OPALCO Cost-of-Service Analysis and Rate Design – EXEC SUMMARY

OPALCO May Board Meeting

Draft Results (Residential Focus)

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Outline

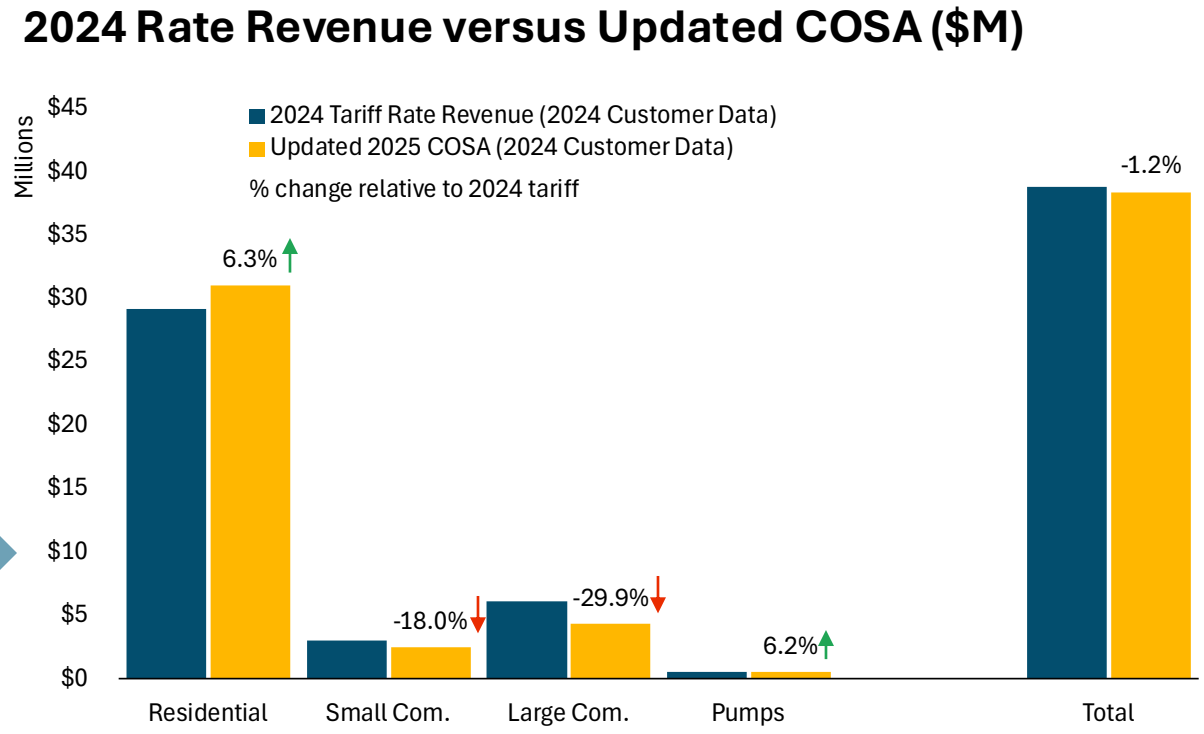
1. Cost Allocation Recap
2. Residential Rate Design Alternatives
3. Residential Bill Impacts
4. Conclusions and Next Steps

The updated COSA class cost allocations deviate from current published tariffs that are based on the prior (2018) COSA

Two key updates in 2025 COSA:

1. Changes to class allocators: residential load up and commercial load down (see below)
2. Changes to COSA methodology for certain cost categories to better align with standard practices

		Customers (#)	Annual Peak (kW)	Annual Sales (MWh)
Residential	Prior COSA (2018 data)	*11,910*	*45,050*	*139,666*
	New COSA (2024 data)	*12,297*	*63,565*	*160,417*
	% Change	***+ 3%***	***+ 41%***	***+ 15%***
Commercial	Prior COSA (2018 data)	*1,594*	*16,984*	*46,306*
	New COSA (2024 data)	*1,541*	*13,681*	*44,655*
	% Change	***- 3%***	***- 19%***	***- 4%***



OPALCO may consider reassigning certain customers. For example, very large residential customers could be assigned to the commercial class or to their own large residential class. We have not directly evaluated this.

Rate Design Context

There are many different potential goals for rate design. This study has focused on specific objectives that are best informed by the embedded cost of service analysis that we performed.

	Current Study	Potential Future Work
Cost of Service Analysis	• **Embedded** Cost of Service Analysis	• **Marginal** Cost of Service Analysis
COSA Description	• Focused on the costs that OPALCO already incurs to serve its customers	• Focused on the costs of expanding system capability to serve additional energy use and peak demand
Rate Design Objectives	• Improve revenue certainty for the utility, e.g., during warm years • Develop rates that better reflect underlying cost drivers and thus more fairly recover system costs	• Encourage load flexibility to reduce forward-looking utility costs, including energy and delivery costs • Compensate customers for value they provide through load flexibility
Rate Elements Considered	• Customer charge • Monthly demand charge • Annual (12-month) demand charge	• Time-of-use rates • Critical peak pricing

The presentation today is focused on residential rates.

Rate Design Options Recap – Today's Focus

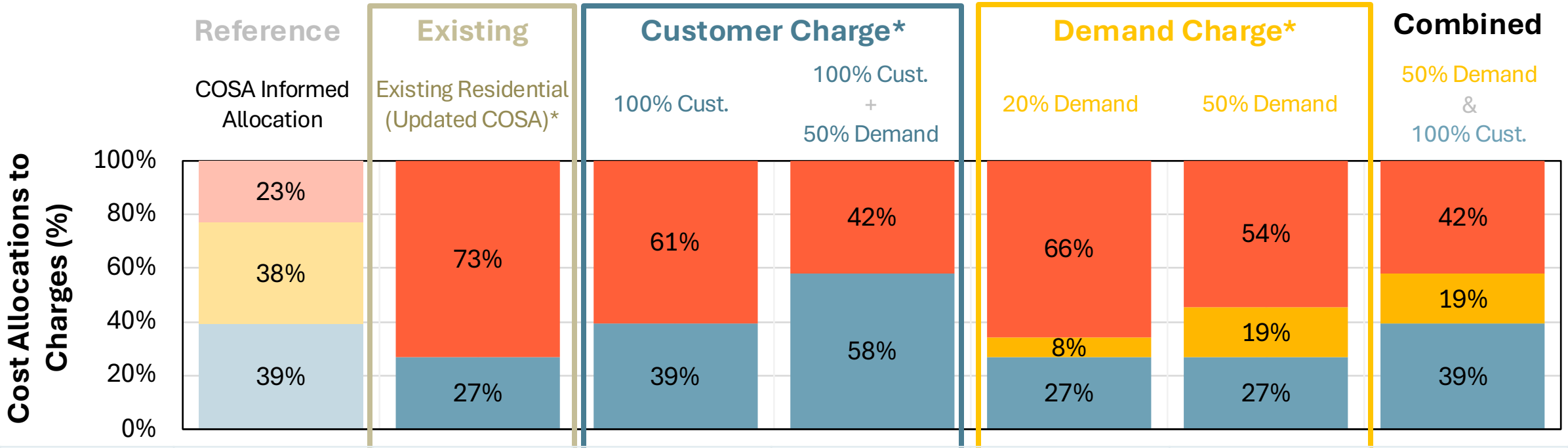
Rate Option		
1.	**Traditional customer charge ($/month):** OPALCO could increase their customer charge to recover additional revenue.	**Focus of today's presentation (residential class)**
2.	**Monthly Non-Coincident Peak Demand Charge ($/kW):** Demand charge based on the customer's highest monthly demand(s)	
3.	**Annual Non-Coincident Peak Demand Charge ($/kW):** Demand charge based on highest demand(s) on a rolling period (e.g., highest monthly NCP from the prior year to date)	
4.	**Declining Block Volumetric Rates ($/kWh):** Utility recovers a higher rate from the first X kWh each month	• Additional data are needed to evaluate this rate; not the highest priority for OPALCO and the Board.
5.	**Size-Based Charge (meter, panel, or service size) ($/month):** Monthly charge on the customer's technical maximum demand	• Little differentiation, as >95% of residential customers have a 200A service. May be valuable for developing customer classes (e.g., large residential).
6.	**Electric Charge Adjuster ($/kWh):** Adjust calculation from power cost adjuster to cover budgeted margin plus unforeseen emergency events	• Ensures that required revenue is collected • Additional data are needed to quantitatively evaluate this option.

Not directly modeled

We have evaluated a range of residential rate design options

Some of these options vary widely from existing rates

Modeled



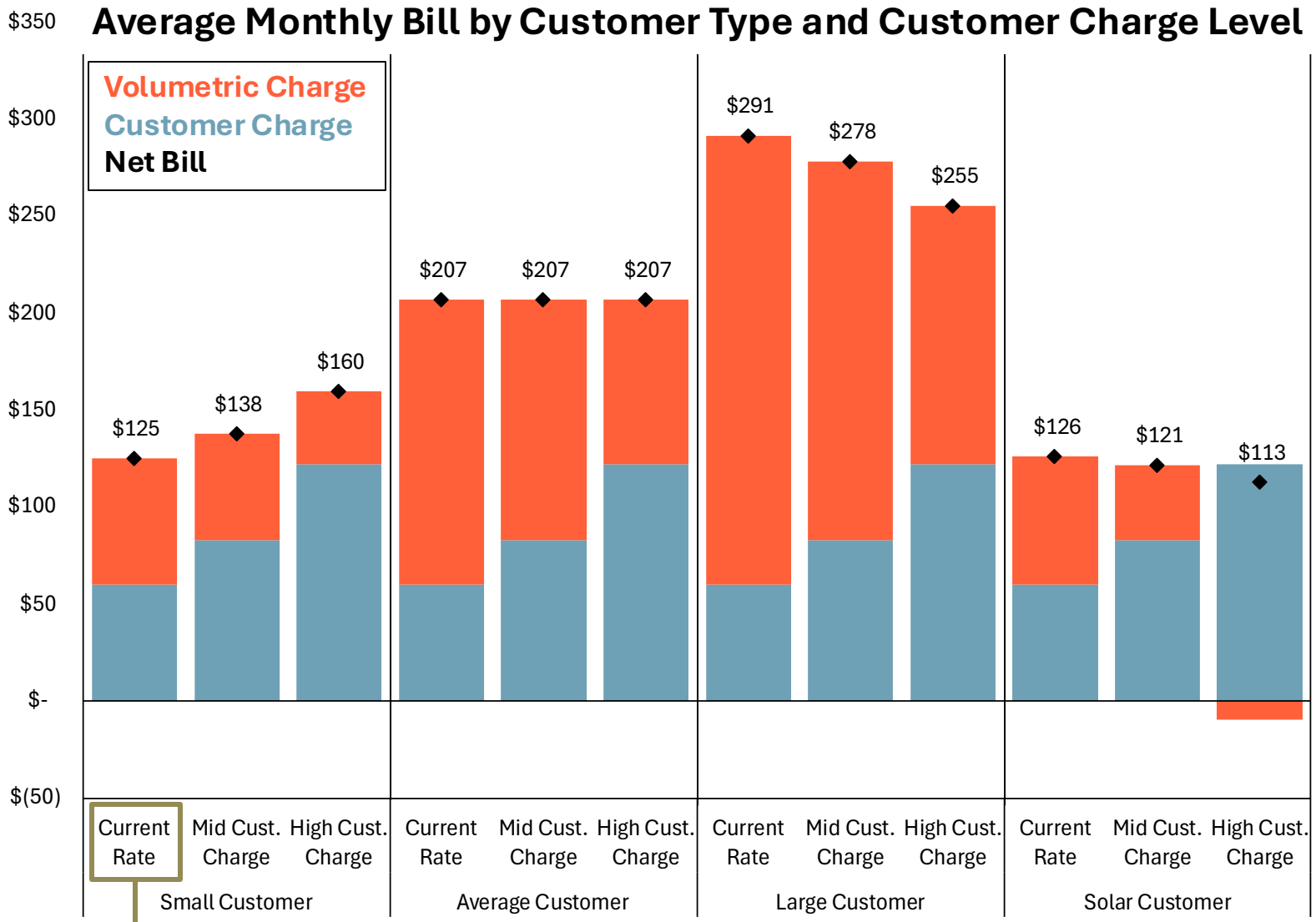
	Reference	Existing	Customer Charge*		Demand Charge*		Combined
	COSA Informed Allocation	Existing Residential (Updated COSA)*	100% Cust.	100% Cust. + 50% Demand	20% Demand	50% Demand	50% Demand & 100% Cust.
Volumetric	$0.04 *per kWh*	$0.13*	$0.11	$0.08	$0.12	$0.10	$0.08
Demand	$10.98 *per kW*	-	-	-	$2.20	$5.49	$5.49
Customer	$82.82 *per month*	$60.02*	$82.82	$122.31	$60.02	$60.02	$82.82

- *Increasing customer charge offsets volumetric charge. Recovering 100% of customer and demand related costs would result in $161.81/mo*
- *The demand charge can be assessed on peak usage monthly or on a rolling basis such as annual. Allocating 100% demand costs to a monthly NCP demand charge would result in a $10.98 / kW demand charge.*

** Existing OPALCO rate design applied to the updated COSA class revenues. Note that the COSA is based on **2024** revenues, and thus 2025 rates under updated COSA allocations would be ~ 6% higher than these numbers.*

Bill Impacts of Increased Customer Charge Designs

	Current Rate	Mid Cust.	High Cust.
Volumetric	$0.13	$0.11	$0.08
Demand	-	-	-
Customer	$60.02	$82.82	$122.31

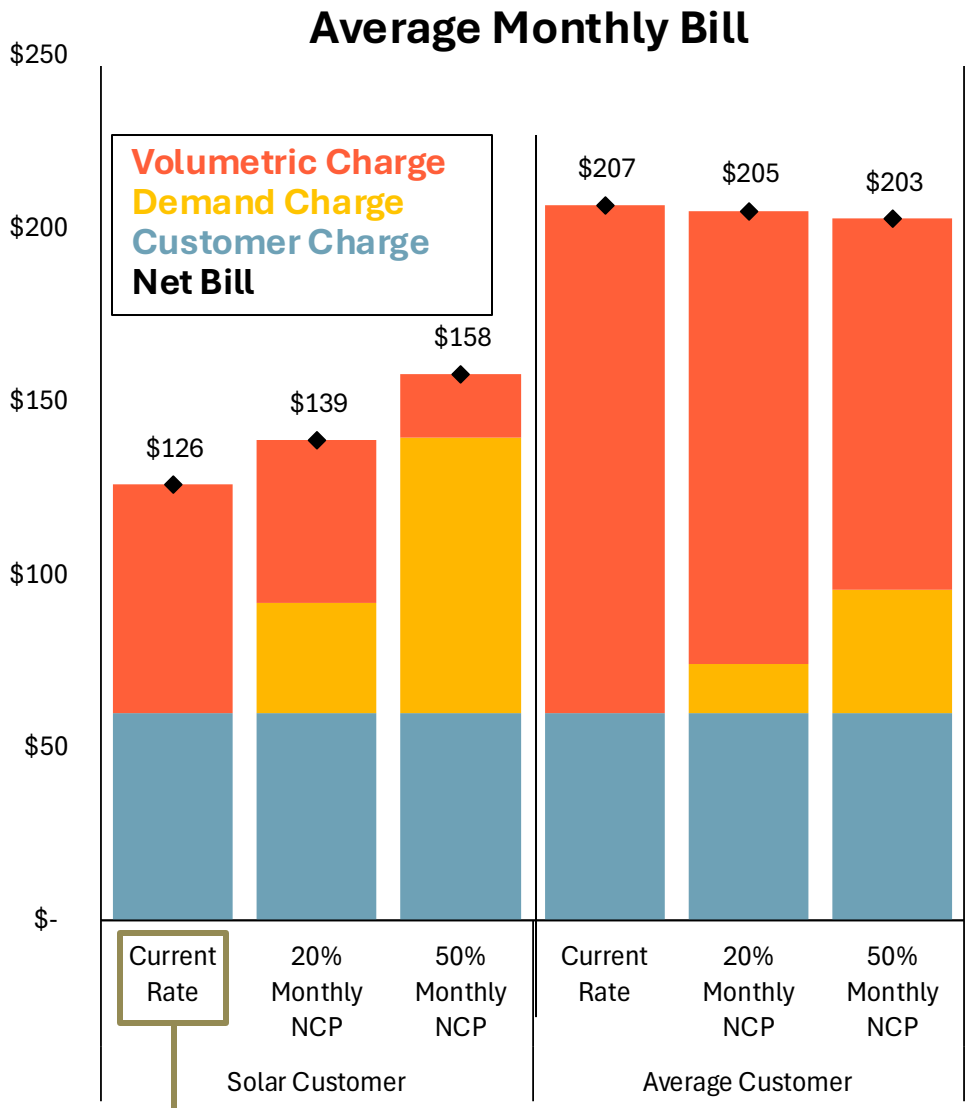


1. **Impact of customer charge is a function of gross energy usage. As the customer charge increases…**
   - A. Small users see increasing bills
   - B. Average customer sees little impact
   - C. Large customers see a bill reduction
2. **Customer charge alone may not be an effective way to recover fixed costs from solar customers**
   - A. Solar customer modeled sees bill reductions due to high gross sales (resembling large customer)
   - B. Reduction to renewable generation credit may be needed in tandem
3. **Increasing the EAP could limit impacts to low-income customers**
   - A. OPALCO's practice is to increase EAP by the amount of the customer charge increase

Current Rate based on updated COSA but existing rate structure

Bill Impacts of Demand Charge

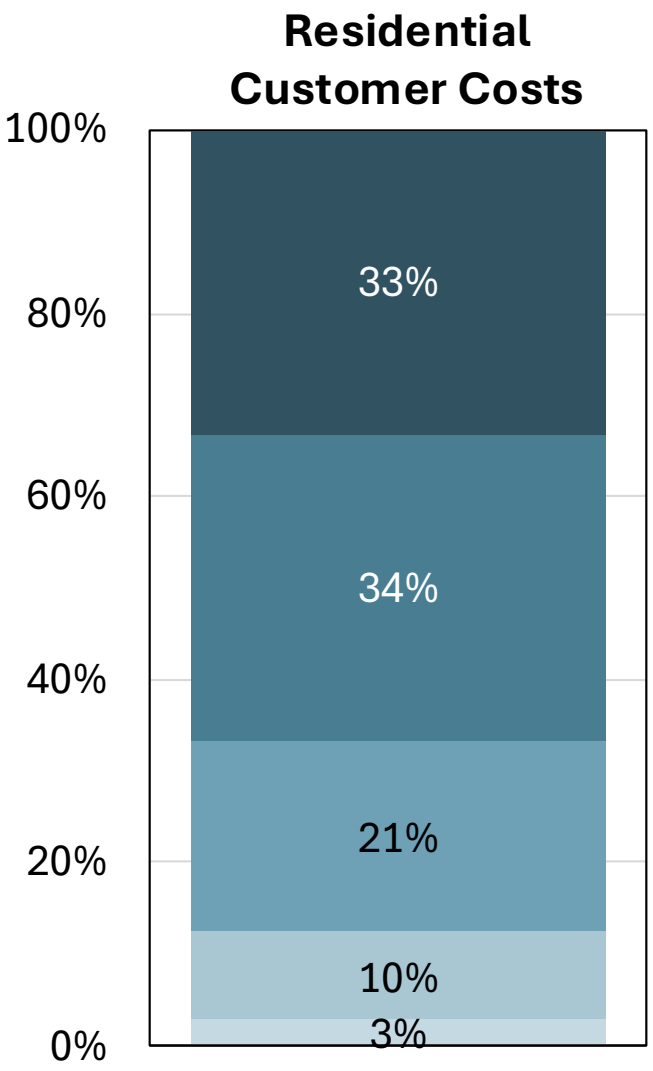
	Current Rate	20% Demand	50% Demand
Volumetric	$0.13	$0.12	$0.10
Demand	-	$2.20	$5.49
Customer	$60.02	$60.02	$60.02



1. **An NCP demand charge is generally not intended to encourage behavioral response, but rather to serve as "non-bypassable" charge to recover demand-driven costs in a way that reflects cost responsibility**
2. **For NCP-driven costs, the demand charge could be assessed as a "bidirectional" charge to capture the impact of solar exports on distribution grid capacity needs**
   A. Bidirectional = greatest of max hourly imports or max hourly exports
   B. Modeled solar customer sees high winter imports and high summer exports, so a high demand charge throughout the year
3. **For other customers, it is more difficult to predict whether a demand charge will cause a bill increase or bill decrease**
   A. Not tied to customer usage, but rather to customer load factor; *i.e.*, how "peaky" is the customer's load
4. **A demand charge could be assessed on an *annual* basis, *i.e.*, based on maximum load over the past 12 months**
   A. This would smooth out month-to-month bill volatility and would significantly increase cost recovery from seasonal customers

Current Rate based on updated COSA but existing rate structure

To improve transparency, the customer charge could be segmented into clear components



Breaking the customer charge into clearly-labeled components would help customers understand the components of the charge and that these components do not vary with electricity usage.

Capital Equipment: *Depreciation, Interest, and Margin*

Operations and Maintenance: *Distribution Operations, Distribution Maintenance*

Taxes, Insurance, Business Expenses: *Taxes, Insurance, Advertising, Pension/Benefits*

Customer Service and Billing: *Customer Service, Customer Accounts and Records*

Administrative: *Administrative Salaries, Forfeited Discounts, Electric Property, etc.*

Key Takeaways and Recommendations

1. **Under the updated 2025 COSA, the allocation of costs to the residential class increases by ~ 6%**
   - This is due to two factors:
     - Changes to class allocators: since 2018, residential load and demand are up; commercial load and demand are down
     - Changes to COSA methodology for certain cost categories to better align with standard practices
   - Standard practice is to adopt cost-based allocations, though OPALCO may choose to update cost allocations gradually
2. **Rate changes can better tie residential rates to the drivers of utility costs, with two key goals in mind:**
   - 1) Improving revenue certainty for the utility
   - 2) More fairly recovering costs from customers
   - Note: encouraging customer response / load flexibility is a valuable area of future study
3. **A demand charge can support these goals while limiting adverse impacts to small energy users**
   - There are many implementation options including monthly vs. annual, as well as options to average over top N hours
   - Implementing a demand charge would require extensive customer education
4. **Increasing the monthly fixed customer charge ($ / month) is another option to help achieve these goals**
   - Residential customers are already familiar with customer charges
   - However, this may require other changes, such as increasing EAP discounts and updating to the solar export rate

Next Steps

+ **Further explore final residential rate changes to adopt**

+ **Develop updated commercial class rates and bills**
  - Evaluate impact of combining small and large commercial classes

+ **Support communication strategies to ensure customer understanding and readiness for new rates**
  - Presentations (e.g., town hall)
  - Engaging web postings
  - On-bill communication