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DATE: September 28, 2023

FROM: Chris Monacelli

TO: Chair Heyeck, Members of City Council

CC: Monica Irelan, Jason Bechtold

RE: 2023 Cost-to-Serve and Rate Change Recommendations

Current Environment:

Since the COVID-19 pandemic, the Westerville Electric Division (WED) has seen pricing increases and lead times as never before. Below are examples of commonly purchased items and the correlated price increases:

- In 2022, a 167 kVA transformer cost the Division \$9,600 and would arrive in approximately six months; in 2023, the same transformer cost the Division \$19,000 and is estimated to arrive in 17 months (198% price increase).
- In 2021, a 2-way padmounted switch cost \$85,000 and was shipped in five months; in 2023, WED saw a 248% increase (to \$211,000 per switch) and a 14 month lead time.
- The unit cost per street lighting has increased from \$5,482 in 2017 to \$12,049 per pole in 2023 (120% price increase).
- Underground cable replacement has increased from \$20.29 in 2017 to \$46 per foot in 2023 (103% price increase).
- A 25-pound spool of copper wire cost the Division \$94 in 2020 and \$164 in 2023 (174% increase).

In addition to price increases and outstanding lead times, WED continues to combat rising transmission expenses. In comparing January-August of 2022 to January-August of 2023, transmission expenses have increased approximately 13% or nearly \$1M. Looking back even further, transmission rates have increased nearly 400% since 2010. WED anticipates transmission rates to continue to rise for the foreseeable future.

WED has managed to weather these “storms” for many years through thoughtful planning/cost management and securing favorable power supply contracts. WED has not issued debt since 2012, and has reduced the Energy Charge (residential) between 2017 and 2023 by 3% by passing a 4% rate reduction in 2018. Additionally, WED has fully funded and plans to retire \$6.3M in debt in 2023. However, the rising transmission expenses and current the costs of goods have become significant, and are the primary driver of the following proposed rate increases. Increased prices leads to a higher revenue requirement; higher revenue requirement requires rate increases in order for the Division to continue to provide safe and

reliable electricity. In order to fully understand the impact of the steeply rising costs, WED performed a cost-to-serve study.

Cost-to-Serve and Rate Design Background:

Every four to five years, WED undertakes a comprehensive review of utility rates to ensure costs are allocated fairly across rate classes. This process begins with a cost-to-serve study. The purpose of this study is exactly as it's titled: what does it cost Westerville Electric to serve each customer rate class, and are Westerville's rates set appropriately to recover those costs? In 2023, WED conducted an RFP to locate a cost-to-serve consultant and selected Christensen Associates to conduct the analysis.

Located in Madison, Wisconsin, Christensen Associates (CA) has been offering consulting services for utilities, regulators, and stakeholders since 1976. Christensen has completed numerous cost-of-service, rate design, and customized rate models for private, public, and municipal utilities throughout the United States. WED ultimately selected Christensen because of the organization's innovative rate design experience, experience working with utilities of all sizes, and depth of professional experience and talent among staff (including numerous doctorate degrees in economics). Christensen obtained historical information on WED's customer numbers, consumption and peak demand, and analyzed changes in customer count and usage per customer to evaluate likely future trends. The organization navigated WED's financial history and CIP and operational budgets through 2028.

The results of this effort include:

- A revenue requirement forecast;
- A cost-to-serve study;
- Proposed rate changes; and,
- An evaluation of AMI opt-out rates.

Rate Design Considerations:

Below are the key rate design considerations resulting from the cost-to-serve study from CA:

- Increase rates steadily over the forecast period to ensure revenue coverage for the period, targeting an approximate 8% increase in 2024 (average bill impact);
- An increase to customer charges for each rate class;
- The continuation of the Power Supply Cost Adjustment (PSCA) structure, but move approximately \$0.012 into the Energy Charge and reset PSCA to \$0.01;
- Simplify rates by eliminating the minimum demand charge for General Service customers; and,
- The continuation of the winter discount phase-out, as previously approved by Council.

See **Appendix A** for detailed explanations and examples of the recommended rate changes in each rate class, and to see how the rates compare to AEP's utility charges.

AMI Opt-Out Program:

In 2020, WED implemented an advanced metering infrastructure (AMI) opt-out fee for all residential customers electing to retain a legacy meter. The opt-out fee was calculated during the 2019 cost-to-serve study, and, at that time was determined to be \$5 per month per opt-out customer. This fee was implemented to cover the costs of maintaining a legacy meter reading system, and has been billed monthly since the program's inception. At the time of implementation there were 247 opt-out customers; today, in 2023, there are 88 opt-out customers.

In light of increasing costs associated with manual meter readings (both labor and equipment), WED is evaluating the options associated with opt-out customers. As a part of the cost-to-serve study, CA reviewed the cost assumptions from the 2019 cost-to-serve study. Several key factors have changed since 2019 concerning the opt-out rate:

1. The number of opt-out customers has decreased by 159 (89%);
2. Staff turnover - Utility Billing no longer has staff trained or available to manually read meters (staff from the Public Service Department have been reading meters for more than one year); and,
3. Technology - the system used to read water meters has passed the end of its useful life and is no longer supported.

Put simply, in order to continue to read meters manually, there will need to be investment in new technology to read water meters. The major cost driver is associated with the technology to read meters; replacement software or the outsourcing of meter reading could cost as much as \$50,000 which, when spread over the 88 opt-out customers would result in an increase to the opt-out fee. Staff has identified two options for Council's consideration:

1. Increase the AMI opt-out fee - Based on current assumptions associated with replacing the technology to read meters, the cost-to-serve the 88 opt-out customers is calculated at \$27 per month per customer; or,
2. Eliminate the AMI opt-out option - At the time AMI was implemented in Westerville, the technology was new; since then, AMI has become the standard for metering across the world. Eliminating the opt-out program would allow the City to maintain a single technological system for metering across Electric and Water, eliminating the need to support two different systems.

Staff is seeking input from Council on the preferred direction regarding the AMI opt-out options.

Future Considerations

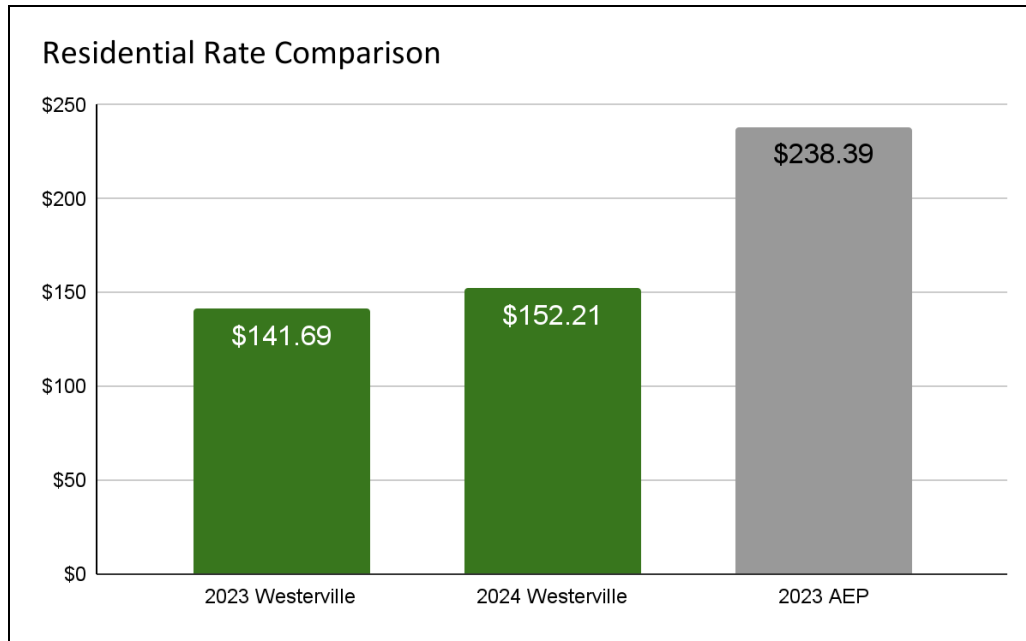
WED's engagement with CA also included support in exploring and designing several new rates. These items are still in progress and are under consideration from WED staff:

- Distributed Energy Resource (Solar) Rate;
- Income Based Residential Rate; and,
- DC Fast Charging Rate.

Appendix A: Rate Change Details

Residential Rate Class Changes

- Customer Charge - increases from \$14 to \$15;
- Energy Charge - increases from \$0.09524 to \$0.11698 per kWh;
- Winter Discount - winter rate changes from \$0.07175 to \$0.09349 for usage over 800 kWh; and,
- Power Supply Cost Adjustment (PSCA) - decreases from approximately \$0.022 per kWh to \$0.01 per kWh.

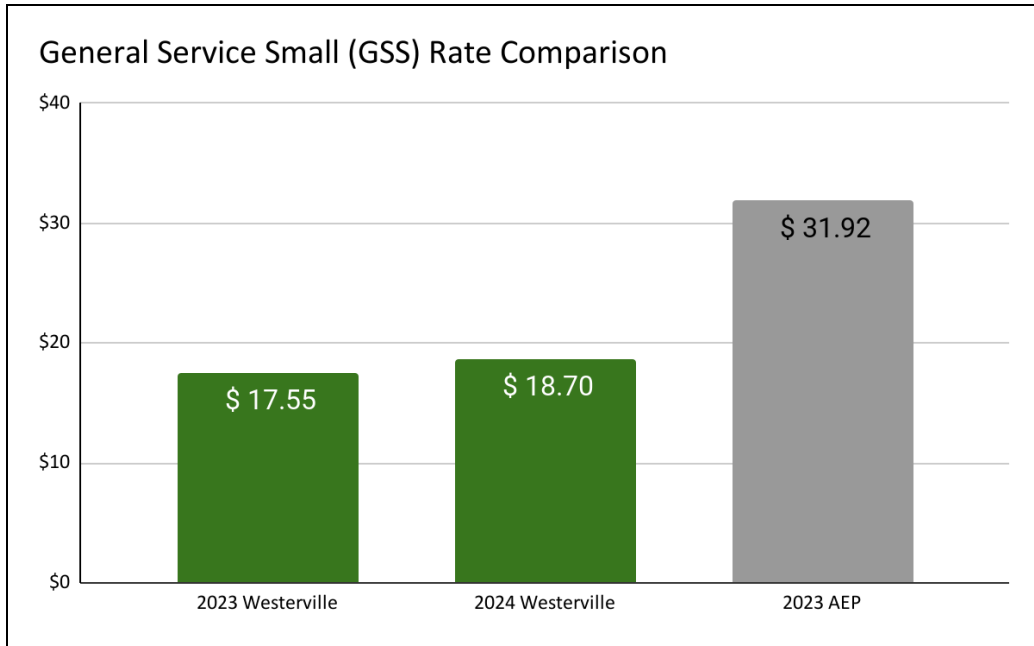


Average monthly bill - Residential consumer averaging 1,087 kWh per month compared to AEP's most current published rates (August 1, 2023).

There are 15,578 customers in this rate class.
The average residential electric customer will see an approximate 8% bill increase in 2024.

General Service Small (GSS) Rate Class Changes

- Customer Charge - increases from \$14 to \$15;
- Energy Charge - increases from \$0.09524 to \$0.11222 per kWh; and,
- PSCA - decreases from approximately \$0.022 per kWh to \$0.01 per kWh.

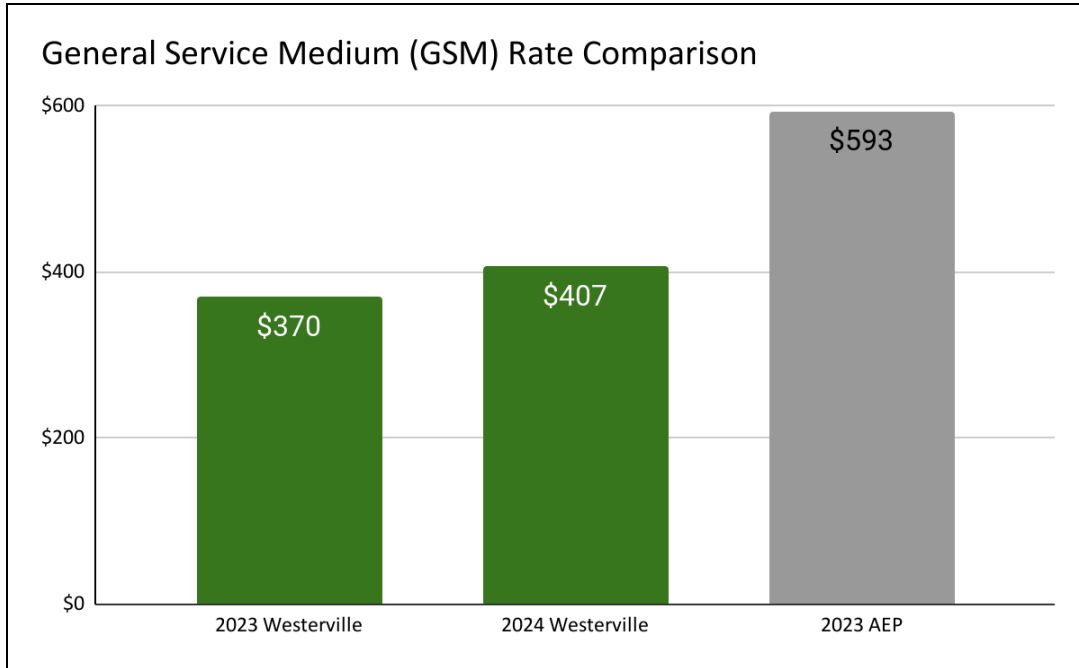


Average monthly bill for actual customer - General Service Small (GSS) consumer averaging 30 kWh per month compared to AEP's most current published rates (August 1, 2023).

There are 417 customers in this rate class.
The average GSS customer will see an approximate 6% bill increase in 2024.

General Service Medium (GSM) Rate Class Changes

- Customer Charge - increases from \$25 to \$30;
- Energy Charge - decreases from \$0.07359 to \$0.06925 per kWh;
- Maximum Demand Charge - increases from \$6.00 to \$10.79 per kW; and,
- PSCA - decreases from approximately \$0.022 per kWh to \$0.01 per kWh.

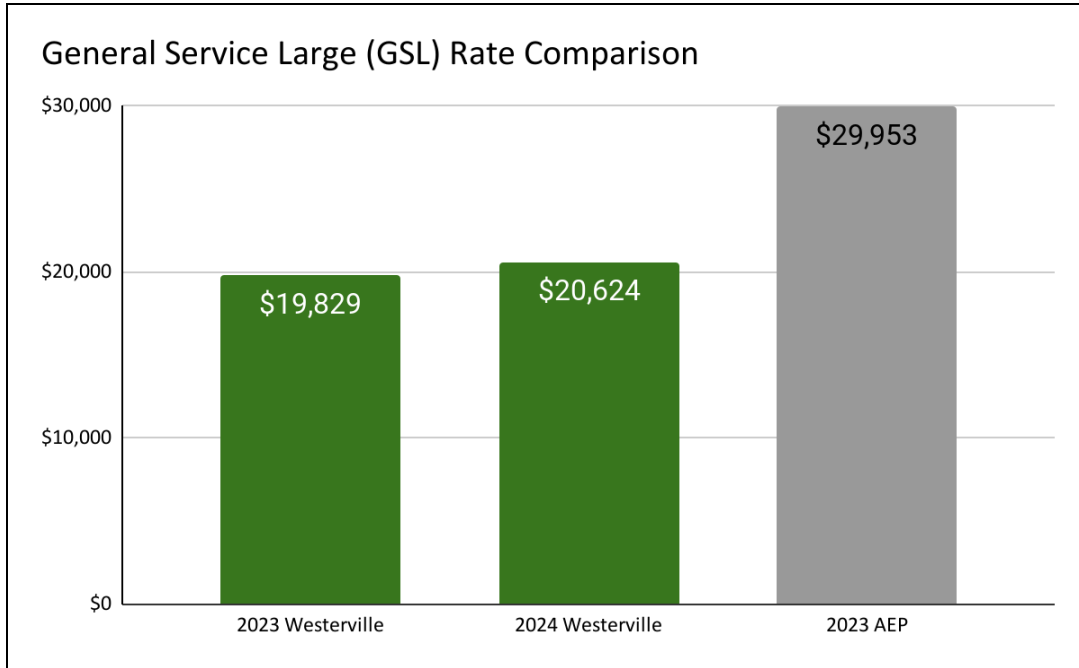


Average monthly bill for actual customer - General Service Medium (GSM) consumer averaging 2,740 kWh per month and a 14 kW demand compared to AEP's most current published rates (August 1, 2023).

There are 1,548 customers in this rate class.
The average GSM customer will see an approximate 6% bill increase in 2024.

General Service Large (GSL) Rate Class Changes

- Customer Charge - increases from \$120 to \$200;
- Energy Charge - increases from \$0.0575 to \$0.06849 per kWh;
- Minimum Demand Charge - decreases from \$550 to \$0;
- Maximum Demand Charge - increases from \$10.50 per kW and \$0.50 per kVAR to \$13.82 per kW; and,
- PSCA - decreases from approximately \$0.022 per kWh to \$0.01 per kWh.

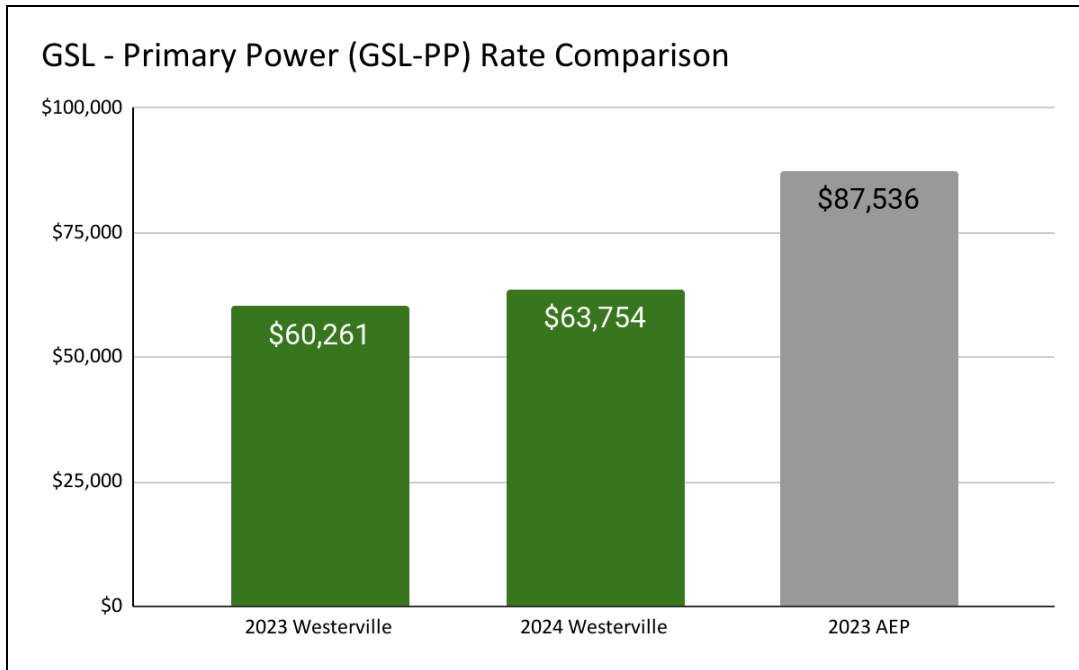


*Average monthly bill for actual customer -
General Service Large (GSL) consumer averaging 197,580 kWh per month and a
335.7 kW demand compared to AEP's most current published rates (August 1, 2023).*

There are 210 customers in this rate class.
The average GSL customer will see an approximate 4% bill increase in 2024.

General Service Large Primary Power (GSL-PP) Rate Class Changes

- Customer Charge - increases from \$350 to \$700;
- Energy Charge - increases from \$0.0575 to \$0.06776 per kWh;
- Minimum Demand Charge - decreases from \$550 to \$0;
- Maximum Demand Charge - increases from \$9.90 per kW and \$0.50 per kVAR to \$15.27 per kW; and,
- PSCA - decreases from approximately \$0.022 per kWh to \$0.01 per kWh.

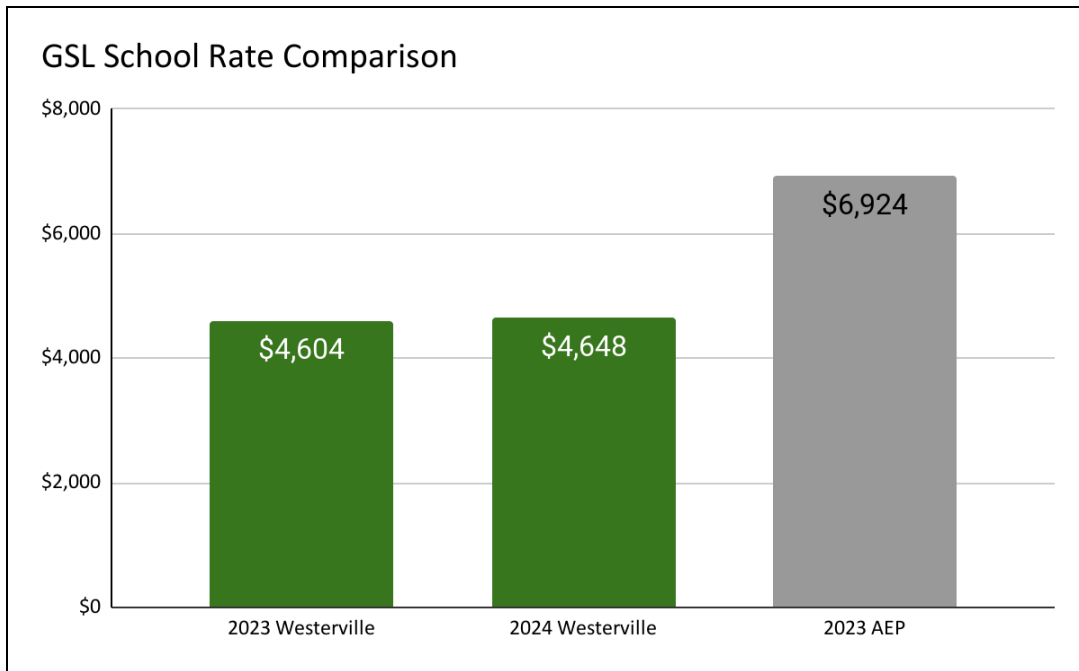


*Average monthly bill for actual customer -
General Service Large - Primary Power (GSL-PP) consumer averaging 203,050 kWh per month and a
588.4 kW demand compared to AEP's most current published rates (August 1, 2023).*

There are 13 customers in this rate class.
The average GSL-PP customer will see an approximate 6% bill increase in 2024.

General Service Large Schools (GSL-Schools) Rate Class Changes

- Customer Charge - increases from \$86 to \$200;
- Energy Charge - increases from \$0.0575 to \$0.06849 per kWh;
- Maximum Demand Charge - increases from \$10.50 per kW and \$0.50 per kVAR to \$10.84 per kW; and,
- PSCA - decreases from approximately \$0.022 per kWh to \$0.01 per kWh.

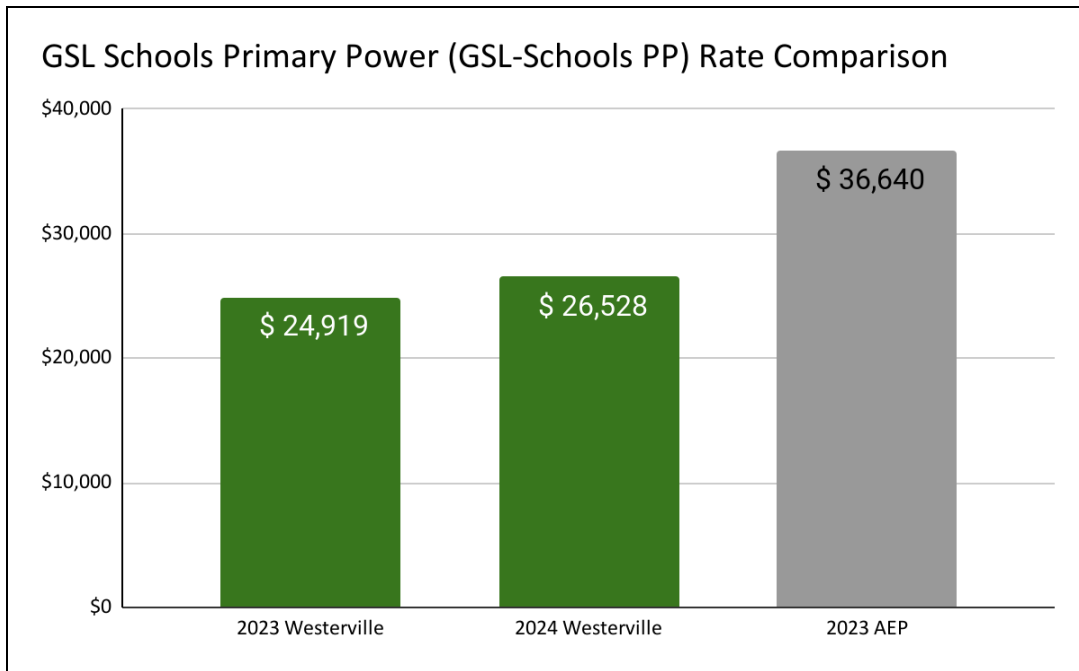


*Average monthly bill for actual customer -
General Service Large - School (GSL-School) consumer averaging 36,253 kWh per month and a
147.9 kW demand compared to AEP's most current published rates (August 1, 2023).*

There are 14 customers in this rate class.
The average GSL-Schools customer will see an approximate 4% bill increase in 2024.

General Service Large Schools - Primary Power (GSL-Schools PP) Rate Class Changes

- Customer Charge - increases from \$86 to \$700;
- Energy Charge - increases from \$0.0575 to \$0.06776 per kWh;
- Maximum Demand Charge - increases from \$9.90 per kW and \$0.50 per kVAR to \$12.41 per kW; and,
- PSCA - decreases from approximately \$0.022 per kWh to \$0.01 per kWh.

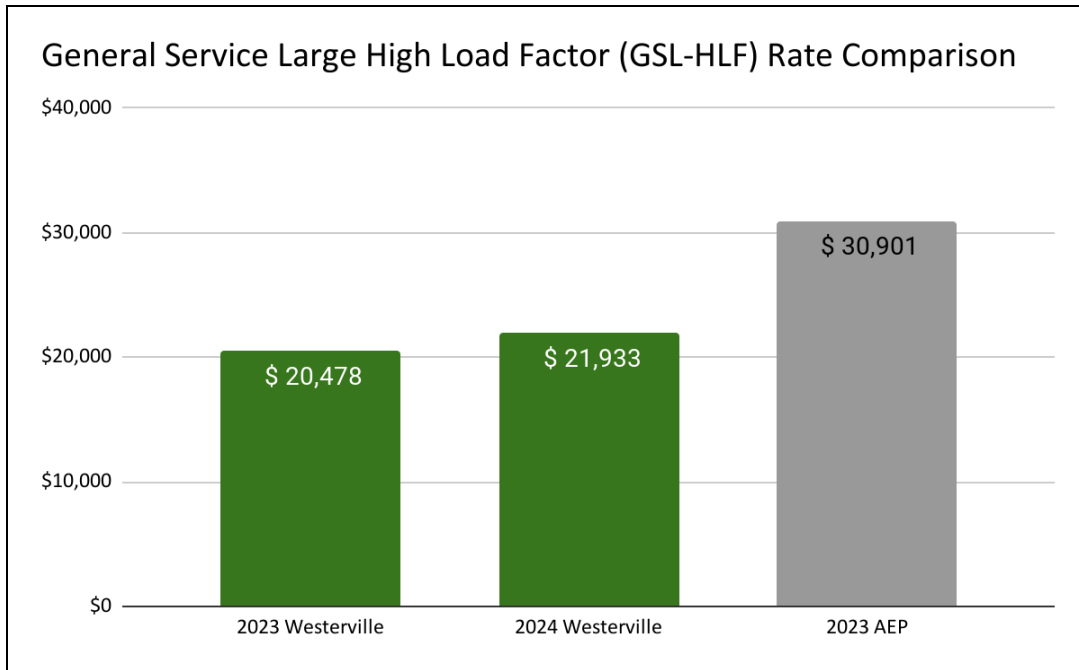


*Average monthly bill for actual customer -
General Service Large School Primary Power (GSL-Schools PP) consumer averaging 218,600 kWh per month
and a 711.5 kW demand compared to AEP's most current published rates
(August 1, 2023).*

There are two customers in this rate class.
The average GSL-Schools PP customer will see an approximate 6% bill increase in 2024.

General Service Large High Load Factor (GSL-HLF) Rate Class Changes

- Customer Charge - increases from \$120 to \$200;
- Energy Charge - increases from \$0.05435 to \$0.06798 per kWh;
- Minimum Demand Charge - decreases from \$550 to \$0;
- Maximum Demand Charge - increases from \$10.50 per kW and \$0.50 per kVAR to \$13.82 per kW; and,
- PSCA - decreases from approximately \$0.022 per kWh to \$0.01 per kWh.



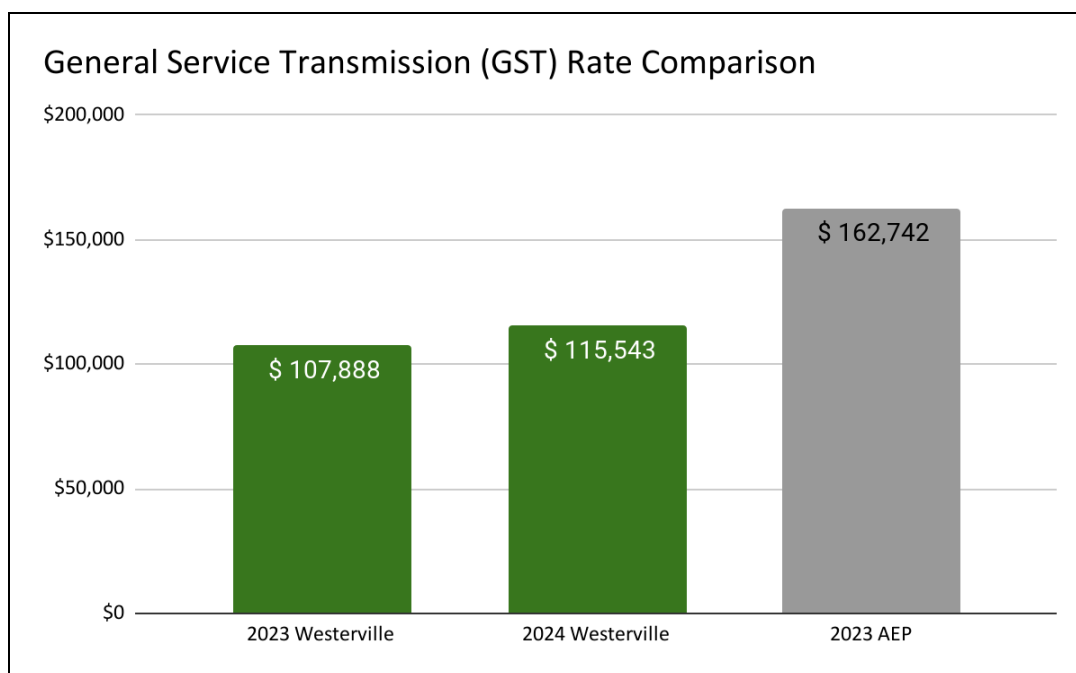
*Average monthly bill for actual customer -
General Service Large High Load Factor (GSL-HLF) consumer averaging 220,467 kWh per month and a
328.6 kW demand compared to AEP's most current published rates (August 1, 2023).*

There are six customers in this rate class.
The average GSL-HLF customer will see an approximate 7% bill increase in 2024.

General Service Transmission (GST) Rate Class Changes

- Customer Charge - increases from \$75 to \$3,500*;
- Energy Charge - increases from \$0.049 to \$0.06659 per kWh;
- Minimum Demand Charge - decreases from \$14,246 to \$0*.
- Maximum Demand Charge - increases from \$6.305 per kW to \$7.40 per kW; and,
- PSCA - decreases from approximately \$0.022 per kWh to \$0.01 per kWh.

It should be noted that the GST rate class has one customer. The increase in customer, energy, and maximum demand charges with the reduction to the PSCA and removal of the minimum demand charge results in an overall billing impact of approximately 7%.



*Average monthly bill for actual customer -
General Service Transmission (GST) consumer averaging 1,246,000 kWh per month and a 2,244.9 kW demand compared to AEP's most current published rates (August 1, 2023).*

The sole GST customer will see an approximate 7% bill increase in 2024.