



2025 Retail Tariff Update to Minister

For Informational Purposes

28 November 2024

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Executive Summary

The Regulatory Authority (RA) completed the 2025 Retail Tariff Review, balancing BELCO's revenue requirements with the goal of minimising customer impact. Key outcomes:

Revenue Allowance:

- BELCO applied for a revenue allowance of \$289 million.
- The RA initially approved \$269 million, approximately \$20 million less than requested.
- After adjustments, the final approved allowance is \$276 million, \$13 million below the request.

Electricity Rates:

- Overall retail tariffs will see a modest increase of 2.19% from Q4 2024 to Q1 2025, significantly lower than initial expectations.
- Base rates will increase by an average of 10.9%, offset by a 13.8% reduction in the Fuel Adjustment Rate (FAR), which limits the overall rate impact.

Customer Impact:

- The tariff structure maintains the existing balance between customer classes, ensuring no disproportionate impact on any group.
- Ratios between retail tariffs align closely with the estimated true cost of service, avoiding further distortions in individual tariff components.

Introduction

- Section 35(1) of the Electricity Act 2016 (EA) requires the Regulatory Authority (RA) to determine the Retail Tariff in accordance with the methodology which was set by the RA in the Regulatory Authority (Retail Tariff Methodology) Interim General Determination 2023 dated 29 December 2023 (Interim GD) and the principles set out in part 6 of the EA.
- Section 35(2) of the EA requires the methodology set by the RA to seek to enable the Transmission, Distribution & Retail Licensee to seek to generate a total revenue (Allowed Revenue) that recovers reasonable costs of service incurred in achieving the service standards, including investment costs (and an appropriate return on such investments), operating expenses, fuel procured for generation, generation procured, and other expenses including Government authorisation fees, the Regulatory Authority fee, and other statutory fees.
- In accordance with the Electricity Act, the RA has reached a decisive conclusion regarding the 2025 Retail Tariff and the electrical rates that will be implemented as a result.
- The 1000+ page submission from BELCO was reviewed and verified by the RA and its industry experts, including engineers, legal advisors, and economic and financial analysts.

Retail Tariff Review Legislative Framework (Section 35 of the EA)

- The tariff methodology seeks to enable the TD&R Licensee to generate:
 - Total revenue that recovers reasonable costs of service incurred in achieving the service standards
 - Reasonable costs relative to investments if it is prudently incurred
 - Reasonable return on investment
 - Total revenue that recovers reasonable costs relative to expenses efficiently incurred:
 - Operating expenses
 - Fuel procured for generation
 - Government Authorisation Fee (GAF)
 - Regulatory Authority Fee (RAF)
- The methodology shall—
 - be designed to enable an efficient licensee to recover the cost of its licensed activities
 - include information that gives end-users information regarding costs that their demand imposes on the licensee's business



Summary of 2025 Retail Tariff Revenue Allowance & Adjustments

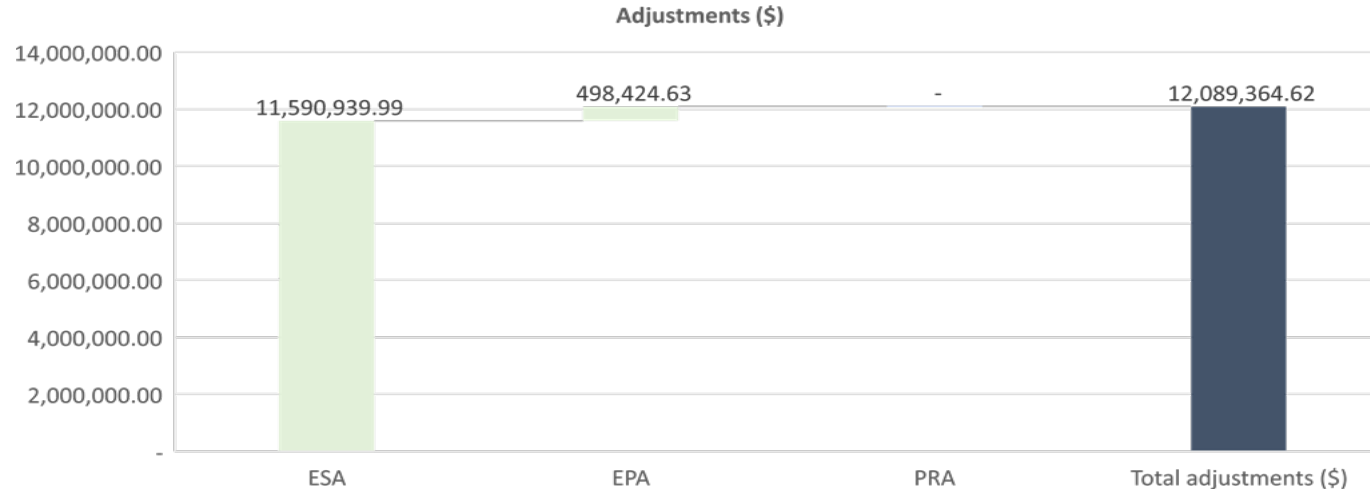
2025 Revenue Allowance (RA) & Adjustments

	2025 (Applied)	2025 (Initially approved)	2025 (Adjusted)
Allowable rate of return (%)	10.13%	7.79%	7.79%
Total RA incl. Pass-through before adjustments	289,037,410	264,066,055	264,066,055
ESA	0	0	11,590,940
EPA	0	0	489,425
ERA	0	0	0
PRA	0	0	0
Total RA incl. fuel costs	289,037,410	264,066,055	276,155,419
Total RA excl. fuel costs	198,884,146	173,912,790	186,002,155
In BMD/MWh	2025 (Applied)	2025 (Initially approved)	2025 (Adjusted)
NFABR after adjustments-including IPP/DG purchase	388.79	339.96	363.59
NFABR after adjustments-excluding IPP/DG purchase	379.44	330.62	354.26

No change from initial decision in August 2024

Adjustments

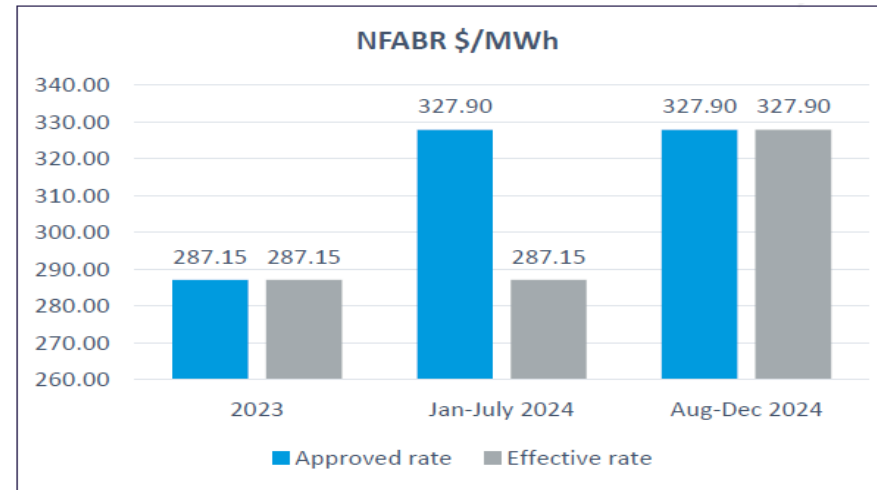
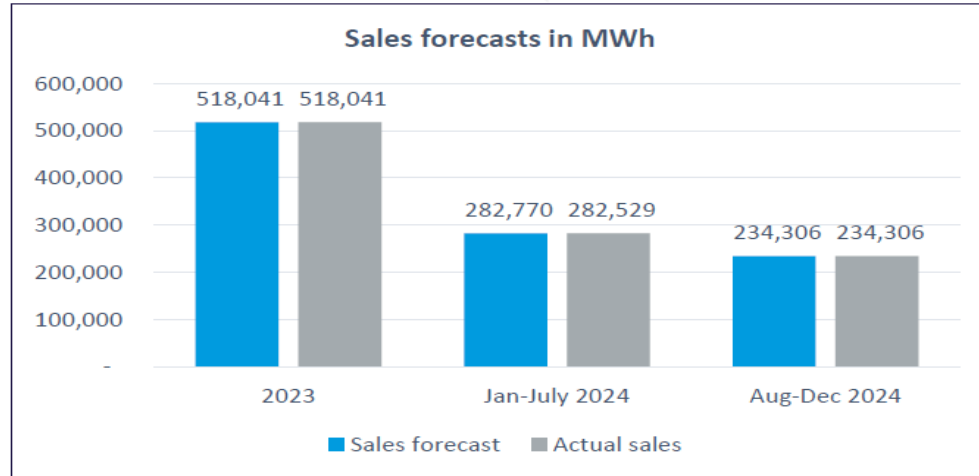
- The revenue allowance for each year is set in advance based on forecasts received in the Retail Tariff Review process.
- Each annual Revenue Allowance is adjusted before the start of the year to account for the differences in actuals versus forecasted values used in the Revenue Allowance. This is called the true-up mechanism.
- The approved Allowed Revenue from **Order #20220530** was **BMD 264,066,055** for 2025. The updated Allowed Revenue for 2025 is **BMD 276,155,419**.
- The **BMD 12,089,365** increase accounts for the adjustments as follows:



- The majority of the adjustment is due to the Energy Sales Adjustment (ESA) from a delayed implementation of rates.
- The other portion is the Energy Purchase Adjustment (EPA) which is from increased purchases from DG customers and IPPs.

Energy Sales Adjustments (ESA)

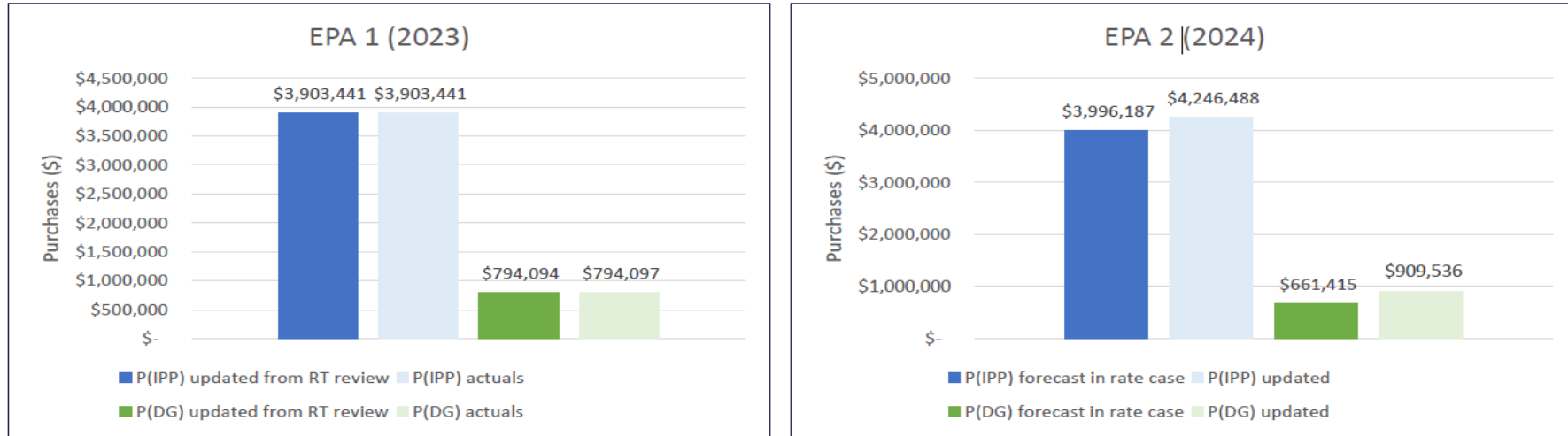
The ESA accounts for the variations between sales forecast and actual sales (both sales volume and the value of sales), leading to either an over or under revenue recovery by tariff rates compared with the total TD&R revenue allowance net of fuel and energy purchase costs.



ESA	\$value
ESA1: 2023	-
ESA2: Jan – July 2024	11,590,940
ESA3: August – December 2024	-
ESA total	11,590,940

Energy Purchase Adjustments (EPA)

The EPA covers the variation between forecast purchases and actual purchases from IPPs (Tyne's Bay WTE Facility, Saturn Solar BDA 1) and distributed generators (solar customers).

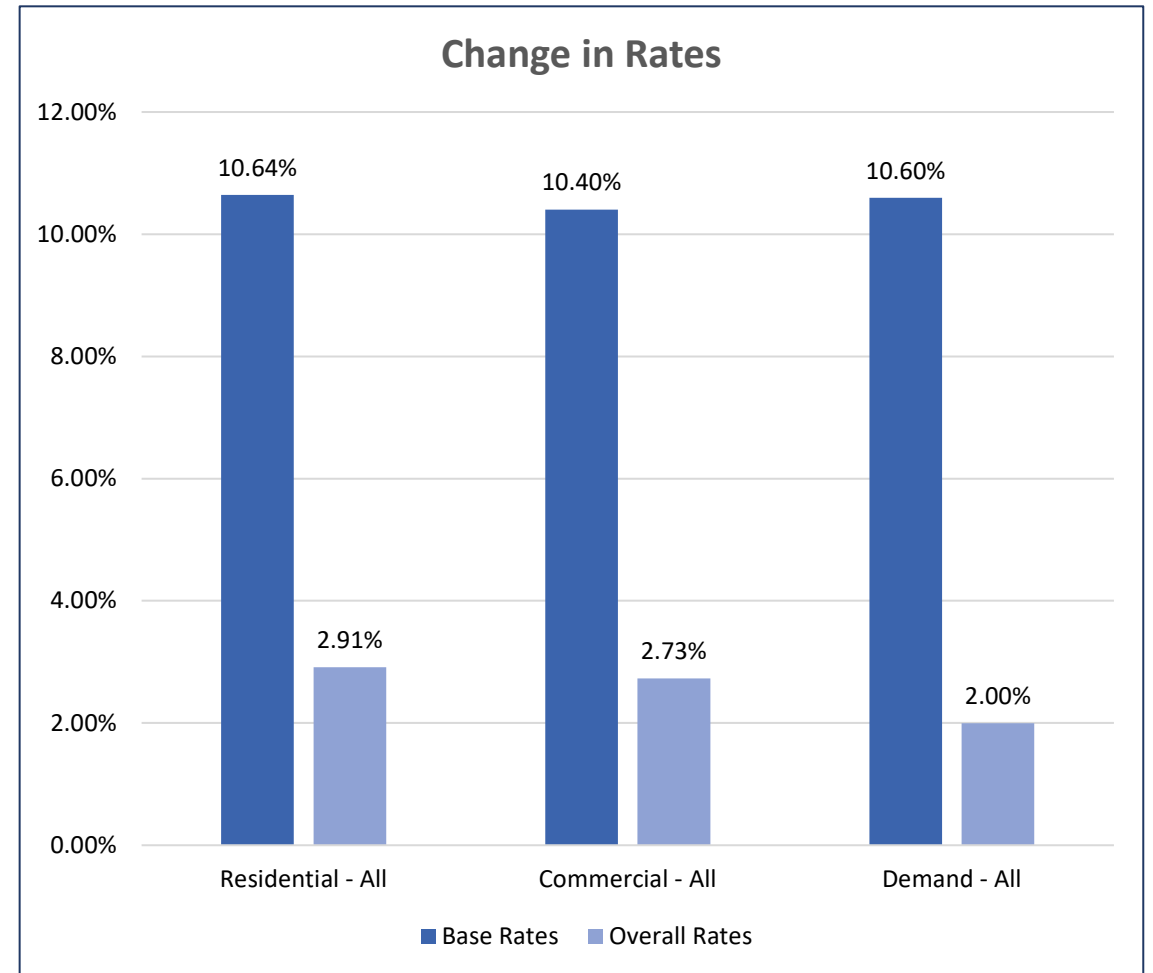
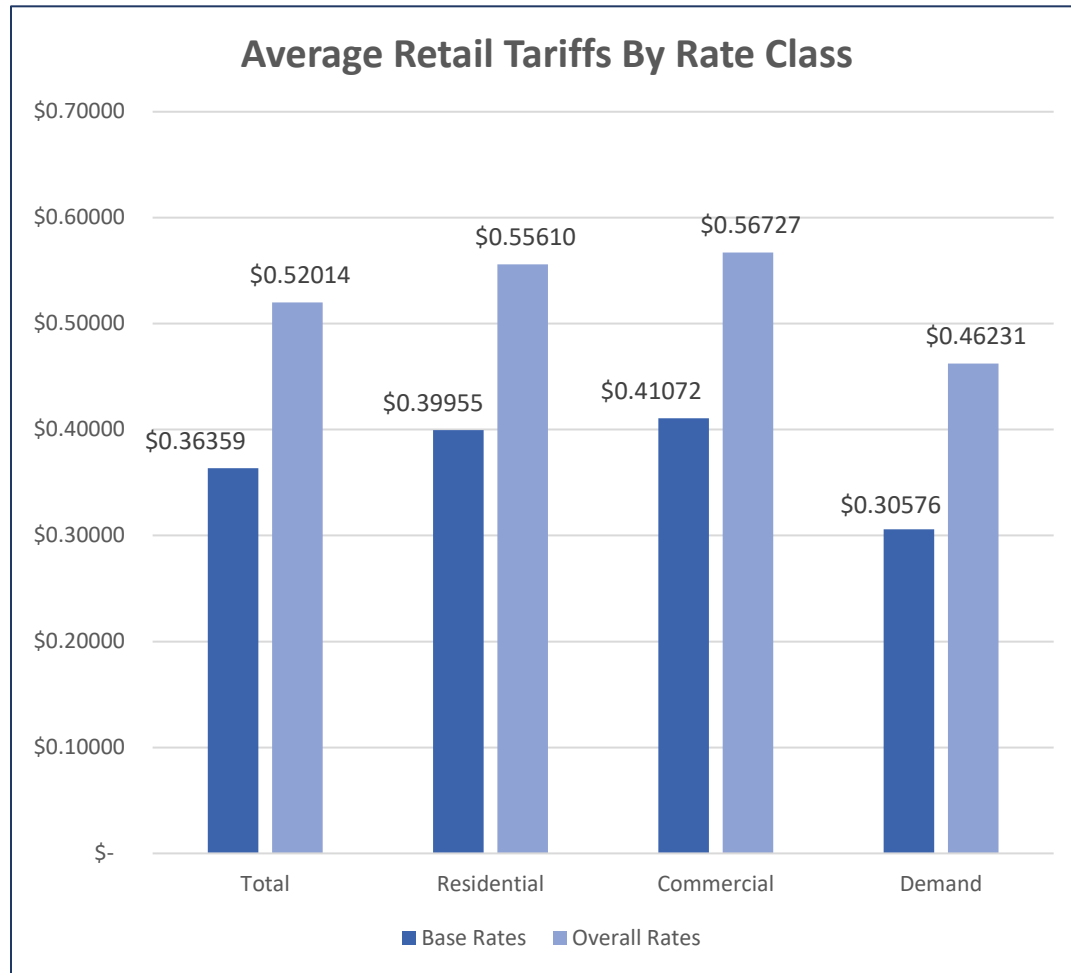


EPA	\$value
EPA: 2023	3
EPA: 2024	498,422
EPA total	498,425

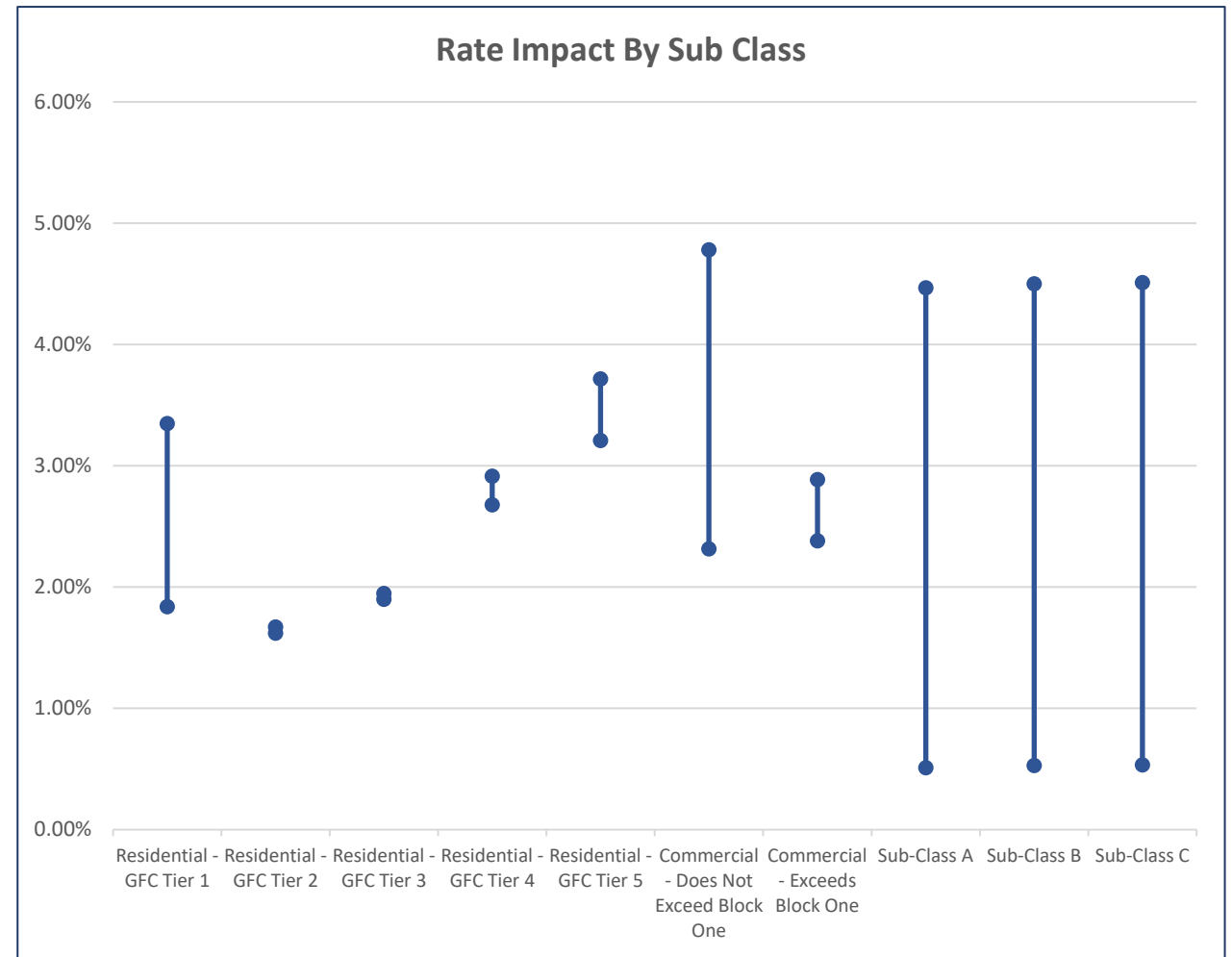
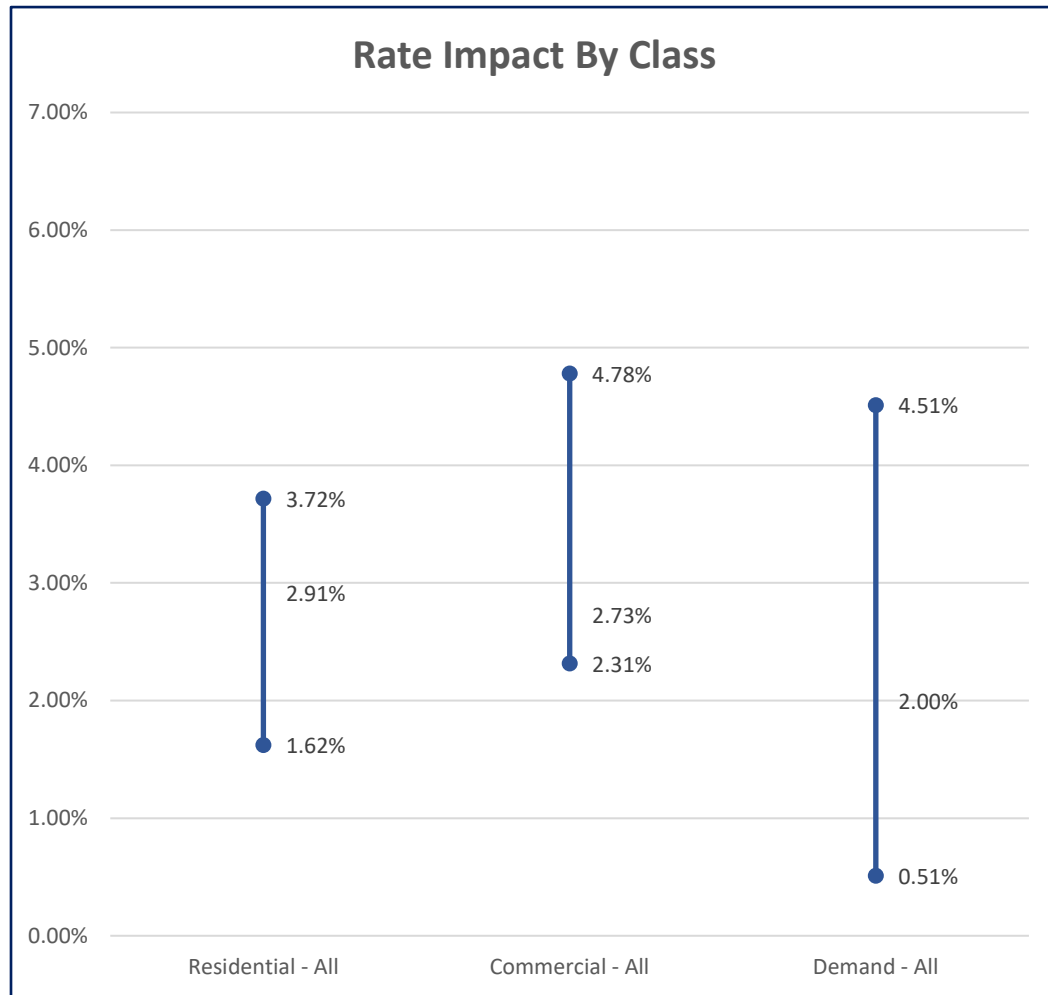


2025 Rate Impacts

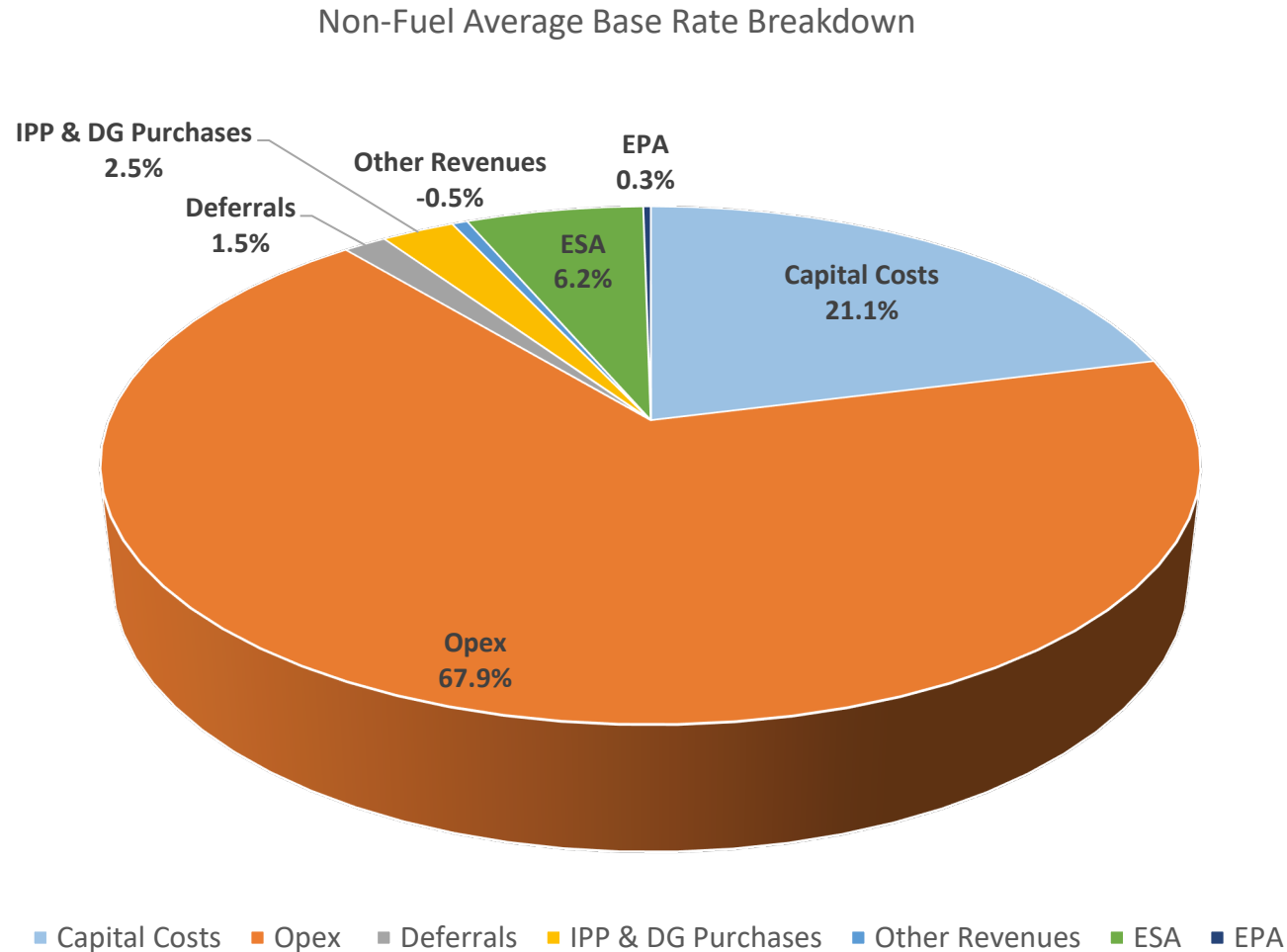
2025 Rate Impacts



2025 Rate Impacts



Non-Fuel Average Base Rates (NFABR) Breakdown



Breakdown of Costs	
Cost Allocation	\$/MWh
Capital Costs	77.39
Operation Expenses (Opex)	249.71
COVID Revenue Deferrals	5.53
IPP & DG Purchases	9.34
Other Revenues	- 2.00
Energy Sales Adjustment (ESA)	22.66
Energy Purchase Adjustment (EPA)	0.97
Total without Fuel	363.59
Fuel Costs	151.10
Total with Fuel	514.69

2025 Rate Impacts

BELCO BILL RATE COMPARISONS

Comparisons are based on the same sample usage of **554 kWh** for a 30 day billing cycle.
This sample is in the range of average customer usage.

Charges			
BILLING CHARGES			
FIRST 250 KWHs	\$0.15509 per kWh		\$38.77
NEXT 250 - 700 KWHs	\$0.27692 per kWh		\$84.28
TOTAL USAGE CHARGES			\$123.05
FACILITIES CHARGE			\$51.42
FUEL ADJUSTMENT	\$0.17539 per kWh		\$97.23
*INCLUDES GOVERNMENT TAXES ON FUEL OF \$10.10			
REGULATORY AUTHORITY FEE	\$0.00545 per kWh		\$3.02
TOTAL BILLING CHARGES			\$274.72

CURRENT RATES

Charges			
BILLING CHARGES			
FIRST 250 KWHs	\$0.17193 per kWh		\$42.98
NEXT 250 - 700 KWHs	\$0.30698 per kWh		\$93.42
TOTAL USAGE CHARGES			\$136.42
FACILITIES CHARGE			\$56.88
FUEL ADJUSTMENT	\$0.15110 per kWh		\$83.76
*INCLUDES GOVERNMENT TAXES ON FUEL OF \$10.10			
REGULATORY AUTHORITY FEE	\$0.00545 per kWh		\$3.02
TOTAL BILLING CHARGES			\$280.06

PROPOSED RATES

BELCO BILL RATE COMPARISONS

Comparisons are based on the same sample usage of **800 kWh** for a 30 day billing cycle.
This sample is in the range of average customer usage.

Charges			
BILLING CHARGES			
FIRST 250 KWHs	\$0.15509 per kWh		\$38.77
NEXT 250 - 700 KWHs	\$0.27692 per kWh		\$124.51
OVER 700 KWHs	\$0.43616 per kWh		\$43.62
TOTAL USAGE CHARGES			\$207.00
FACILITIES CHARGE			\$80.44
FUEL ADJUSTMENT	\$0.17539 per kWh		\$140.31
*INCLUDES GOVERNMENT TAXES ON FUEL OF \$14.70			
REGULATORY AUTHORITY FEE	\$0.00545 per kWh		\$4.35
TOTAL BILLING CHARGES			\$432.11

CURRENT RATES

Charges			
BILLING CHARGES			
FIRST 250 KWHs	\$0.17193 per kWh		\$42.98
NEXT 250 - 700 KWHs	\$0.30698 per kWh		\$138.14
OVER 700 KWHs	\$0.48350 per kWh		\$48.35
TOTAL USAGE CHARGES			\$318.45
FACILITIES CHARGE			\$88.90
FUEL ADJUSTMENT	\$0.15110 per kWh		\$120.88
*INCLUDES GOVERNMENT TAXES ON FUEL OF \$14.70			
REGULATORY AUTHORITY FEE	\$0.00545 per kWh		\$4.35
TOTAL BILLING CHARGES			\$443.88

PROPOSED RATES

56% of residential customers fall below this category

OVERALL INCREASE OF 1.95%

83% of residential customers fall below this category

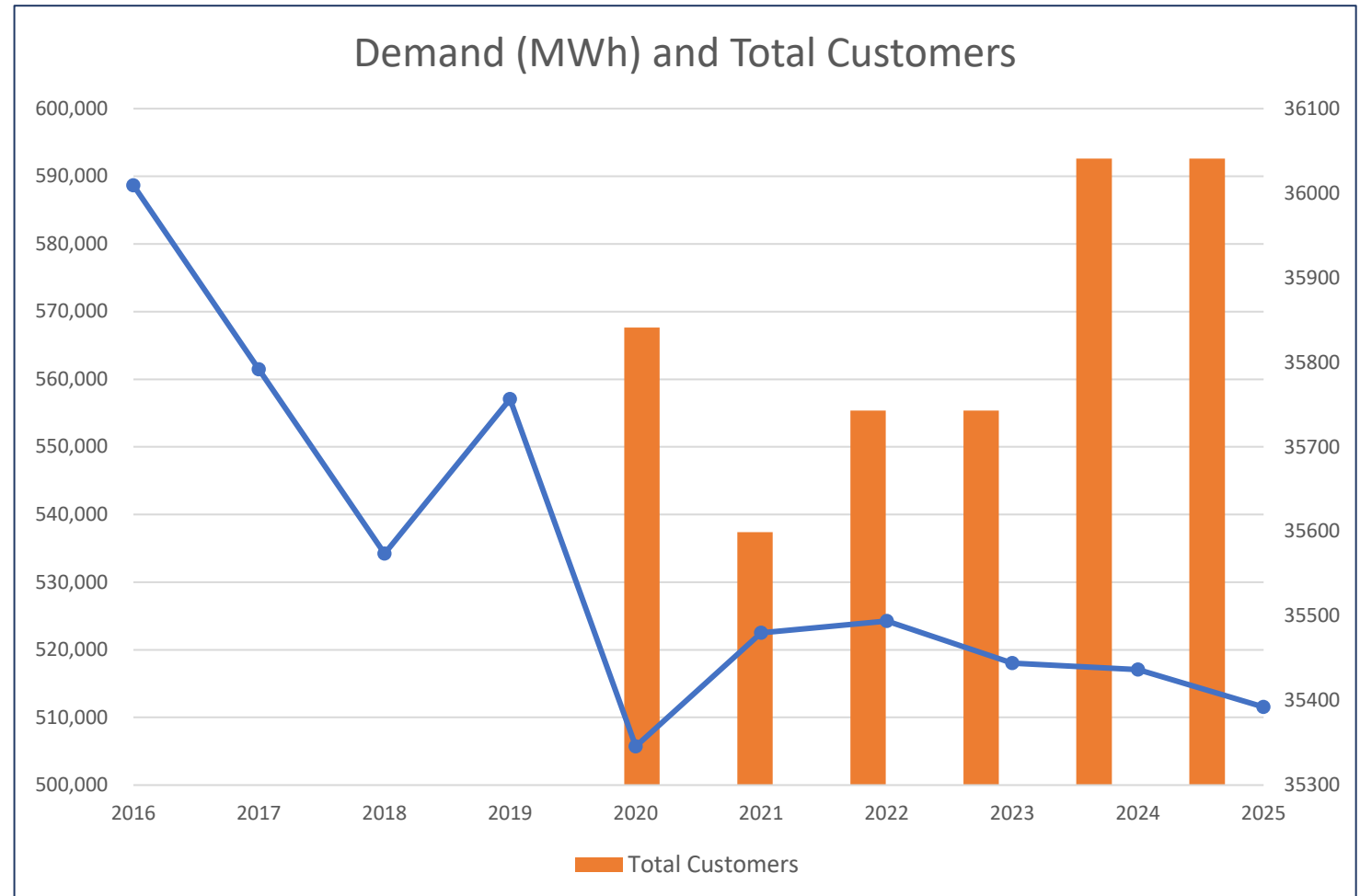
OVERALL INCREASE OF 2.68%



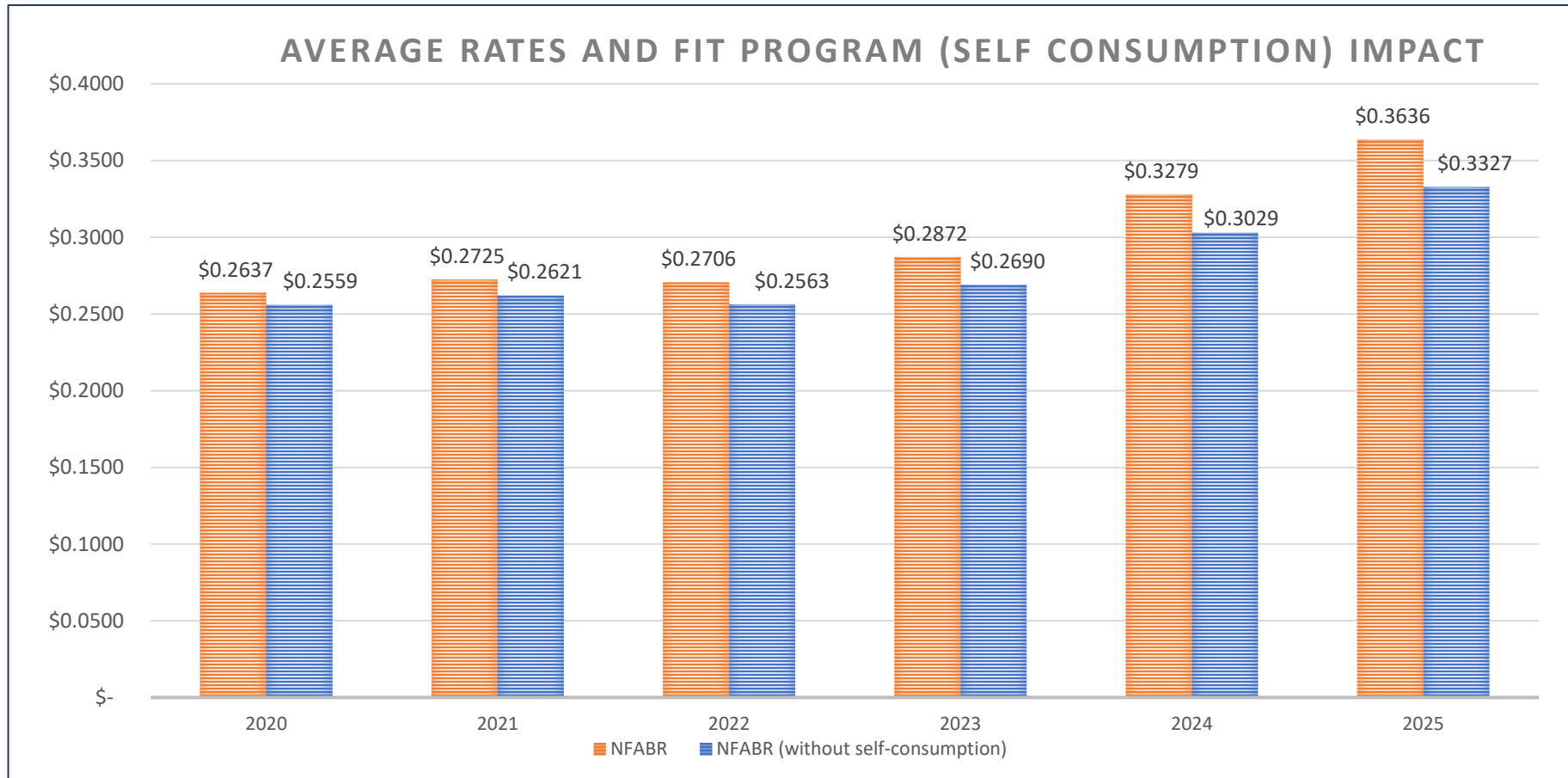
Factors Impacting Rates: Impact of Solar PV Distributed Generation on Rates

Total Customer and Demand Historical Trends

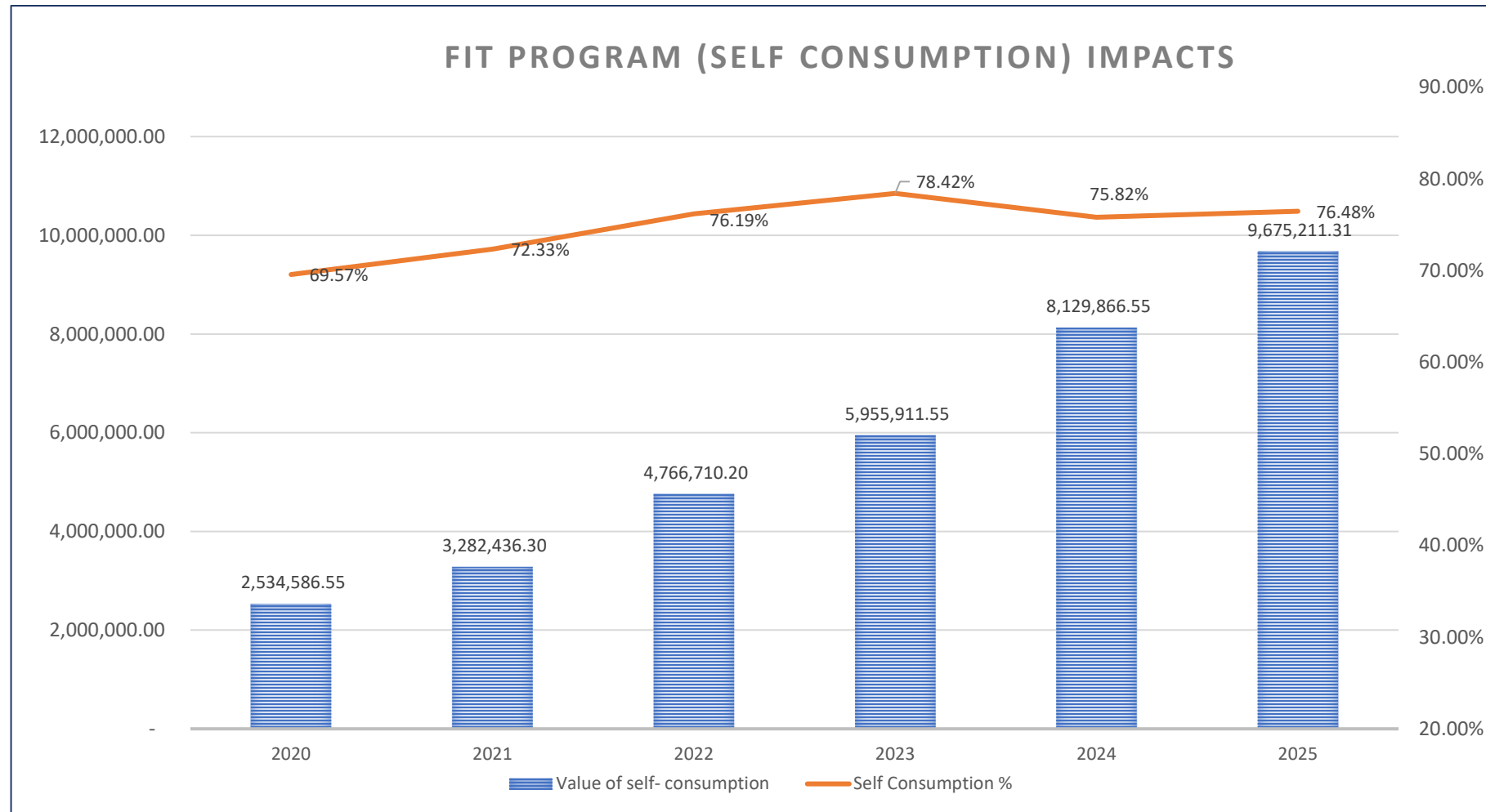
- Before the COVID-19 pandemic, total sales were on a slow decline predominantly because of improved energy efficiency and uptake of renewable energy systems.
- Since 2020, sales slowly recovered in 2021 and 2022, however, total sales have decreased from since then and further decreases are expected in 2025.
- The downward trend for 2023-2025 is due to an expected increase in Photo-Voltaic (PV) system deployment, particularly larger scale PV, increasing self-consumption, and energy efficiency improvements, which offsetting the recovery that has taken place from COVID-19.



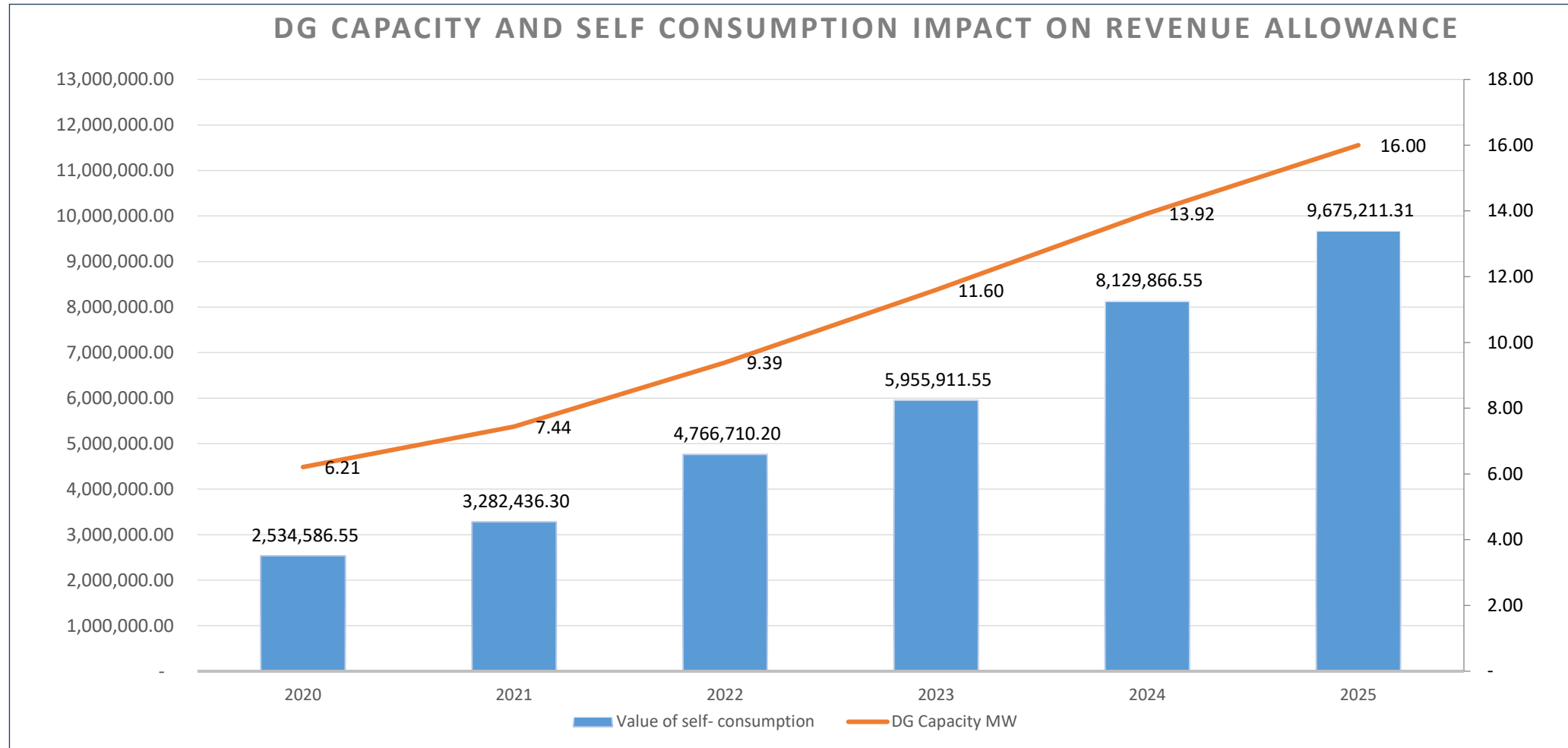
Impact of Distributed Generation (DG) & Solar on Rates



Impact of Distributed Generation (DG) & Solar on Rates

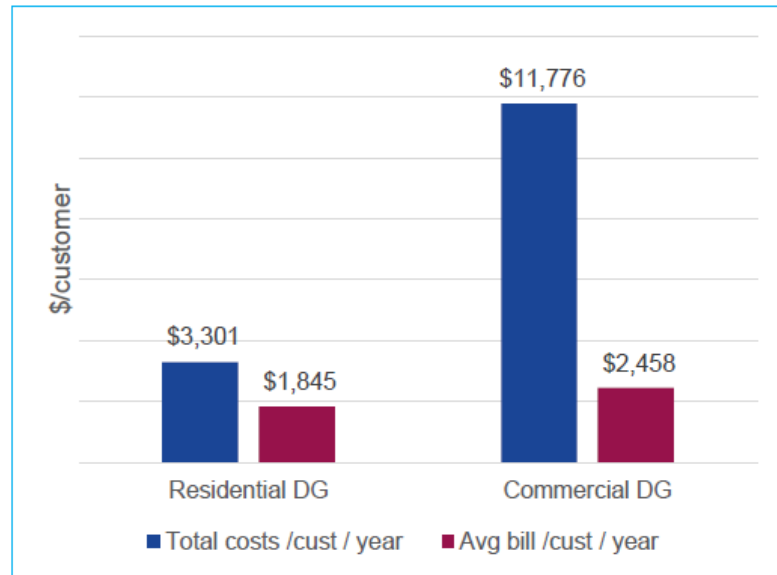


Impact of Distributed Generation (DG) & Solar on Rates



Rates vs Costs – DG Users

The contrast between rates and costs is even starker with DG customers



RATES <<< COSTS



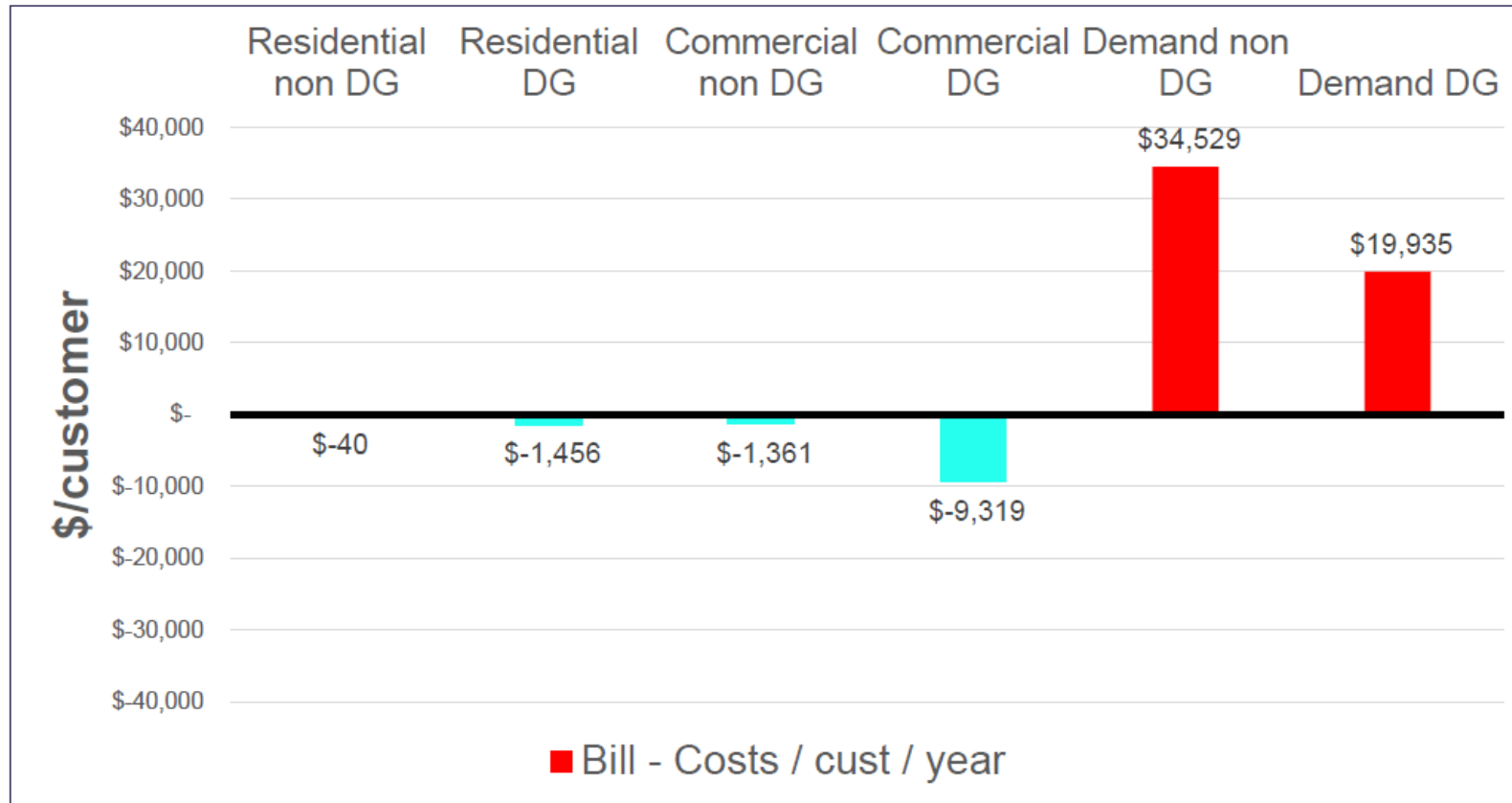
RATES >> COSTS

DG bill calculations exclude FIT payments on this chart

This is mainly because when DG consumers reduce their grid consumption, they stop paying for "fixed" costs for assets they otherwise benefit from some of the time (e.g. power plants) or all of the time (e.g. network lines)

Who Subsidies Whom?

Demand non DG customers are those subsidising the most, residential and commercial DG customers are those benefiting the most from subsidies



DG bill calculations exclude FIT payments on this chart

Customers pay **more** than their costs

Customers pay **less than** their costs

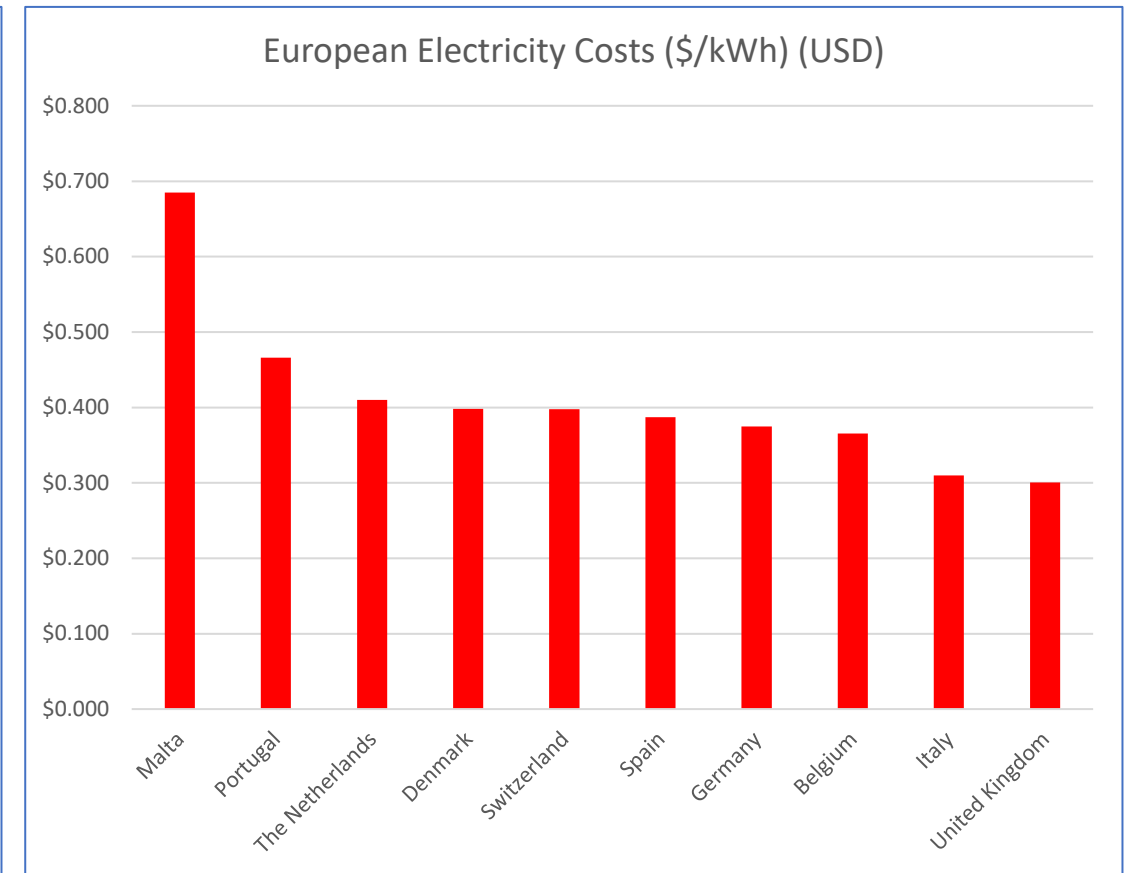
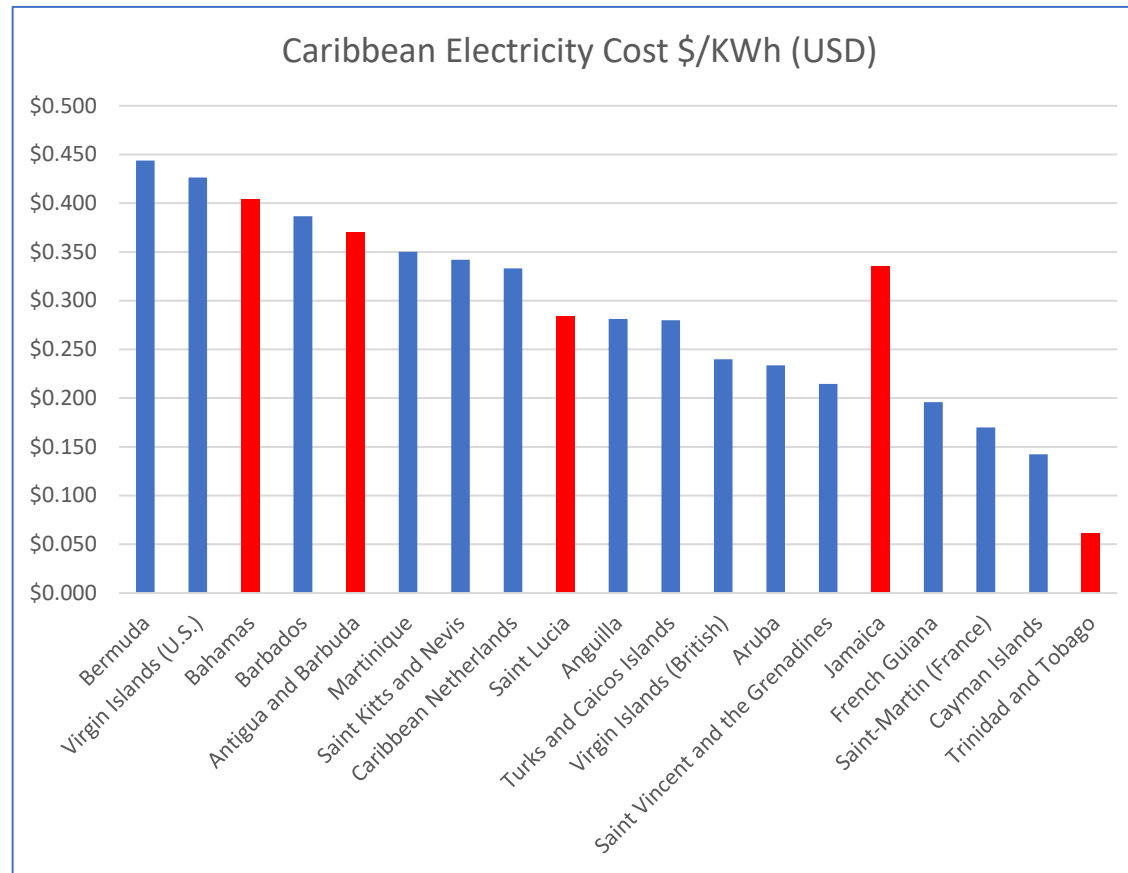
Who Subsidises Whom?

- Current rate structures create distortions.
- Demand customers subsidize residential and commercial customers.
- DG users contribute less to their full costs of electricity supply and network access than non-DG users.
- Overall distortions between classes should be addressed by:
 - Reviewing the rate design
 - Bill breakdown between variable and fixed charges (\$/month or \$/kW.month)
 - Increase the fixed charge of DG users relative to that of non-DG users in the same class



Global Electricity Costs (Case Studies: Barbados & Ontario, Canada)

Global Electricity Costs



Subsidised Energy

Non-Subsidised Energy

Case Studies: Barbados

- Barbados has made significant investments in renewable energy, particularly solar. This was largely driven by a national commitment to reduce fossil fuel dependency and promote cleaner energy sources.
- In 2012, Barbados had one of the highest electricity tariff in the world (over 0.4 US\$/kWh), and imported diesel and heavy fuel oil were the main energy sources.
- With the support of the Inter-American Development Bank (IDB), Barbados is now spearheading an energy transition that improves the life of its citizens, lowers its fossil fuels' import bill, and embraces initiatives that might seem futuristic for our times. For example, having two-way power meters in every household that measure the solar energy produced and sell it to the utility company
- The government introduced incentives for residential and commercial solar installations, contributing to a substantial rise in distributed generation.



Impacts on Rates and Non-DG Consumers

- As more consumers installed solar panels and became less dependent on the grid, the fixed costs for maintaining the electricity infrastructure were distributed among a smaller customer base.
- This shift increased per-kilowatt-hour charges for non-solar customers, as the utility still needed to maintain the grid and generate sufficient revenue despite having fewer users contributing to these costs.
- The Barbados utility had to adjust its rates to ensure it met its reasonable rate of return, placing more financial pressure on non-DG consumers.

Policy Responses

- The Barbadian government and utility worked together to review the tariff structures. One approach included re-evaluating feed-in tariffs to balance the incentives for DG adoption with the financial sustainability of the grid.
- The utility also began exploring fixed charges for all customers to cover basic infrastructure costs, regardless of their electricity consumption, to help mitigate the impact on non-DG customers.
- Barbados has halted solar installations.

Case Studies: Ontario, Canada

- Ontario is a leader in renewables and nuclear. In 2018, over one-third of Ontario's electricity generation was from renewables and over 92% was from non-emitting sources.
- Ontario has a well-established history of promoting renewable energy sources, including solar, as part of its commitment to reduce carbon emissions.
- The province introduced attractive feed-in tariffs (FIT) and net metering options that encouraged widespread adoption of solar panels by residential and commercial users.



Impacts on Rates and Non-DG Consumers

- As more residents adopted DG solutions, the fixed costs of the grid, such as maintenance and operational expenses, became concentrated among a shrinking base of traditional customers.
- Similar to Barbados, Ontario saw increases in rates for non-DG consumers because the utility still needed to recover the costs of maintaining the infrastructure.
- These rate increases led to concerns about equity, as customers without access to DG (either due to financial constraints or lack of property ownership) faced higher bills than those with solar installations.

Policy Responses

- Ontario revised its FIT program to limit new DG adoption incentives, aiming to slow the cost impact on non-solar users while still supporting renewable energy.
- Additionally, the province introduced a “global adjustment charge,” a fee applied to cover infrastructure and renewable energy costs, which was spread across all consumers to reduce the impact on traditional grid users.
- Ontario’s experience showcased the need to carefully balance incentives for renewable energy adoption with measures that protect ratepayers who cannot adopt DG.

Takeaways for Bermuda



Fixed Cost Recovery: Both Barbados and Ontario had to address the challenge of distributing fixed grid costs among fewer traditional customers, which led to rate increases for those not adopting solar.



Tariff Adjustments: Each jurisdiction adjusted tariff structures to balance DG incentives with grid sustainability, including adjustments to FIT programs and introducing flat fees to cover infrastructure.



Equity Concerns: Both show the importance of equitable rate structures, as non-DG users risk bearing a disproportionate share of grid maintenance costs when DG adoption grows without compensating measures.

Conclusion

- This decision ensures the utility has the resources to maintain the reliable and safe operation of the electricity infrastructure.
- The RA has balanced its mandate to protect consumers while encouraging necessary investments in infrastructure.
- BELCO's original request reduced by approximately \$34 million each year.
- BELCO can achieve a reasonable rate of return on its operations as outlined by the Electricity Act.
- This approach guarantees a sustainable and resilient energy future for Bermuda.