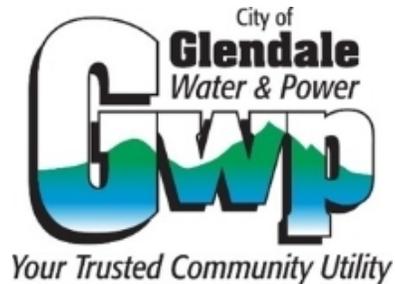


Plan to Increase Solar Adoption and Develop Additional Distributed Energy Resources

November 4, 2024



Eric Cutter, Partner

Objectives

City Council Resolution of August 2022

10% of GWP customer solar and energy storage adoption by 2027

Additional dispatchable and peak load reduction capacity of 100 MW

Category 1



Develop Plan to Increase Solar and Energy Storage Penetration and Develop Additional Distributed Energy Resources (DERs)

Category 2



Dispatchable Capacity and Demand Reduction Calculation

Category 3



Cost-Benefit Analysis

The Results of Economic Analysis of Scenarios: Cost Test Scores

**Participant
Cost Test**

**Societal Cost
Test**

**Ratepayer
Impact
Measure**

S1
Continue Current NEM

3.04

1.87

0.28

S2
Targeted LMI/MF
Adoption

2.16

2.09

0.45

S3
Balanced

2.25

2.11

0.39

S4
High Adoption

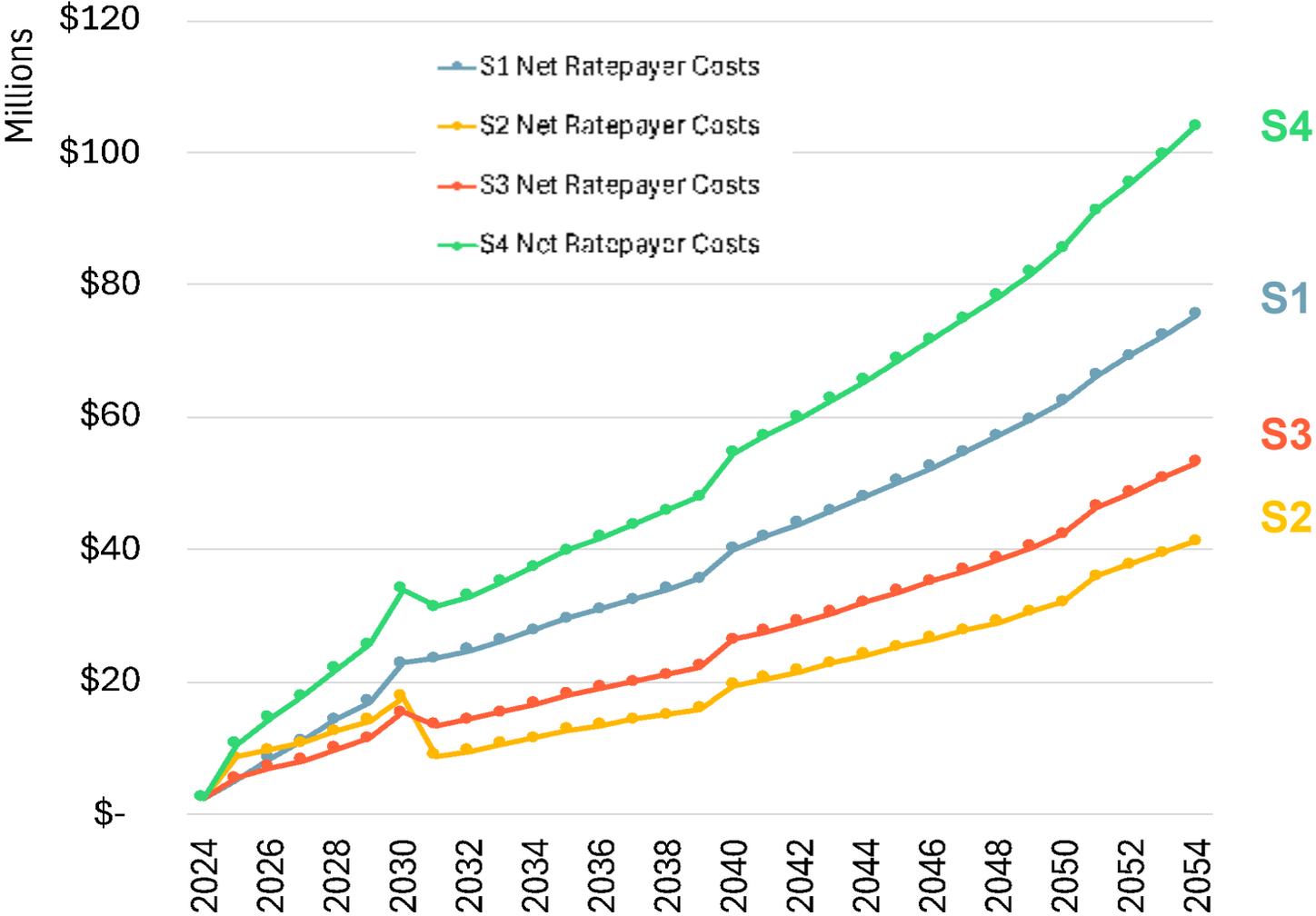
3.04

2.17

0.29

Annual Net Ratepayer Costs

➤ All scenarios have annual net ratepayer costs that increase GWP rates due to accelerating DER adoption



Findings: Achieving the adoption goals by 2027 is not feasible



Achieving a goal of 10% customer solar adoption by 2027 is not feasible. The goal is theoretically feasible by 2030 with a significant increase in utility costs and effort, but real-world barriers remain.



Achieving a goal of 10% customer storage adoption in the near future is not feasible.



Achieving a goal of 100 MW of reliable peak load reduction with DERs is not feasible.



Industry studies suggest that achievable potential is 20%-40% of the technical potential.

Recommendations

- Set an adoption goal in terms of MW of installed capacity rather than a percentage of customers.
- Perform additional analyses of realistically achievable potentials for customer-owned, community, and utility-scale solar and storage.
- Develop an integrated resource plan with the potential and MW targets for each resource type.

Findings: Adoption of customer-owned solar and storage increases GWP rates



The scenarios achieving 10% solar adoption would result in a projected net cost of \$23-\$45 million to GWP ratepayers from 2024 to 2027.



The resulting rate increase would be 6-11% by 2030, with a low- and moderate-income (LMI) customer monthly bill increase of \$4-\$6.

Recommendations

- Implement a Net Billing Tariff to reduce the cost shift.
- Develop and implement non-bypassable charges and fixed customer charges to reduce the cost shift.
- Evaluate the cost and feasibility of changes to GWP's billing and metering systems needed to implement a Net Billing Tariff.

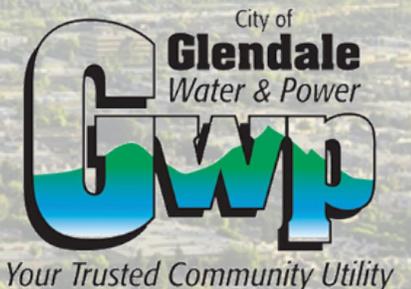


Plan to Increase Solar Adoption and Develop Additional Distributed Energy Resources: Findings, Recommendations and Next Steps

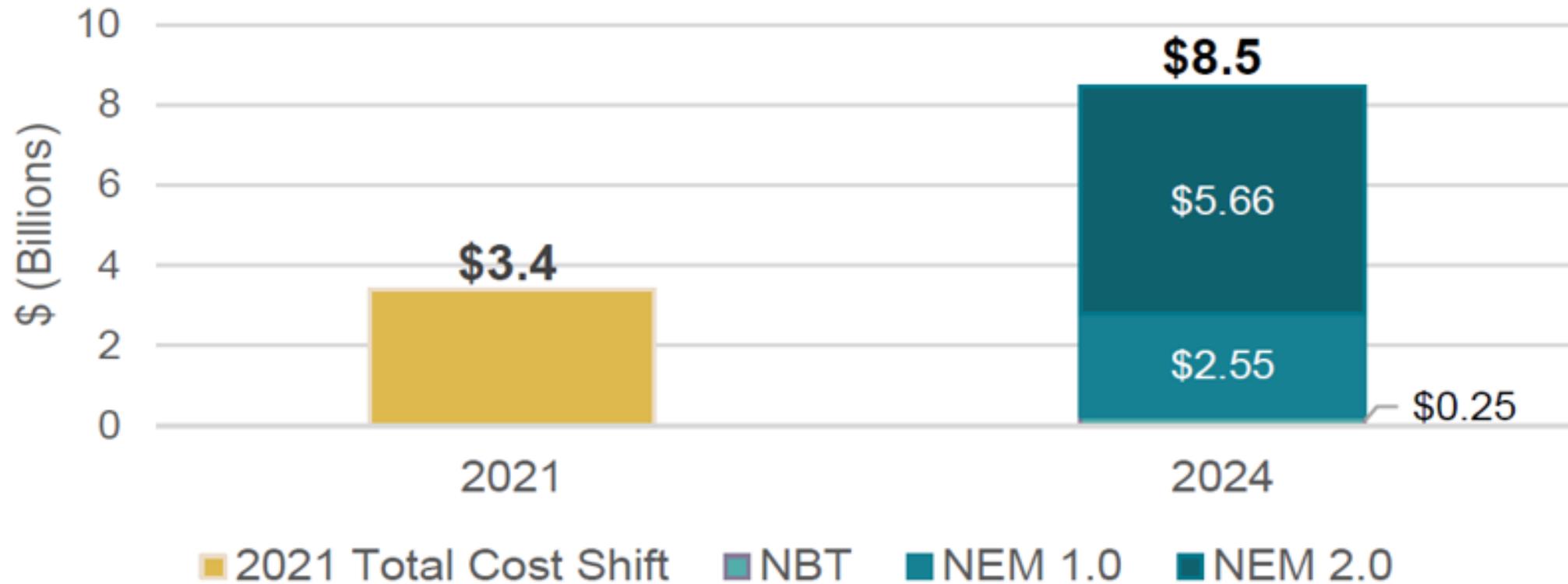
Glendale Water & Power Commission

November 4, 2024

Ruzan Soloyan – Clean Energy Officer
City of Glendale Water & Power



Net Energy Metering Cost Shift Continues to Grow



Source: California's Public Advocates Office report titled "Rooftop Solar Incentive to Cost Customers Without Solar an Estimated \$8.5 Billion by the End of 2024."

<https://www.publicadvocates.cpuc.ca.gov/-/media/cal-advocates-website/files/press-room/reports-and-analyses/240822-public-advocates-office-2024-nem-cost-shift-fact-sheet.pdf>



Proposed Programs



1. In-System Solar Power Purchase Agreement (PPA) Program
 - Proposed launch in November 2025
 - Guarantee long-term rate and better understanding of ROI
 - Looking at providing location-specific incentives for using underutilized space



2. Comprehensive Residential Energy Efficiency Rebate Program
 - Proposed launch in August 2025
 - Offer more rebates for energy efficiency measures to support the adoption of distributed energy resources.
 - Lower upfront costs could help customers adopt above-code technology.



3. Comprehensive Energy & Water Assessments, Installations & Concierge Services
 - Proposed launch in January 2026
 - Offer comprehensive energy & water assessments & direct installations
 - Provide concierge services to identify additional incentives and tax credits

Solar Adoption Projections in Glendale by 2030

Customer Class	Number of Connections	Current Generation Capacity (MW)	Projected Generation Capacity (MW) by 2030
Residential Single Family	24,234	18.1	35
Non-Residential	9,869	11.2	15
Total Customer Owned Solar	87,281	29.3	50
Utility Owned Solar (Phase 1 & 2)	-	0	8*
Power Purchase Agreements	-	0	2*
Total Solar Capacity	-	29.3	~ 60**
Additional Achievable Energy Efficiency Savings on Peak (Proposed Programs)	-	-	Additional analysis pending for proposed EE programs

* In Progress

** 15% of Forecasted (380 MW) Total Peak Demand



Recommendations

1. **Accept the E3 Study Findings:** Staff recommends that the GWP Commission endorse the E3 study findings on GWP's Plan to Increase Solar Adoption and Develop Additional Distributed Resources for Council approval, as they reveal significant ratepayer impacts that deem the analyzed initiatives not feasible.
2. **Amend Resolution No. 22-125:** Staff recommends that the GWP Commission endorse the amendment to Resolution No. 22-125 for Council approval, which includes:
 - I. Removing the target of achieving a minimum total peak dispatchable and peak-load-reducing capacity of 100 MW and GWP customer adoption target of 10% by December 31, 2027, and revising these to 60 MW of solar generating capacity by 2030 to mitigate feasibility concerns and potential rate increases.
 - II. Approving the development of three proposed programs to enhance energy efficiency and reduce peak demand:
 - i. In-System Solar Power Purchase Agreement (PPA) Program
 - ii. Comprehensive Residential Energy Efficiency Rebate Program
 - iii. Comprehensive Energy and Water Assessments, Installations, and Concierge Services





Questions?

