DOCKETED	
Docket Number:	18-IRP-01
Project Title:	Integrated Resource Plan
TN #:	253559
Document Title:	City of Burbank, Water and Power IRP Report Part 7 Page 3-100 to 7-106
Description:	The Burbank IRP file was too large, so it had to be separated into multiple parts. This is "Part 7."
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Organization:	City of Burbank
Submitter Role:	Applicant
Submission Date:	12/7/2023 8:59:25 PM
Docketed Date:	12/8/2023

3.9.5.1 2-Tier Inclining-Block Energy Charges

Residential service customers, except for those customers that elect the optional electric vehicle rate, are subject to 2-tier inclining-block energy charges. 2-tier inclining-block energy charges offer energy at two inclining or increasing rates. The first, cheaper rate, applies to consumption up to the upper bound of the first "block" or tier. The second, more expensive rate, applies to incremental consumption above the first block or tier. For standard residential customers, the upper bound of the first block is 300 kWh. For residential lifeline customers, the upper bound of the first block is 400 kWh. The purpose of inclining-block energy charges is to encourage conservation, as higher consumption is subject to a higher rate.

3.9.5.2 Time-of-Use Energy Charges

Time-of-Use (TOU) energy charges are energy charges that vary based on the time of day, day of week, month of year, and observance of holidays. Currently, all commercial customers are subject to time-of-use energy charges. This rate schedule is designed to shift energy use from high-cost periods, such as in the evening between 4pm and 7pm, to low-cost periods.

Table 3-12 Time Periods for Time-of-Use (TOU) Rates

	Summer		Non-Summer	
Time	Weekday	Weekends & Holidays	Weekday	Weekends & Holidays
Midnight to 8am	Off	Off	Off	Off
8am to 4pm	Mid	Off	Mid	Off
4pm to 7pm	On	Off	Mid	Off
7pm to 11pm	Mid	Off	Mid	Off
11pm to Midnight	Off	Off	Off	Off

Table 3-13 Time Periods for Time-of-Use (TOU) Rates for Residential Electric Vehicle Owners

Time	Summer	Non-Summer
Midnight to 8am	Off	Off
8am to 4pm	Mid	Mid
4pm to 7pm	On	Mid
7pm to 11pm	Mid	Mid
11pm to Midnight	Off	Off

The summer season is from June 1 through October 31, and the non-summer season is from January 1 through May 31, and November 1 through December 31. Observed holidays are New Year's Day (January 1), Presidents' Day (third Monday in February), Memorial Day (last Monday in May), Independence Day (July 4), Labor Day (first Monday in September), Veterans Day (November 11), Thanksgiving Day (fourth Thursday in November), and Christmas (December 25).

BWP believes that time-of-use rates are a useful demand side management tool for reducing overall system costs. TOU rates can encourage customers to change their consumption patterns such that they reduce the utility's need to procure energy and capacity during the most expensive periods of the year. TOU rates can also encourage customers to shift their consumption to periods of the year when energy (often renewable) and capacity is in excess. These changes in consumption patterns can be beneficial to both the customer and BWP in terms of cost savings.

TOU rates will become an increasingly important tool for BWP as it continues to integrate more intermittent renewable resources. BWP believes in the potential for residential customers to respond to TOU rates, lowering their bills and decreasing the utility's cost to serve customers on a long-term basis.

3.9.6 Fixed Monthly Charges

Fixed monthly charges are generally designed to recover the cost of customer service and billing. For residential customers, they may also take the form of a service size charge which is designed to recover secondary distribution system costs.

3.9.6.1 Service Size Charge

The service size charge recovers customer-specific system costs, including the cost of wires and transformers and is determined by the customer's electrical panel size and the number of homes or buildings sharing a single transformer.

Customers are categorized as follows for service size charges:

- Small: Service Location with two or more meters per service drop and does not meet the definition of Large; typically multifamily residential.
- Medium: Service location with one meter per service drop and does not meet the definition of Large; typically single family residential.
- Large: Service with panel size greater than 200A.

3.9.6.2 Customer Service Charge

All customers are subject to a fixed monthly customer service charge with the exception of residential lifeline customers. This charge ranges from $12.07 (FY 2023-24) for residential basic service rate customers to $122.51 (FY 2023-24) for extra-large commercial customers. Note that for commercial customers, the monthly customer service charge may vary depending on whether the customer is unmetered, has single-phase service, or three-phase service.

3.9.7 Demand Charges

Demand charges are typically designed to recover capacity cost associated with transmission, distribution, and/or generation. The simple demand charge, which is designed to recover all of these costs only applies to medium commercial customers on a per-kVA basis. Two separate demand charges apply to large and extra-large commercial customers as discussed below.

3.9.7.1 Demand Charge – Medium Commercial

Medium commercial customers are subject to a simple demand charge, which is designed to recover the cost of distribution, transmission, and generation capacity. This charge is measured on a per-kVA basis.

3.9.7.2 Distribution Demand Charge

The distribution demand charge is a per-kVA demand charge that applies to both large and extra-large commercial customers. It is designed to recover distribution capacity costs. It is measured on an all-hour or "non-coincident peak" (NCP) basis, meaning that the demand reflects the maximum interval read of all reads during a given billing period. This is in contract to a "coincident peak" (CP) basis for demand measurement, which only measures demand during a subset of monthly hours when the entire system is believed to peak.

3.9.7.3 Reliability Services Demand Charge

The reliability services demand charge is also a per-kVA demand charge that applies to both large and extra-large commercial customers. It is designed to recover generation capacity or "peaking costs." It is also measured on an NCP basis.

3.9.8 Electric Rate Comparison

BWP's residential electric rates remain among the lowest in the region including other municipal utilities, as well as investor-owned utilities.

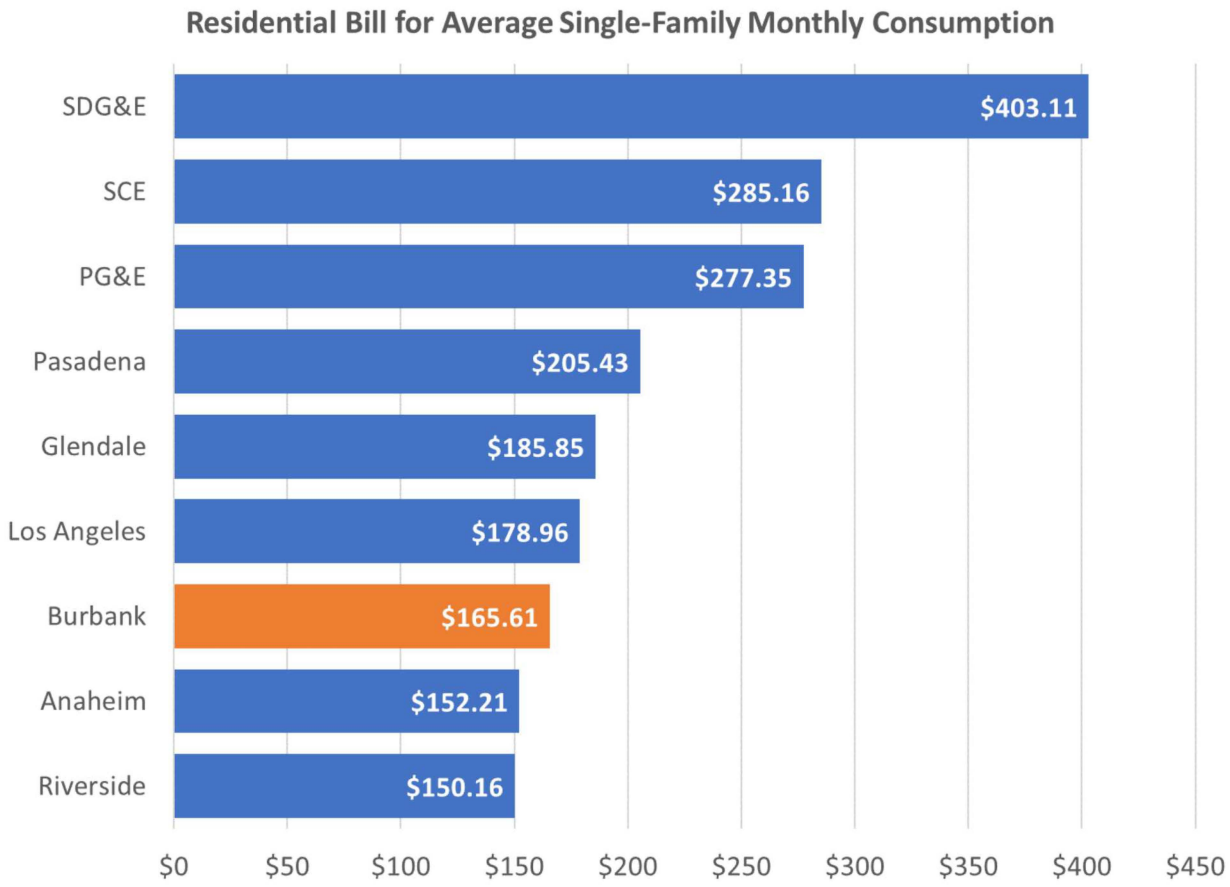

Figure 3-18 Residential Bill for Average Single-Family Monthly Consumption[35]

All fees and charges are brought before the City Council for approval on an annual basis.

BWP has also developed short-term as well as long-term energy procurement strategies to reduce price risks and volatility. These strategies are monitored by BWP management using the Energy Risk Management Policy, originally adopted in 2004 and amended in April 2009 and December 2017. Under the Energy Risk Management Policy, the Risk Oversight Committee was formed and meets regularly to discuss the power supply risks, market conditions, and transactions needed to maintain reliable and affordable rates for Burbank.

[35] Burbank Water and Power, FY 2023-23 & FY 2024-25 Proposed Budget, April 6, 2023 presentation, https://www.burbankwaterandpower.com/images/budget/april-2023-budget-files/Proposed%20Utility%20Fiscal%20Year%202023-24%20and%202024-25%20Budgets%20for%20BWP%20Board.pdf

3.10 TRANSMISSION SYSTEM RESOURCES

Power transmission is the delivery of energy from its place of generation, purchase, or sale to the distribution system that takes it to meet demand. Burbank has ownership in or contractual entitlements to numerous regional transmission facilities. Transmission lines bring in electric energy to meet demand and BWP uses its contractual and ownership rights to deliver the electricity it generates and purchases to customers in Burbank.

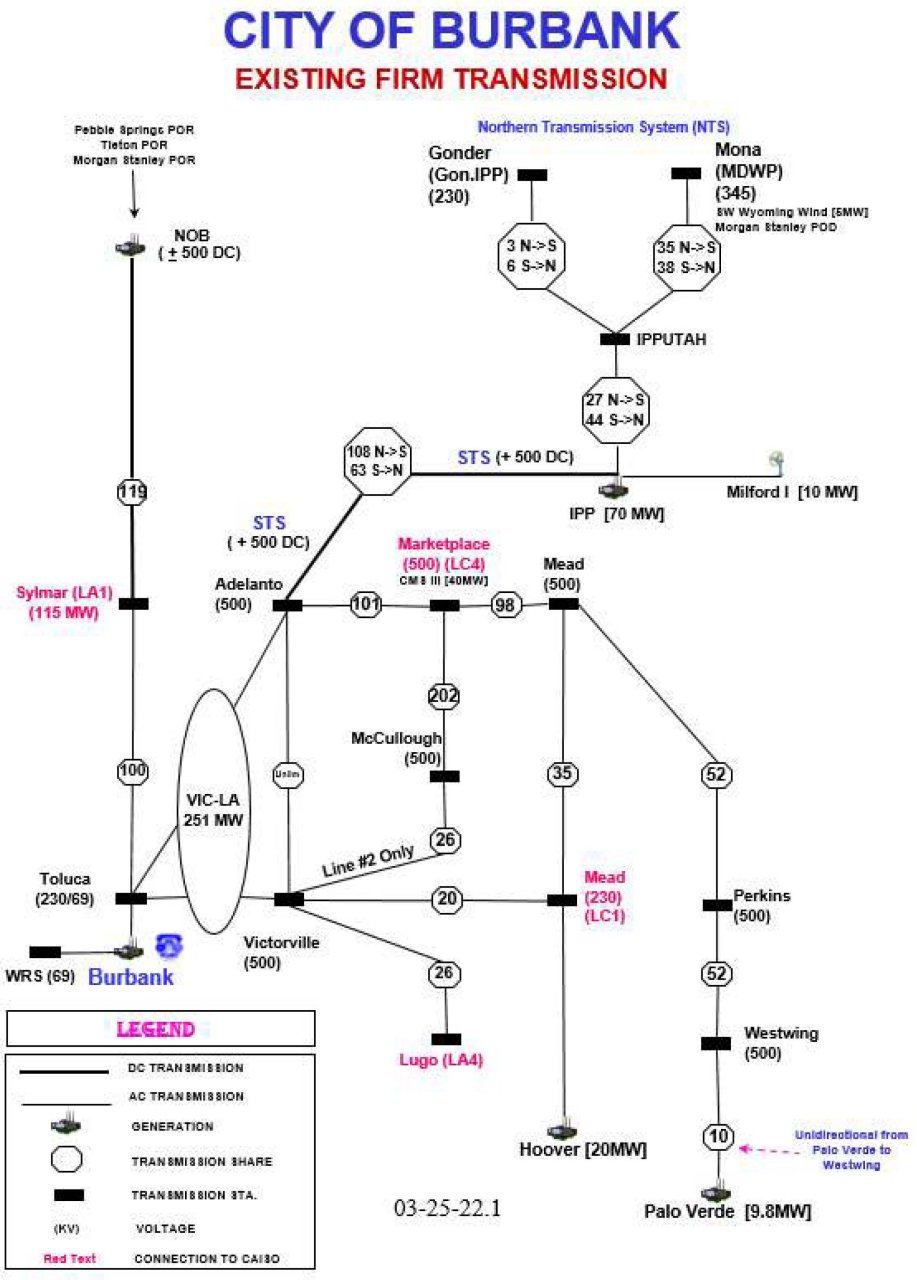

Figure 3-19 Burbank's Existing Firm Transmission

3.10.1 History of BWP's Transmission Rights

The utility business has changed tremendously over the years. Historically, BWP has worked with the SCPPA and other entities to participate in major new transmission projects so that BWP can move power from generation facilities, or other entities, throughout the western United States.

Over time, BWP has focused on engaging in new transmission contracts and on finding advantageous power resources or supplies that help keep electric rates low. SCPPA was formed in 1980 to help finance these transmission projects for municipal utilities to leverage economies of scale and keep costs low. BWP worked with other participants through SCPPA to jointly build major transmission lines such as Mead-Phoenix and Mead-Adelanto. Since BWP helped build those projects, it has rights to schedule and move power over those transmission lines.

These transmission rights are adequate to serve BWP's current energy needs. They also enable BWP to participate in the wholesale power market. However, as more renewable energy is added and/or replaced, it may be necessary to acquire additional transmission service or participate in the development of new transmission lines.

BWP can also enter into swaps and other agreements to use a third party's transmission assets. In those cases, BWP might purchase renewable energy from a distant power plant and swap it to a third party, which would then deliver substitute energy to BWP from closer to Burbank. In that sort of arrangement, the third party also absorbs the intermittency of that renewable energy source, if any. Arrangements like those are another method of acquiring resources in the most cost-effective manner.

3.10.2 Planned Transmission Upgrades and Additions

3.10.2.1 Southern Transmission System

The Southern Transmission System (STS) currently consists of a high voltage direct current (HVDC) line from the IPP site near Delta, Utah to Adelanto, California. This line currently carries the baseload output of the IPP coal plant. As discussed in Section 2.5.4, the IPP coal plant is scheduled for retirement in 2025 and will be replaced with natural gas-fired generation. BWP's new contract with IPP begins in 2027 and was entered into, in part, to secure future transmission rights on the STS. Use of those STS transmission rights will be key to accessing additional renewable energy resources located outside of Burbank. Prior to the renewal of the IPP contract in 2027, BWP will maintain a 4.49% share of the STS capacity, equal to 107.95 MW. Per the terms of the contract renewal, from 2027 through 2077, BWP will have a 4.2% share of the transmission capacity on the STS, equal to 101.4 MW.

3.10.2.2 Transmission Expansion Considered Within the IRP

The production cost model created for the Base Case in this IRP was optimized around the existing transmission system that serves Burbank. As such, no transmission expansion was either "hard-wired" into the model or included as a possible expansion project for the model to choose. In the Base Case, all demand on the BWP system through 2047 could be met with the transmission capacity that already exists. However, it should be noted that by the end of the planning period, that the existing transmission capacity was at times fully utilized. Demand growth beyond what was forecast for 2047 could result in the need to acquire additional transmission rights or to physically expand the capacity of the transmission system that delivers power to Burbank. Where transmission expansion was included within the other planning scenarios, it has been noted. See Section 2.6 for scenario specific information.

Due to the long development periods necessary for such acquisitions or upgrades, BWP will continue to monitor its transmission margins on an ongoing basis to ensure future shortfalls do not occur.

3.11 DISTRIBUTION SYSTEM RESOURCES

BWP provides Burbank with electrical service through a distribution network which includes electric substations, sub-transmission lines, distribution lines, and transformers. An electric power distribution system is the final stage in the delivery of electric power that carries electricity to individual customers. With its current high reliability, BWP's distribution system is well-positioned for the future.

A large portion of Burbank's electric infrastructure was initially constructed from the 1940s through the 1960s to serve the typical loads of that era, with 4 kV service. The infrastructure has since been expanded and updated. Commercial developers supported and assisted in funding the expansion of the BWP system, beginning the transition from a 4 kV system to the more reliable 12 kV service and from large air-insulated electric substations to smaller, more modern, gas-insulated substations. Updating the distribution lines from 4 kV to 12 kV allowed BWP to deliver three times as much energy, reducing power losses in the system, and improving reliability.

With the investment in more reliable 12 kV substation capacity, including the San Jose, Golden State, Keystone, Hollywood Way, Burbank, and Ontario Substations, BWP has been steadily transferring customers from the 4 kV service to the more reliable and efficient 12 kV service.

The 12 kV substations are primarily served from the 34.5 kV systems. Future substations will be served from the 69 kV system where possible, allowing BWP to realize additional efficiency and reliability. While BWP has made significant progress in the last 20 years, several 4 kV substations and associated distribution systems remain.

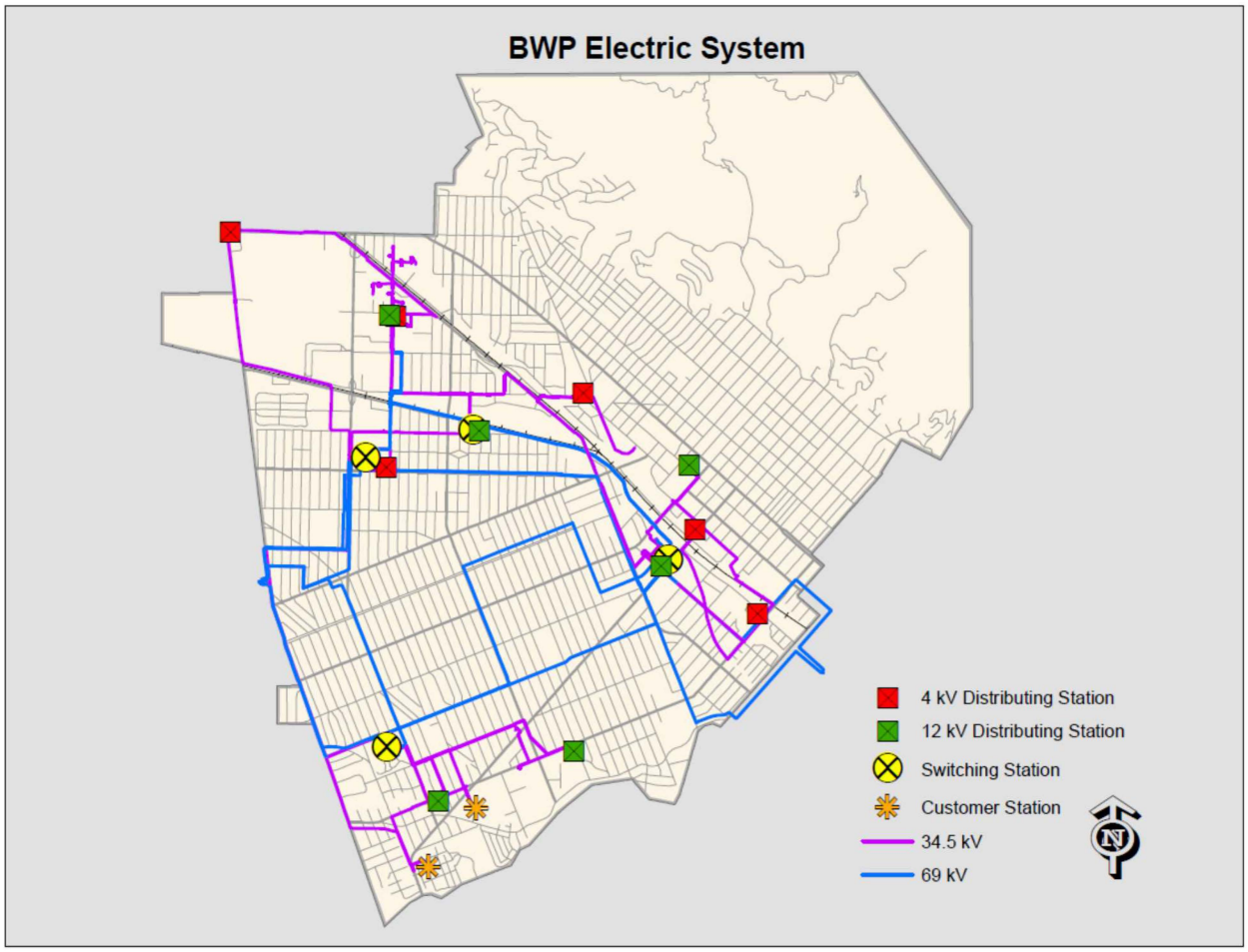

Figure 3-20 Burbank's Existing Distribution System

BWP's distribution system consists of the following:

- A service area of approximately 17 square miles
- Approximately 33 miles of 69 kV sub-transmission
- Approximately 44 miles of 34.5 kV sub-transmission
- Thirteen distribution substations, two customer substations, and four switching stations
- Approximately 185 miles of 4 kV distribution
- Approximately 151 miles of 12 kV distribution
- Approximately 10,800 poles
- Approximately 5,800 distribution transformers

Over the decades, the residential and small commercial load has grown, primarily driven by increasing population, increasing air conditioning installations, larger homes, and the addition of the electronic devices and appliances that provide modern conveniences and creature comforts.

Reducing losses on the distribution system has beneficial impacts on rates and the environment by reducing fuel consumption, extending the lifespans of transmission and generating facilities, and

reducing air pollution and GHG emissions. These efforts are consistent with BWP's goals of reliability, affordability, and sustainability. BWP has taken significant steps to reduce losses among all its major distribution system elements.

BWP recognizes that the expansion of customer-owned distributed energy resources like rooftop solar will likely have more significant effects on the distribution system in the future.

3.11.1 Anticipating Customer DER Developments

BWP recognizes that larger quantities of customer-owned distributed energy resources (DER), such as battery storage and rooftop solar, can impact the reliability of the distribution system. The impacts to reliability could include, but are not limited to, circuit loading, system protection, voltage excursions, power quality, substation equipment limits, and operational flexibility. While BWP does not currently have large penetrations of DER that yield these types of reliability issues, BWP will continue to monitor its DER applications and perform capacity studies, as necessary, to ensure reliability of the electric distribution system. In addition, because of its grid modernization efforts, BWP monitors distribution system voltages and circuit loading using data analytics from its advanced metering infrastructure.

Furthermore, BWP is also mindful of the lower levels of fault current produced by non-rotating sources and anticipates that further studies and additional protective relaying technology may be required to account for these lower levels of fault current. Lastly, recognizing the potential future need for battery storage within Burbank, BWP is considering the use of land at decommissioned substations for the installations of energy storage facilities as strategic, cost-effective locations for connecting energy storage to BWP's sub-transmission and distribution systems.

BWP has taken steps to support a larger penetration of sustainable, customer-owned DER. In 2016, BWP updated its distributed generation interconnection agreement for distributed generation above one megawatt to reflect the City's policy of meeting additional energy demands from renewable energy sources instead of fossil-fuel generation.

Customer-owned rooftop solar has both benefits and drawbacks. It is environmentally friendly and does not require transmission to reach customers. On the other hand, it is an intermittent resource – it only generates electricity when the sun is shining and virtually no generation occurs at night or in substantial cloud cover. This swing in generation not only presents a challenge to electric grid reliability, but also influences rate design.

In the early days of solar PV technology and when the cost of installation was high, BWP offered rebates through the Solar Support Rebate program. As solar PV prices have declined and customer decisions to install rooftop solar became independent of rebates, BWP discontinued its rebate program. However, since the 30% Federal Investment Tax Credit makes purchasing solar and/or battery systems more accessible, Burbank continues to see new installations of rooftop solar capacity.

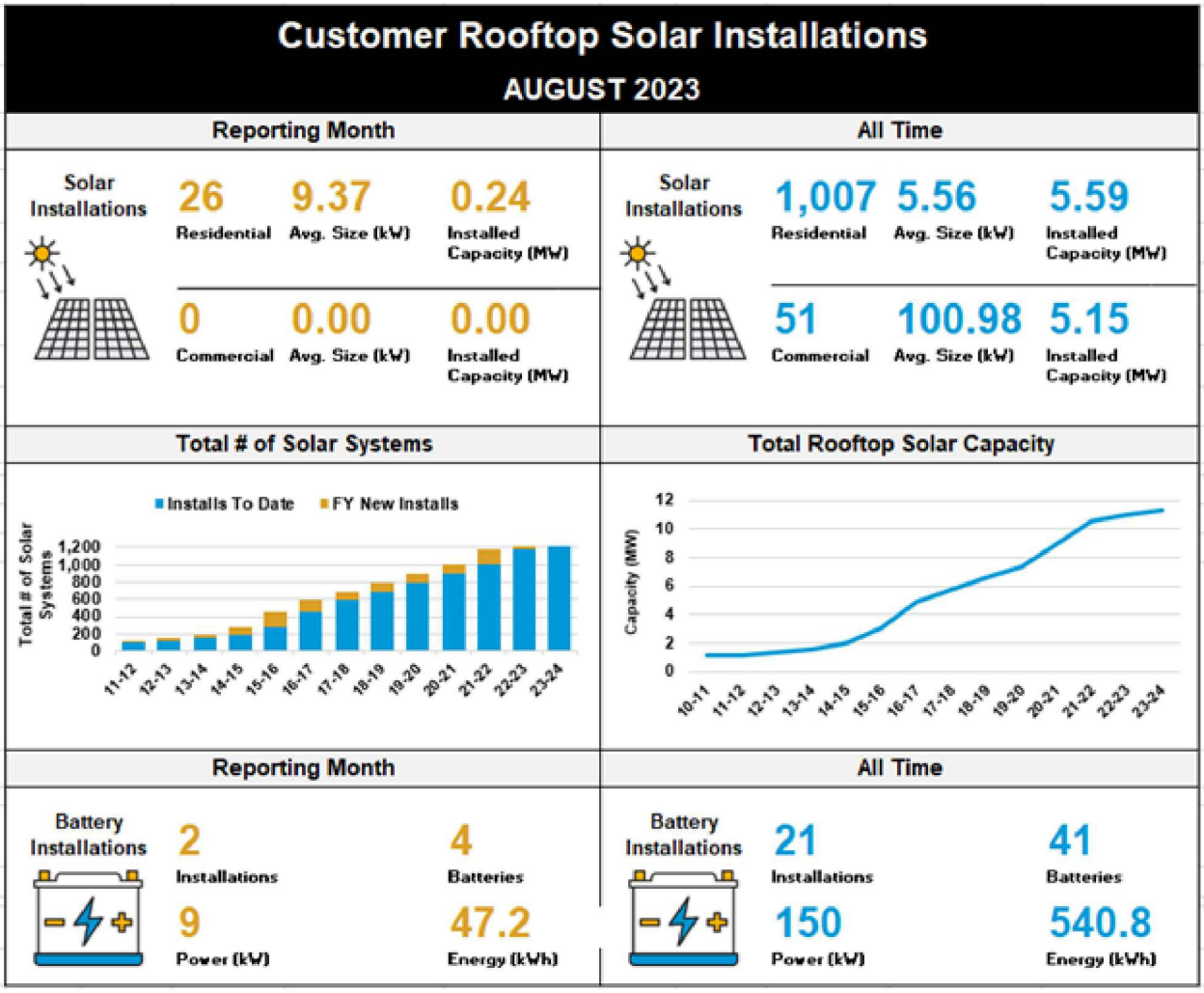

Figure 3-21 Distributed Generation Installations[36]

Solar generation will increasingly affect BWP's resource planning. BWP must be prepared to deal with the impacts that distributed solar generation has on BWP's system in the middle of the day when solar power is being generated. Properly balancing the increase of this intermittent power source to BWP's system will be important for maintaining the system's high reliability.

3.11.2 Grid Modernization

BWP's grid modernization has enhanced Burbank's distribution system with advanced technology including digital meters, energy storage, renewable energy sources, and other improvements. The new meters and devices allow for sending and receiving meter data or device status to the utility without any manual intervention such as meter reading, having customers calling in meter reads, or

[36] Burbank Water and Power, Monthly Operations Report, October 2023.

physically inspecting electrical equipment. BWP uses this enhanced data to provide numerous benefits to customers, and for operational and energy efficiency as well.

This data, in turn, has been used to make targeted improvements in BWP's distribution system to the benefit of BWP's customers. By applying state-of-the-art analytic tools, BWP can analyze and better understand load growth, circuit loading, and power quality. BWP can analyze the incoming meter data and develop strategies to improve system performance and operational characteristics. After upgrading its software tools in the future with an advanced distribution management system (ADMS), BWP will be able to use this data to manage system demand and optimize system performance. This data has also helped with right-sizing of transformers and improving system reliability during times of high load.

At the same time, the data allows BWP's customers to become more informed about their energy consumption and empowers them to change how they consume electricity. BWP delivers a personalized report to its customers that compares their energy consumption with the energy consumption of their neighbors.

3.12 LOCALIZED AIR POLLUTANTS AND DISADVANTAGED COMMUNITIES

Many disadvantaged communities identified by the State of California in the Burbank area are located along the route of Interstate Highway 5. Interstate 5 and Highway 134 are sources of significant air emissions from gasoline and diesel-fuel vehicles. As transportation transitions to electric vehicles, the disadvantaged communities adjacent to the Interstate will benefit from reduced air pollution.

Potential sources of air emissions in or near the disadvantaged communities within the purview of BWP are the Magnolia, Lake One, and Olive 1 and 2 natural gas-fired generating plants on the BWP campus next to the Interstate highway which, in the early 2000s, replaced older, less environmentally friendly, and less efficient units that caused significantly more pollution than Magnolia and Lake One. As a result, emissions from power generating units the BWP campus have decreased significantly since that time.

4 Energy Efficiency Analysis

BWP manages a comprehensive portfolio of efficiency programs for residential and commercial customers focusing on energy efficiency, peak load reduction, transportation electrification and greenhouse gas savings. These programs are described in Section 2.4.2.

With the approval of the Burbank City Council, BWP has established an annual goal of achieving energy efficiency savings equal to 1% of electric sales, and peak demand savings equal to one percent of total grid demand. In practice, these goals have been equal to approximately 10,000 MWh of consumption savings and demand savings of slightly less than 3 MW. Over the past four fiscal years, BWP has reported actual energy efficiency savings as listed in Table 4-1 below.

Table 4-1 Energy Efficiency Savings – Actuals vs. Goals

	Actuals		Goals	
Fiscal Year	Demand Savings [MW]	Consumption Savings [MWh]	Demand Savings [MW]	Consumption Savings [MWh]
FY 2019-2020	2.50	7,341	3.02	10,605
FY 2020-2021	1.23	4,696	2.83	10,194
FY 2021-2022	1.65	6,747	2.92	10,172
FY 2022-2023	1.79	5,450	2.92	10,172

5 Public Participation

BWP develops each IRP with input from the public. Public participation is vital for BWP, in order to understand the implications on the IRP to different ratepayers. BWP's robust IRP website provides details on the public process. The IRP website was updated through every step of the IRP process. The website can be found here: https://www.burbankwaterandpower.com/2024-irp

5.1 STAKEHOLDER TECHNICAL ADVISORY GROUP (STAG)

In December 2022, the STAG was selected by BWP. The STAG represents a diverse group of ratepayer and city representatives.

Table 5-1 STAG Meeting Schedule

Meeting	Date	STAG Discussion
1	12/15/2022	IRP 101, IRP Survey and Roles and Responsibilities of the STAG
2	01/26/2023	Power Plant 101, Resource Planning 101, Energy Control Center 101 and Burbank Solar and Storage Projects update
3	02/23/2023	Natural Gas and Energy Price update, Renewable Portfolio Standard 101 and IPP 101
4	03/23/2023	Black and Veatch Update and Power Supply Update
5	04/27/2023	Magnolia Power Project (MPP) Tour, Survey Update and Power Supply Update
6	06/21/2023	Black and Veatch Base case, Survey Update and Power Supply Update
7	08/07/2023	IRP Update and Scenario Discussion
8	08/17/2023	Scenario Discussion, Scorecard Development and Survey Update
9	10/12/2023	Final Survey Results, Scorecard Results, Scenario Overview and Preferred Scenario Selection

5.2 COMMUNITY STAKEHOLDER MEETINGS

BWP hosted four community stakeholder meetings to discuss the IRP with the community at large. Below is a list of the community meeting and topics discussed. The details on each community meeting can also be found on the BWP IRP website.

Table 5-2 Community Stakeholder Meeting Schedule

Meeting	Date	Community Stakeholder Discussion
1	04/20/2023	IRP 101, Resource Planning 101, IRP Survey Discussion and Base Case and Scenario Discussion
2	07/13/2023	Resource Planning Update, IRP Survey Results and Black and Veatch Assumptions Update and Base Case Discussion
3	08/10/2023	IRP 101 Discussion, Survey Discussion and Base Case and Scenario Update
4	10/26/2023	Final Survey Results, Scorecard Results, Scenario Overview and Preferred Scenario Selection

5.3 IRP SURVEY

In December 2022, BWP posted the IRP survey on the IRP website. A link to the survey was also distributed via billing inserts and the monthly BWP newsletter, "Currents." 952 responses to the survey indicated a preference for high reliability and affordable rates. The results of the IRP survey are included as Attachment 2 to this report.

5.4 BWP BOARD AND CITY COUNCIL UPDATE

Staff presented an update to the IRP, to the BWP Board monthly. Staff provided an update to City Council on the IRP on April 25, 2023 and July 25, 2023.

6 Process for Updating the IRP

In accordance with the requirements of PUC Section 9621, BWP will update its IRP at least once every five years. The 2019 IRP was approved by the Burbank City Council in December 2018 and was submitted to the CEC in April 2019. To meet the five-year update requirement, BWP kicked off its IRP process in December 2022 and worked throughout 2023 to engage with stakeholders and the public as it developed the inputs and assumptions as well as the scenarios that would drive this analysis.

7 Attachments

Attachment 1: BWP Renewable Energy Resources Procurement Plan & Enforcement Program

Attachment 2: IRP Survey Results

Attachment 3: List of Acronyms

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

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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.

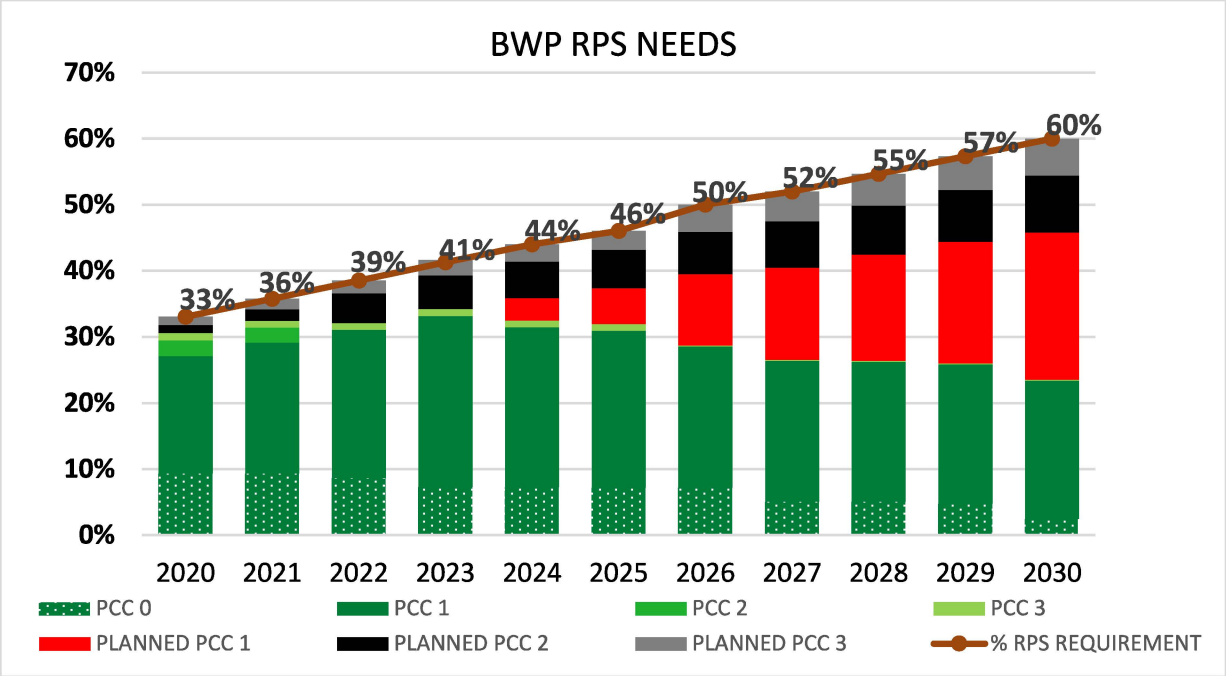
CURRENT RENEWABLE RESOURCES AND PROGRESS TO SB 100 TARGET

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

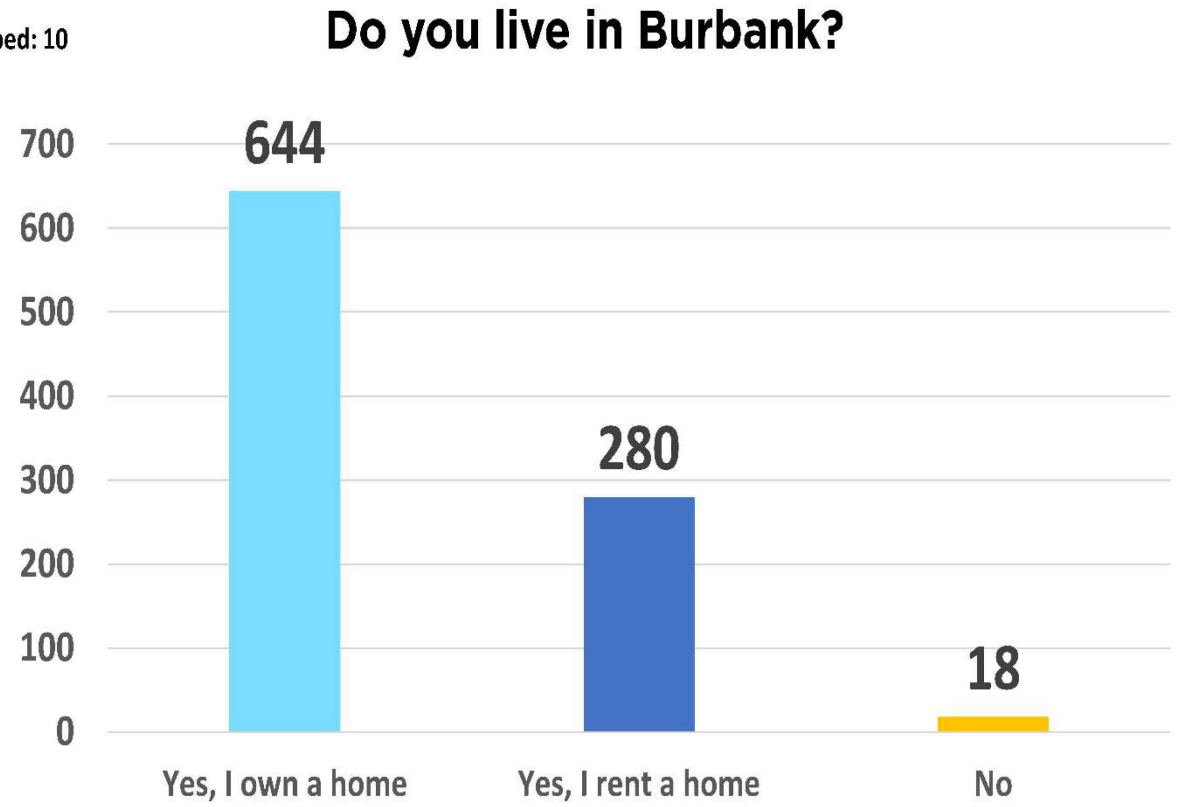
12 Question Survey with 952 Responses

- 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

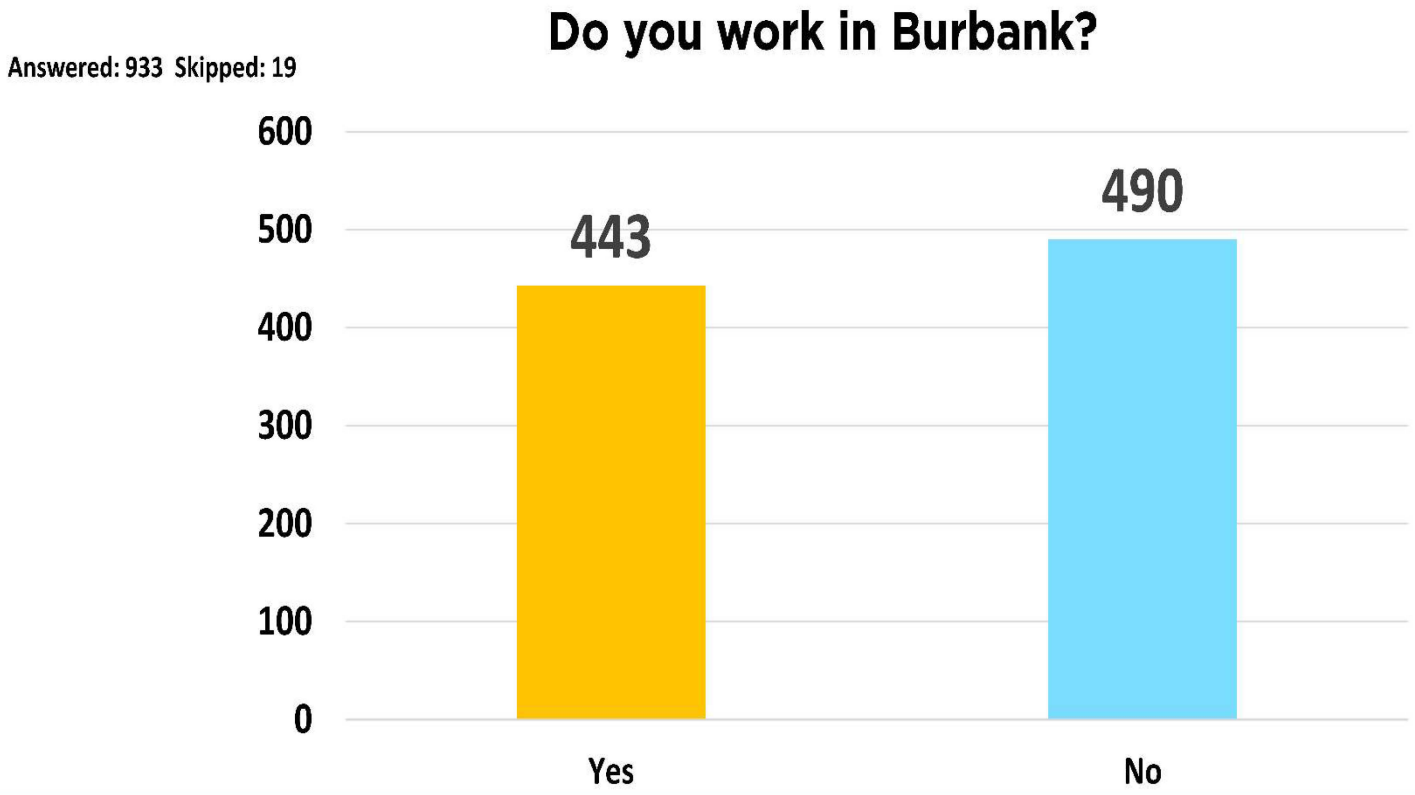
~68% of respondents are homeowners

Answered: 942 Skipped: 10



Attachment 2: IRP Survey-3

~47% of respondents work in Burbank

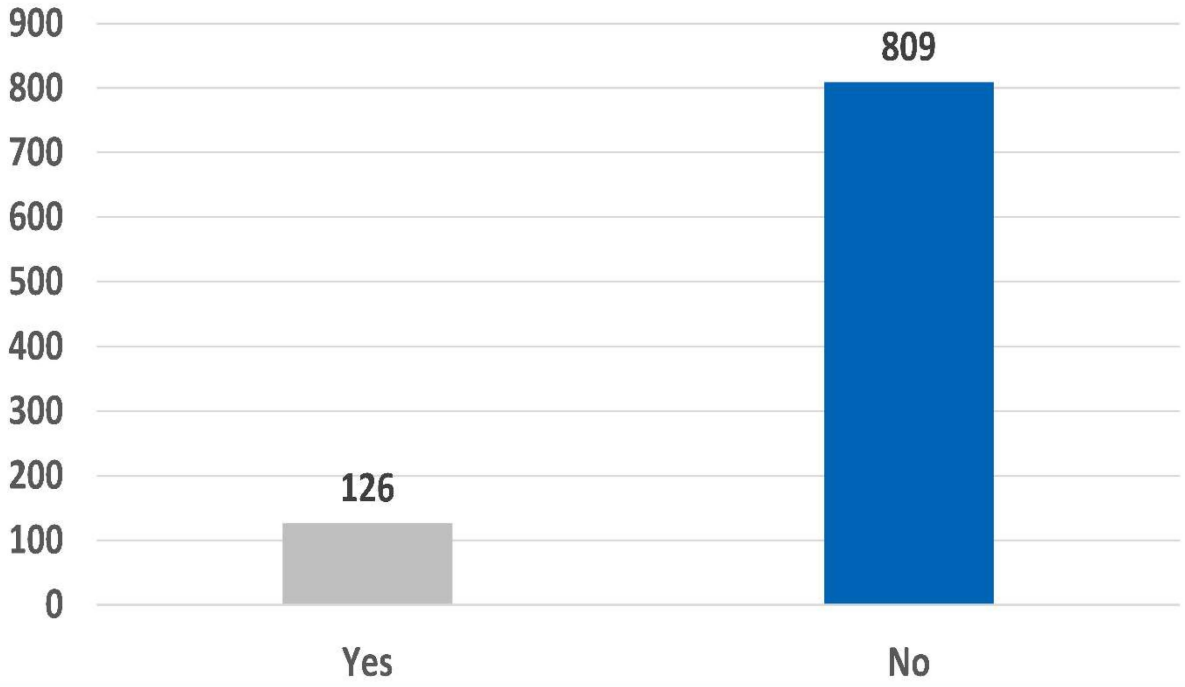


Attachment 2: IRP Survey-4

Most respondents do not own a business

Do you own a business in Burbank?

Answered: 935 Skipped: 17

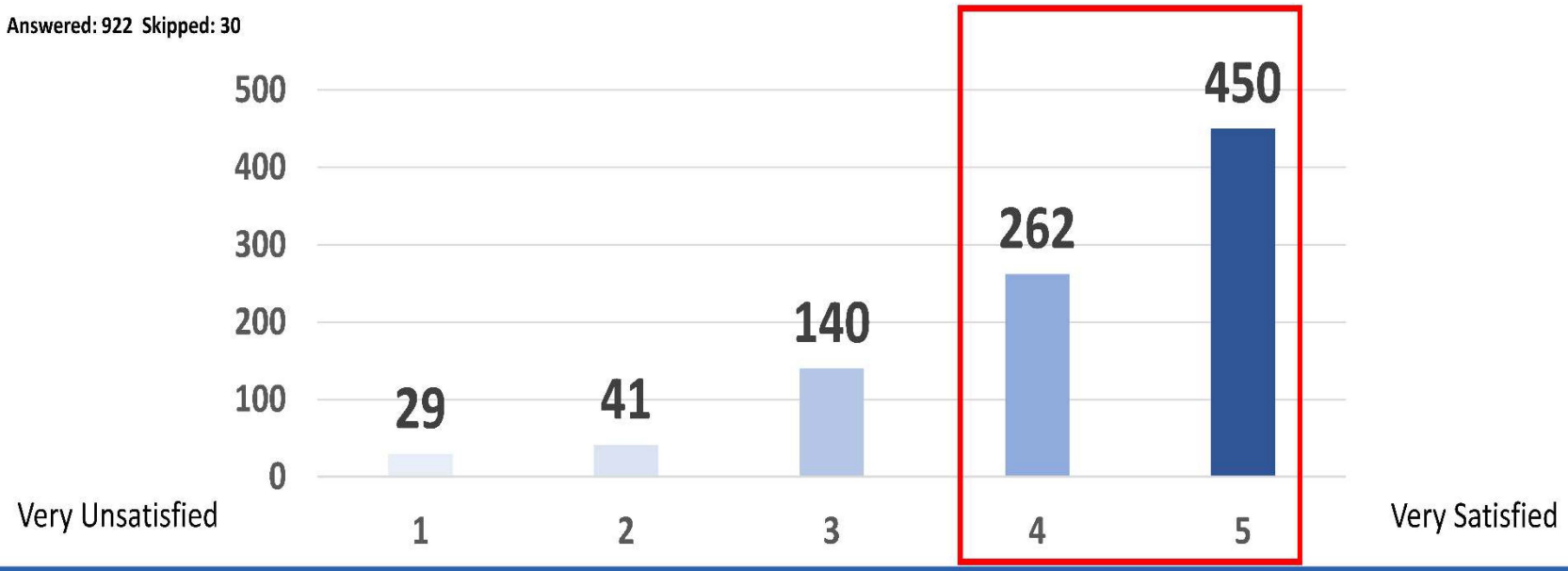


Attachment 2: IRP Survey-5

~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

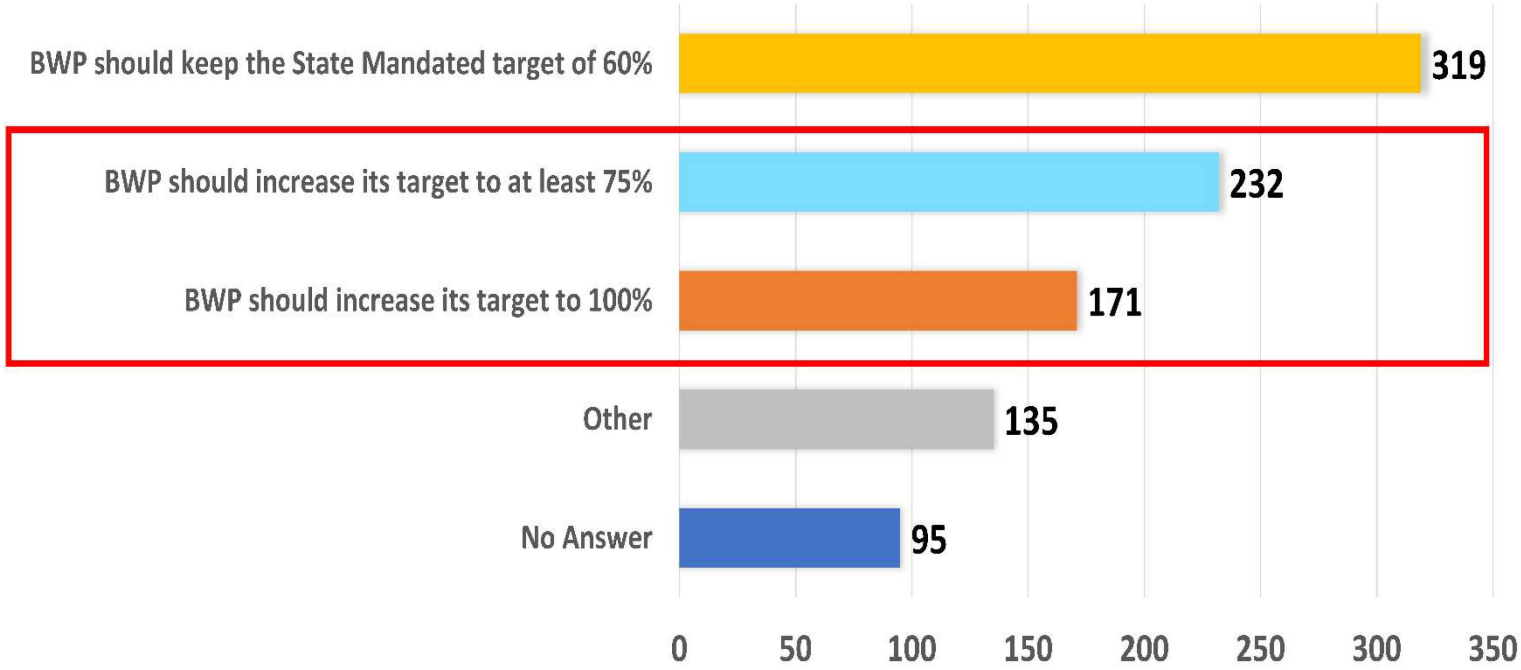
Quality of Customer Service

35% placed this last

Many left no answer

58% think the target should increase

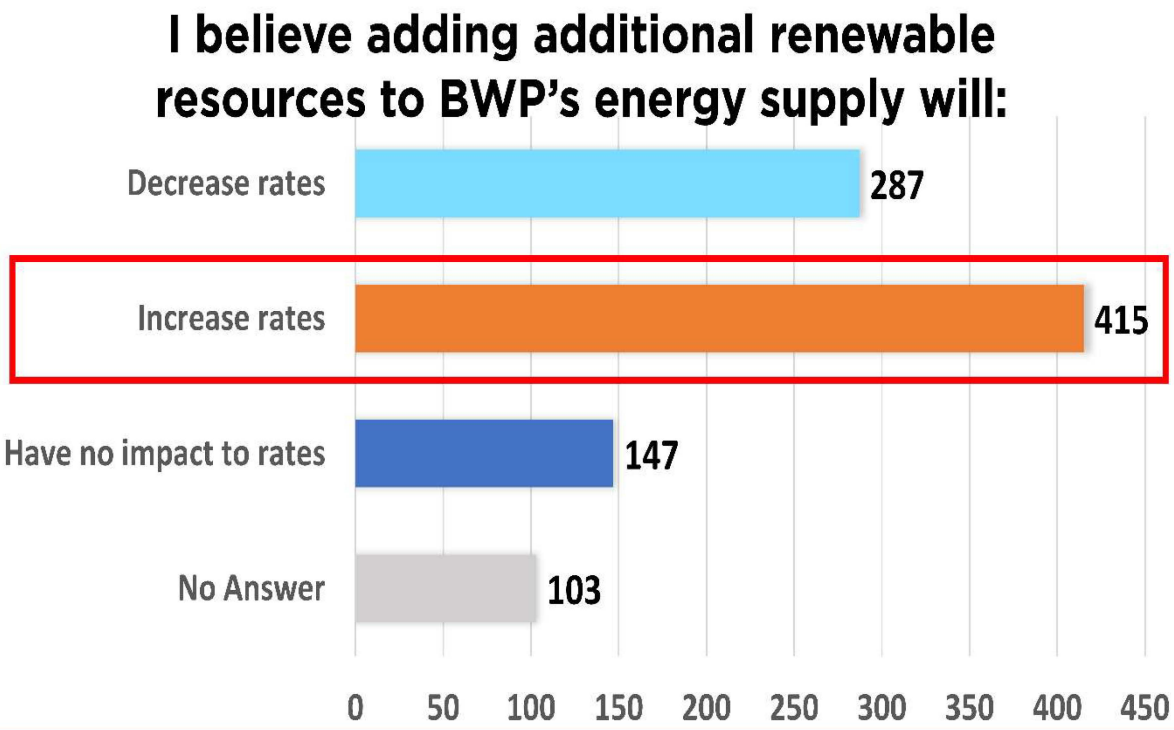
What do you think BWP's renewable resource target should be by 2030?



* 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"

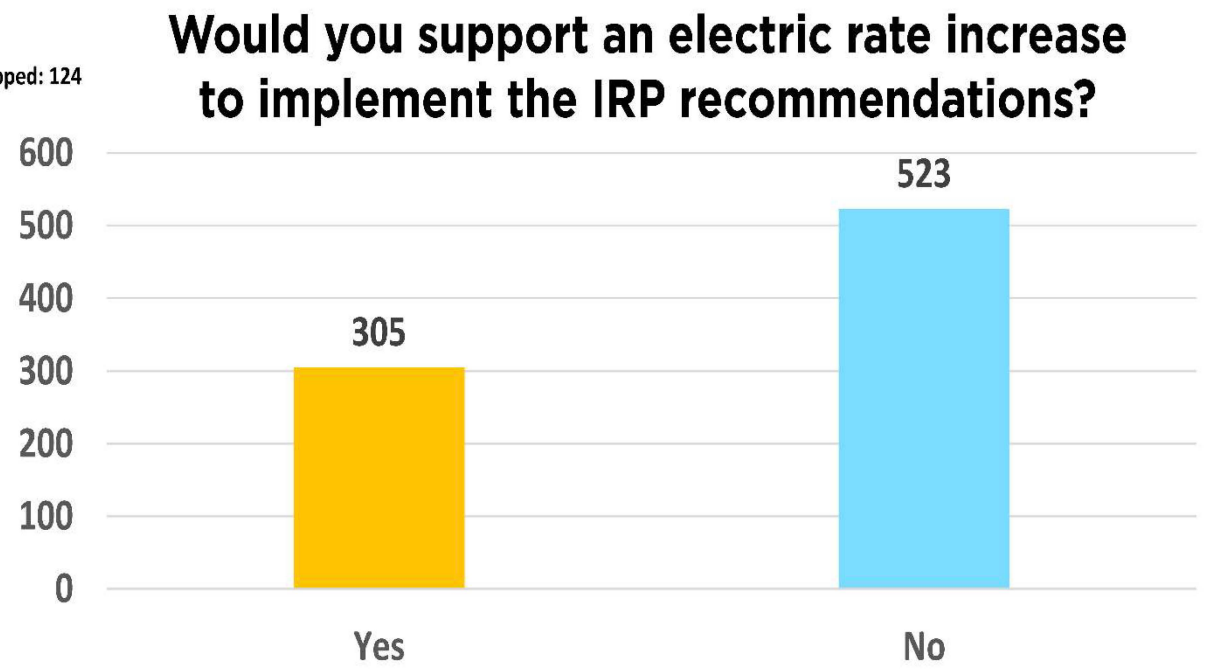
What do you think BWP should prioritize as it develops the IRP?

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



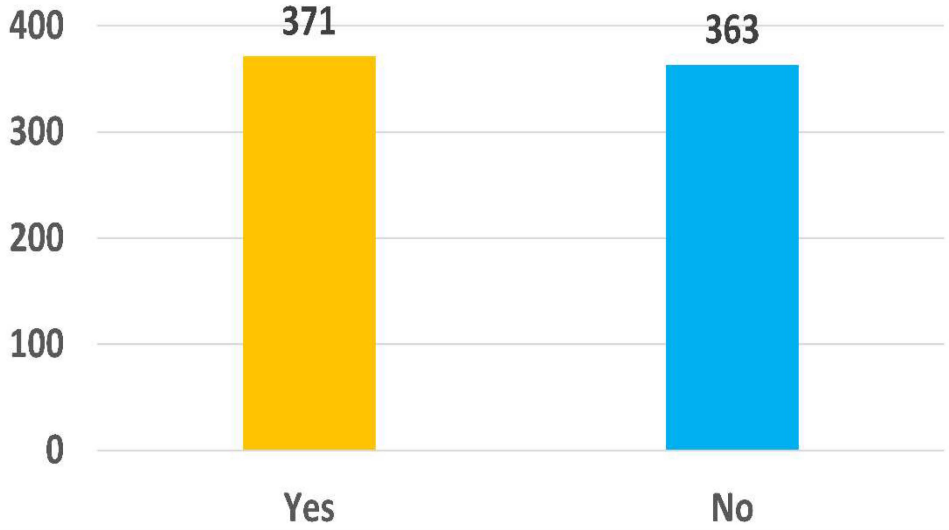
Attachment 2: IRP Survey-11

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?

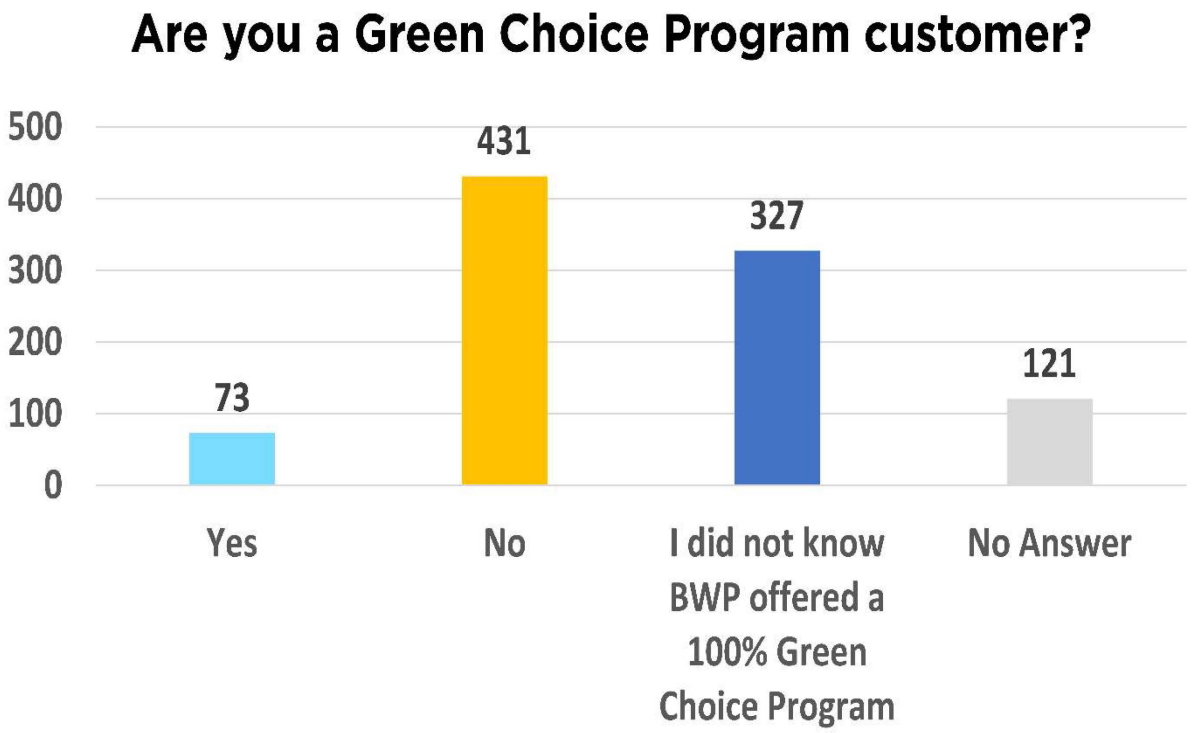
Answered: 734 Skipped: 218

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