

PREPARED BY EES CONSULTING

# Roseville Electric Utility

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## *Final Backbone Mitigation Fee Update*

**October 2024**



October 16, 2024

Mr. Patrick Zanardelli  
Roseville Electric Utility  
116 S. Grant Street  
Roseville, CA 95678

SUBJECT: Final Backbone Mitigation Fee Update

Dear Mr. Zanardelli:

EES Consulting (EES), a GDS Associates company, is pleased to submit this Final Backbone Mitigation Fee Update to Roseville Electric Utility.

Please feel free to contact me directly with any questions or comments.

Very truly yours,

A handwritten signature in blue ink that reads 'Amber Gschwend'.

**Amber Gschwend**  
**Managing Director, EES Consulting**  
16701 NE 80<sup>th</sup> Street, Suite 102, Redmond, WA 98052

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## Backbone Mitigation Fee Update

### INTRODUCTION

EES Consulting (EES), a GDS Associates company, is pleased to submit this Final Backbone Mitigation Fee Update to Roseville Electric Utility (REU). The Backbone Mitigation Fee is charged for new customers to connect to the distribution system based on the relationship between future costs and the impact new customers have on future expansion costs. The purpose of the Backbone Mitigation Fee is to prevent existing customers from increased electric rates due to capital expenditures directly related to the addition of customers.

This report summarizes the backbone fee update prepared for REU. This report updates the previous analysis prepared in April 2019. The results show that the current backbone fee should be increased approximately 6% to mitigate the cost of line capacity growth on existing customers by recovering backbone costs through the kVA fee. Additionally, this increase is consistent with recent inflationary pressures and supply chain impacts impacting electric utilities in particular. Table 1 summarizes the current and proposed Backbone Mitigation Fee.

**TABLE 1: CURRENT AND PROPOSED KVA FEE**

Customer Class	Current Fee	Billing Method	Proposed kVA Fee
RSF (Residential Single-Family)	\$510.51	Per Home	\$592.20
RMF (Residential Multi-Family)	\$371.28	Per Dwelling	\$429.35
GS (Commercial/Industrial)	\$92.82	Per kVA	\$98.70

### CURRENT BACKBONE MITIGATION FEE

The current Backbone Mitigation Fee was developed in 2019 based on the kVA approach. This fee is typically adjusted annually by the construction cost index (CCI), however the last update was in June 2020 and was not adjusted again in an effort to help offset increased costs for developers. The proposed backbone fee increase incorporates the most recent CCI adjustments, enabling the utility to better reflect the rising costs of labor and materials since the previous analysis completed in 2019. Had annual CCI updates been utilized, the current backbone fee would be \$110.61 per kVA which is higher than the proposed per kVA fee of \$98.70 in Table 1 above.

**TABLE 2: CURRENT FEE AND APPROXIMATE FEE INCLUDING CCI INCREASES**

Customer Class	Current Fee	Billing Method	Approximate Fee w/ CCI Increases
RSF (Residential Single-Family) <sup>1</sup>	\$510.51	Per Home	\$608.36
RMF (Residential Multi-Family) <sup>2</sup>	\$371.28	Per Dwelling	\$442.44
GS (Commercial/Industrial)	\$92.82	Per kVA	\$110.61

1. Based on 5.5 kVa per single family home
2. Based on 4.0 kVa per multifamily home

### BACKBONE MITIGATION FEE ANALYSIS

The analysis reviewed REU's capital improvement plan and costs. Not all CIP costs are attributed to growth. Many CIP projects are initiated due to reliability needs including aging assets, lack of redundancy,

safety, and security. The 5-year CIP plan was provided by Power Engineering staff and the list was updated to include several new projects and removes two projects identified in the previous analysis that have been paid for with backbone fees collected since the 2019 analysis. The additional capital improvement projects and increases to labor and material costs since 2019 increased the 5-year CIP plan project expenses by 31% from the previous backbone fee study.

**TABLE 3: PLANNED CIP COSTS 2024 – 2029**

	<b>Total CIP</b>	<b>% Allocated to New Dev</b>	<b>\$ Allocated to New Dev.</b>
<b>Sierra Vista Transformer Addition</b>	\$3,381,000	75%	\$2,536,000
<b>Creekview Substation/60kV Extension</b>	\$15,394,000	75%	\$11,546,000
<b>Vernon Substation Upgrade</b>	\$18,832,000	25%	\$4,708,000
<b>Total</b>	<b>\$37,607,000</b>		<b>\$18,790,000</b>
<b>Less Backbone Fees Collected Since 2018</b>			<b>\$5,290,000</b>
<b>Adjusted Total</b>			<b>\$13,500,000</b>

The total capital costs assigned to growth total \$18.8 million. However, this total is adjusted downward to \$13.5 million based on the backbone fees collected since 2018. These collected fees partially fund the CIP in Table 3. This new amount is divided by the total number of new kVA projected on the system. The total new kVA is based on the Specific Plans for development in Amoruso Ranch, while customers served by existing capacity include growth projections for all other areas of the City.

**TABLE 4: PLANNED HOUSING UNIT GROWTH 2024 – 2029**

	<b>Units served by Existing Capacity</b>	<b>Customers Served by New Capacity</b>	<b>Total New Customers</b>
<b>RSF (Residential Single-Family)</b>	6,281	1,794	<b>8,075</b>
<b>RMF (Residential Multi-Family)</b>	5,533	873	<b>6,406</b>
<b>Total New Units (Customers)</b>	<b>11,814</b>	<b>2,667</b>	<b>14,481</b>

Total kVA is calculated in Table 5 using an average of 6.0 kVA for new single family units and 4.35 kVA for new multi-family units. These values are increased from the 2019 study due to increased electric uses in the home including Electric Vehicle charging. General Service kVA per acre varies based on designated land use for the area.

**TABLE 5: PLANNED KVA GROWTH 2024 – 2029**

	<b>kVA Served by Existing Capacity</b>	<b>kVA Served by New Capacity</b>	<b>Total New KVA</b>
<b>RSF (Residential Single-Family)<sup>1</sup></b>	37,686	10,764	<b>48,450</b>
<b>RMF (Residential Multi-Family)<sup>2</sup></b>	24,069	3,798	<b>27,866</b>
<b>GS (Commercial/Industrial)</b>	59,560	1,224	<b>60,784</b>
<b>Total kVA</b>	<b>121,315</b>	<b>15,786</b>	<b>137,100</b>

1. Based on 6.0 kVa per single family home.
2. Based on 4.35 kVa per multifamily home.

Table 6 summarizes the projected revenue recovery with the above assumptions.

**TABLE 6: PROJECTED REVENUES FROM KVA BASED RATES**

	<b>kVA per Customer</b>	<b>Projected # of New Customer or kVA Units</b>	<b>kVA Fee per Unit</b>	<b>Estimated Revenue</b>
<b>RSF (Residential Single-Family)</b>	6.00	8,075	\$592,20	\$4,782,015
<b>RMF (Residential Multi-Family)</b>	4.35	6,406	\$429.35	\$2,750,384
<b>GS (Commercial/Industrial)</b>	1	60,784	\$98.70	\$5,999,415
<b>Total</b>				<b>\$13,531,814</b>

## SUMMARY

Since 2019, REU has added capital projects needed to serve the projected load growth. The costs for these projects are included in the Backbone Mitigation Fee calculation. The above methodology mitigates the cost of growth on existing customers by recovering backbone costs through the kVA fee. The CIP costs are projected through fiscal year 2029. As additional projects are needed to meet projected growth, this analysis should be updated. Between updates, the Backbone Fee should be reviewed and adjusted annually per Municipal Code 4.54.140: The Construction Cost Index (CCI) inflationary fee adjustment. Finally, Backbone Mitigation Fees should be evaluated specifically for any new very large electric customers (connecting at 60 kV or higher).