0	"Grandfathered" renewable energy
PCC1	Portfolio Content Category 1

PCC2	Portfolio Content Category 2
PCC3	Portfolio Content Category 3
PTC	Production Tax Credit
REC	Renewable Energy Credit
RNG	Renewable Natural Gas
RP3	Reliable Public Power Provider
RPS	Renewable Portfolio Standard
SCPPA	Southern California Public Power Authority
SMR	Small Modular Reactor
STAG	Stakeholder Technical Advisory Group
STS	Southern Transmission System
TOU	Time-of-Use
TSA	Transmission Service Agreement
WECC	Western Electricity Coordinating Council
ZELFR	Zero Emitting Load Following Resource