

INTEGRATED RESOURCE PLAN (IRP)

Date: 4/19/2023

IRPs shall consider all reasonable opportunities to meet future energy resource requirements using Demand Side Management techniques, new renewable resources and other programs that will provide retail consumers with electricity at the lowest possible costs, and minimize, to the extent practicable, adverse environmental effects.

To meet your Integrated Resource Planning reporting requirement, complete the following. Unaddressed items will be deemed incomplete and not eligible for approval. Western reserves the right to require customers to provide any supporting back-up data used to support and develop this report.

Customer Contact Information:

(Provide contact information for your organization. Contact person should be able to answer questions concerning the plan)

Customer Name:	City of Roseville, Electric Department
Address:	2090 Hilltop Circle, Roseville, CA 95747
Contact Person:	Brian Schinstock
Title:	Electric Resource Planner
Phone Number:	(916) 746-1658
E-Mail Address:	bschinstock@roseville.ca.us
Website:	https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8663021

Type of Customer:

(Check one as applicable)

<input checked="" type="checkbox"/>	Municipal
<input type="checkbox"/>	State
<input type="checkbox"/>	Federal
<input type="checkbox"/>	Irrigation District
<input type="checkbox"/>	Water District
<input type="checkbox"/>	Other (Specify) _____

Identification of Resource Options (considerations that may be used to develop potential options include cost, market potential, consumer preferences, environmental impacts, demand or energy impacts, implementation issues, revenue impacts, and commercial availability):

Supply-side options:

(Including, but not limited to: purchase power contracts and conventional and renewable generation)

List existing supply-side options:	List future supply-side resource options considered and evaluated:
Natural gas generators	Solar photovoltaic
Geothermal	Geothermal (need determined in 2023 IRP)
Hydroelectric	Hydro (need determined in 2023 IRP)
Solar photovoltaic	Wind (need determined in 2023 IRP)
Wind	
Market purchases	

Demand-side options:

List existing demand-side options:	List future demand-side resource options considered and evaluated:
Commercial HVAC	Advanced metering infrastructure
Commercial customized program	Demand response via HVAC
Commercial lighting	Continuation and revisions to existing programs
Commercial solar	
Commercial electric vehicle program	
Residential solar	
Residential electric vehicle program	
Residential HVAC heat pumps	
Residential heat pump water heater	
Residential induction stove	
Residential heat pump dryer	
Residential HVAC tune-up	
Residential smart thermostat rebate	
Residential fan	
Residential panel replacement	
Residential pool pump	
Residential shade tree	
Residential HVAC (on pause due to exhausted funding)	
Residential sunscreen rebate (on pause due to exhausted funding)	
Residential window replacement (on pause due to exhausted funding)	

Resource options chosen:

(Provide a narrative statement that describes the option chosen and clearly demonstrates that decisions were based on a reasonable analysis of the options)

Roseville Electric's updated 2023 Integrated Resource Plan (IRP) is nearly complete and will be published by 2023. The plan focuses on meeting the latest green goals while maintaining high reliability and affordability. The plan uses proven technologies to best meet future loads, peak needs, and green goals while keeping rates low and limiting market price risk. For more detail, please see Roseville's 2023 IRP, which when complete and approved will be posted on Roseville's direct webpage | https://www.roseville.ca.us/government/departments/electric_utility/about_us/reports_publications/integrated_resource_plan/2022_i_r_p_outreach

Action Plan:**Specific Action Items to be Implemented Over the Next 5 Years:**

(Lists are not meant to be inclusive, complete and provide other action items as applicable)

Energy Consumption Improvements:

Proposed Items	Begin Date	End Date	Est. kW capacity savings per year	Est. kWh savings per year	Milestones to evaluate accomplishments
Aggregate	2024	2028	1,447	13,261,055	1037 Annual Report

Renewable Energy Activities:

Proposed Items	Begin Date	End Date	Est. kW per year	Est. kWh per year	Milestones to evaluate accomplishments
Customer Owned PV Installations	2024	2028	3,000	5,256,000	
Utility Solar	2024	2028	1,320	1,550,000	
Geothermal projects	2024	2028	8,800	61,000,000	
Small-scale hydro projects	2024	2028	6,300	17,507,000	
Other:					

Load Management Techniques:

Proposed Items	Begin Date	End Date	Est. kW savings per year	Est. kWh savings per year	Milestones to evaluate accomplishments
Load management devices/systems	2024	2028	4,000		Roseville Electric Utility only utilizes when the grid is strained, therefore does not have an estimated kWh saving.
Demand control techniques and equipment	2024	2028			Roseville Electric Utility is currently evaluating a demand response program and the cost and benefits associated but does not have kW/kWh savings at this time.
Smart meters or automated equipment	2024	2024			Roseville Electric Utility is phasing in the smart meter rollout and expects benefits but has not determined exact kW/kWh savings.
Other:					

Rate Design Improvements:

Proposed Items	Begin Date	End Date	Est. kW savings per year	Est. kWh savings per year	Milestones to evaluate accomplishments
Cost-of-service pricing					
Elimination of declining block rates					
Time-of-day rates					
Seasonal rates					
Interruptible rates					
Other:	Roseville Electric Utility will evaluate rate design(s) after the smart metering project.				

Agricultural Improvements:

Proposed Items	Begin Date	End Date	Est. kW savings per year	Est. kWh savings per year	Milestones to evaluate accomplishments
Irrigation pump utilization/scheduling					
Irrigation pump testing or efficiency improvements					
Electric motor replacement					
Photovoltaic pumping systems					
Ditch lining or piping					
Laser land leveling					
Pumpback systems					
Water conservation programs					
Other:					

5-Year Plan

Environmental Effects:

(Provide a narrative statement that sets forth the efforts taken to minimize adverse environmental effects of new resource acquisitions)

Per Roseville's IRP, Roseville will continue to meet the latest environmental requirements. This includes:

- Doubling of energy efficiency. As shown above, Roseville Electric uses the public benefits funds to provide an array of rebates.
- Renewable Portfolio Standard (RPS). New renewable resources will need to be acquired to meet the increased RPS. The IRP provides the technology type, timing, and size in order to meet.
- Greenhouse Gas Emissions. Roseville continues to be at or below the allowable greenhouse gas emissions. Increased renewable procurement will continue to lower overall emissions.

Public Participation:

(Customers must provide ample opportunity for full public participation in preparing and developing an IRP. Provide a brief description of public involvement activities, including how information was gathered from the public, how public concerns were identified, how information was shared with the public, and how it responded to the public comments)

Roseville had an extensive IRP public process that included:

- Presentation to the Roseville Public Utilities Commission on March 22, 2022, and again in July 25, 2023.
- Two public workshops. June 2022 and May 2023, with many notifications via the City newsletter, Utility newsletter, and social media.
- Public surveys with results shared and posted.
- A dedicated webpage that hosted all information related to the IRP.
- A dedicated e-mail to allow the public to ask questions, submit concerns, and surveys.
- Presentation to Roseville's City Council.

The IRP is a plan and any procurement will have its own public process.

Future Energy Service Projections:

(Provide a load forecast to show expected growth or expansion; or a narrative statement concerning expected future growth)

Calendar Year	Peak Demand (kW)	Total Energy (kWh)
2024	338,000	1,195,191,700
2025	344,300	1,209,481,800
2026	344,100	1,209,296,900
2027	349,800	1,228,312,400
2028	352,400	1,232,886,800

or Narrative Statement:

Measurement Strategies:

(Provide a brief description of measurement strategies for options identified in the IRP to determine whether the IRP’s objectives are being met. These validation methods must include identification of the baseline from which a customer will measure the benefits of its IRP implementation)

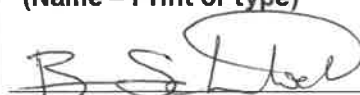
Roseville Electric budgets 2.85% (Public Benefits Fund) of all Roseville Electric revenues for energy efficiency, demand reduction, and renewable distributed generation. In evaluating the net value of programs, Roseville utilizes the California Energy Commission’s (CEC) Total Resource Cost (TRC) definition. Measurements are reported annually in the SB1037 energy efficiency report.

RPS compliance is reported according to CEC reporting requirements. This report includes all newly entered contracts and the amount of Renewable Energy Credits retired for compliance. Additionally, Roseville analyzes regulatory and legislative changes, as well as changes in the load forecast, that impact RPS compliance measurements.

Customer satisfaction will continue to be measured to gauge the overall success of Roseville Electric in meeting the goals of meeting compliance while maintaining high reliability and affordability.

IRP Approval:

(Indicate that all of the IRP requirements have been met by having the responsible official sign below; or provide documentation that the IRP has been approved by the appropriate governing body)

Brian Schinstock _____ (Name – Print or type)	Electric Resource Planner _____ (Title)
 _____ (Signature)	6/27/2023 _____ (Date)

Other Information:

Roseville Electric’s 2023 IRP can be downloaded here | https://www.roseville.ca.us/government/departments/electric_utility/about_us/reports___publications/integrated_resource_plan/2022_i_r_p_outreach