



CITY OF GLENDALE, CALIFORNIA REPORT TO THE CITY COUNCIL

AGENDA ITEM

Report: Plan to Increase Glendale Water and Power (GWP) Customer Solar Adoption and Develop Additional Distributed Energy Resources.

1. Motion accepting the findings of the Energy and Environmental Economics, Inc. (E3) study on GWP's Plan to Increase Solar Adoption and Develop Additional Distributed Energy Resources, as outlined in the Final Report: Plan to Increase Solar Adoption and Develop Additional Distributed Resources.
2. Resolution amending Resolution No. 22-125 to revise the target of achieving a minimum total peak dispatchable and peak-load-reducing capacity of 100 MW by December 31, 2027 to a target of achieving 60 MW of solar generating capacity by 2030, and approving the development of programs to enhance energy efficiency and reduce peak demand.
3. Motion amending the City's existing Professional Services Agreement (PSA), Contract No. 8002375, with E3, to increase the amount by \$52,330 for additional completed work and to authorize the corresponding encumbrance.

COUNCIL ACTION

Item Type: Action Item

Approved for November 19, 2024 **calendar**

EXECUTIVE SUMMARY

On November 15, 2022, the City Council adopted a Motion authorizing the General Manager of GWP to issue a Request for Proposals (RFP) seeking consulting firms to assist in developing a plan to increase solar penetration and develop additional Distributed Energy Resources (DER). Following a competitive selection process, E3 was selected to conduct an analysis aimed at achieving at least 10% solar and energy storage adoption among GWP customers, estimating dispatchable capacity, performing cost-benefit analyses, and developing a plan to meet these goals.

The E3 analysis assessed various solar and energy storage program scenarios for feasibility, equity, and costs. The findings concluded negative ratepayer impacts across all scenarios, indicating that the original goals set forth in Resolution No. 22-125 (a copy of which is attached to this Report as Exhibit 1), requiring at least 10% of GWP customers adopt solar and energy storage systems, and to develop additional demand management measures, with a minimum total peak dispatchable and peak-load-

reducing capacity of 100 MW, are not feasible.

Given these study findings, staff recommends amending Resolution No. 22-125 to ensure GWP can continue its progress toward a clean energy portfolio while maintaining affordability for customers.

To address these challenges, staff proposes immediate program initiatives aimed at mitigating these negative impacts and supporting the City Council's intent of Increasing Solar Adoption and Developing Additional DER (Plan). This Plan outlines three programs to enhance energy efficiency and reduce peak demand in alignment with GWP's clean energy objectives, and staff recommends proceeding with designing and implementing these programs.

To meet Council's request for additional community engagement and cover related E3 travel expenses, and to develop customized GWP avoided costs analysis, the project encountered budget overruns totaling \$52,330. With Council's approval to amend the PSA with E3, the additional \$52,330 for this completed work will increase the total amount of the current PSA from \$335,875 to \$388,205.

RECOMMENDATION

Staff recommends that the City Council:

1. Accept the findings of the E3 study to inform GWP's strategic direction.
2. Amend Resolution No. 22-125 to revise the solar energy goals, ensure continued affordability and reliability of energy services for the Glendale community, and approve the development of three proposed programs to enhance energy efficiency and reduce peak demand:
 - In-System Solar Power Purchase Agreement (PPA) Program
 - Comprehensive Residential Energy Efficiency Rebate Program
 - Comprehensive Energy and Water Assessments, Installations, and Concierge Services
3. Approve the amendment to the existing PSA with E3 to increase the total amount by \$52,330, to a new total not to exceed amount of \$388,205.

ANALYSIS

On August 16, 2022, the City Council adopted Resolution No. 22-125, which among other things, declared the City of Glendale's intent to adopt policies and practices designed to reach a goal of having at least 10% of GWP customers adopt solar and energy storage systems by 2027, and develop additional demand management measures, with a minimum total peak dispatchable and peak-load-reducing capacity of 100 MW. To support these goals, City Council directed staff to issue an RFP for consulting services.

On December 8, 2022, GWP issued an RFP and based on the results of a competitive selection process selected E3 to provide the following services:

Category 1: Develop a plan to achieve the goal of having at least 10% of GWP

customers adopt solar and energy storage systems by 2027, and to develop additional demand management measures, with a minimum total peak dispatchable and peak-load-reducing capacity of 100 MW.

Category 2: Calculate the estimated dispatchable capacity and demand reduction that can be achieved through the plan developed in Category 1.

Category 3: Complete a cost benefit analysis including direct and indirect economic benefits and costs, as well as environmental, societal, and other noneconomic benefits and costs, and direct and indirect impacts to low- and moderate-income households. If the analysis concludes any negative impacts on low-and-moderate-income households, include program options to mitigate the impact.

As part of the analysis, E3 identified market segments and assessed the potential for solar and storage adoption, and developed hypothetical program designs and incentive options. Additionally, E3 evaluated and summarized the dispatchable capacity and peak load reduction potential by examining program adoption potential and impacts, and reviewing the GWP Integrated Resource Plan (IRP). E3 also conducted a cost-benefit analysis, which included developing GWP custom avoided costs.

The E3 study concluded that achieving the original goals by the specified percentages and timelines is not feasible without imposing significant financial burden on the community, especially for low- and moderate- income households. Therefore, revising these targets will allow GWP to continue progressing towards clean energy while ensuring affordability.

The E3 report summarizes findings across the three categories, highlighting the financial impacts. The E3 findings concluded that:

1. 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.
2. Achieving a goal of 10% customer storage adoption in the near future is not feasible.
3. Achieving a goal of 100 MW of reliable peak load reduction with DERs is not feasible.

The cost-benefit analysis evaluated the participant cost test (PCT), societal cost test (SCT), and ratepayer impact measure (RIM). The RIM score indicated that program costs outweigh benefits, resulting in a negative ratepayer impact for all GWP ratepayers. While both the PCT and SCT scored positively, indicating bill savings for participants and significant societal benefits over the system lifetime, it is important to note that these costs would ultimately be absorbed by GWP ratepayers. The societal benefits, such as reduced emissions, are achieved by shifting costs onto GWP customers. Although participants benefit from bill savings and incentives, the RIM score emphasized that these scenarios may not be sustainable for the broader customer

base, meaning the financial burden will disproportionately affect all ratepayers. As a customer owned utility, GWP needs to find other solutions that equitably distribute benefits across all customers.

Since the E3 study revealed significant challenges and projected substantial increases in utility costs which would result in additional rate increases and cost shifts to low- and moderate-income customers, staff recommends revising the goals established in the original Resolution No. 22-125 to ensure that GWP can meet its clean energy objectives without imposing additional undue financial burden on its ratepayers. Specifically, the amended resolution would revise the target of achieving 10% customer adoption of solar and energy storage by 2027 to a combined target of 60 MW of customer-owned, in-system PPA, and City-owned solar adoption by 2030. Below is a summary table of the current and projected solar generation capacities in Glendale.

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
Phase 1 & 2 Utility Owned Solar	-	0	8*
Power Purchase Agreements	-	0	2*
Total Solar Capacity	-	29.3	~ 60**

* In Progress

** 15% of Forecasted (380 MW) Total Peak Demand in 2030

With respect to the resolution language referencing 10% customer adoption of energy storage and to achieving a minimum total peak dispatchable and peak-load-reducing capacity of 100 MW by December 31, 2027, we recommend amending the resolution removing said language aligned with E3's findings deeming them infeasible. The Community's current progressive project deploying 75 MW/300 MWh of utility-scale energy storage will collect any excess system and solar energy and redeploy it during peak periods starting in the Summer of 2026. This project is already funded, will serve the whole of the Glendale community, and represents a capacity greater than 20% of Glendale's highest peak-load day.

Given the analysis and findings, staff explored program options to increase DER adoption in the City. Staff seeks City Council acceptance of the E3 report, after which new programs will be developed that would require separate and additional approval by the City Council at the appropriate time.

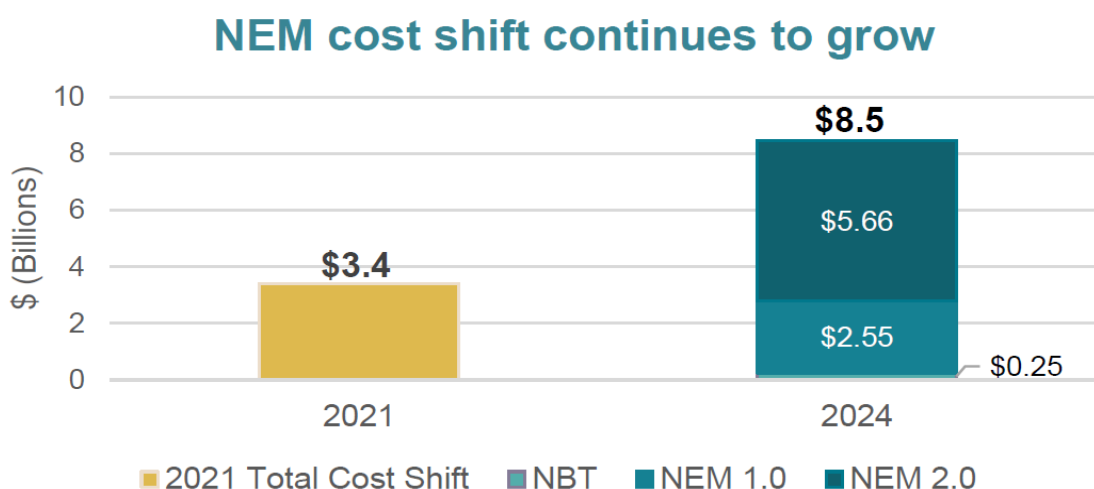
Recognizing the importance of understanding community sentiment and priorities, E3 and GWP conducted a community survey as part of the community outreach that gathered over 2,000 responses. Affordability emerged as the top priority, alongside concerns about potential rate increases. The insights gained from this survey will guide

the design and implementation of customer programs to meet the needs of the community while seeking alignment with the City Council's goals.

To achieve the objectives of enhanced demand management, GWP plans to promote increased DER adoption, and grid reliability while ensuring affordability. GWP is committed to facilitating the adoption of solar, storage, and other DER technologies through effectively managing cost shifts and making the transition affordable for all customers, ultimately fostering a cleaner and more sustainable future for Glendale.

The E3 study revealed that transitioning to a net billing tariff (NBT) or net energy metering (NEM) 3.0 is necessary for better managing cost shifts associated with the integration of DER technologies. NBT would allow for a more equitable allocation of costs among all customers. In contrast, the current NEM programs, such as NEM 1.0 and NEM 2.0, overcompensate for the benefits provided and fail to reflect the true costs of solar and storage. In general, this misalignment contributes significantly to rates increases throughout the state, placing an undue burden on non-solar customers, such as renters and lower-income households, and could hinder the state's electrification efforts if not addressed.

Recent finding from the Public Advocates Office estimate that NEM will cost customers without solar an estimated \$8.5 billion by the end of 2024, a figure that has more than doubled since 2021.

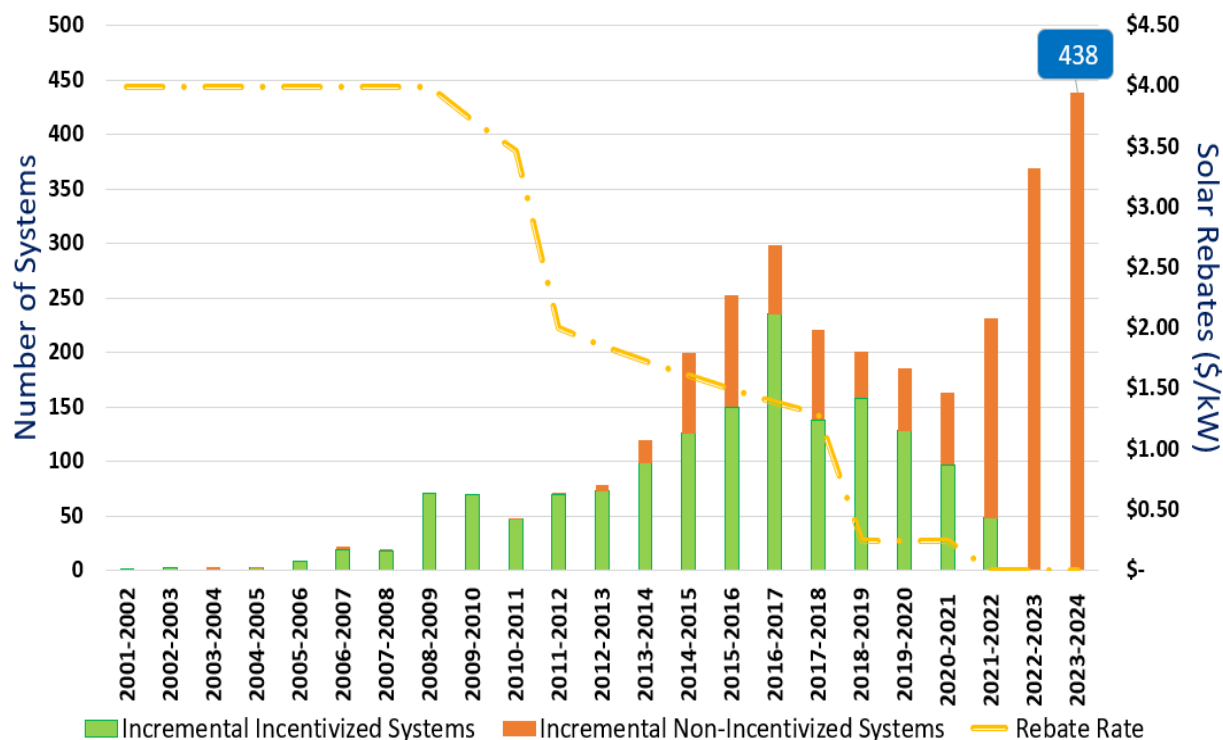


Graph sourced from California's Public Advocates Office report titled "Rooftop Solar Incentive to Cost Customers Without Solar an Estimated \$8.5 Billion by the End of 2024." Available at:

<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>

However, GWP recognizes the Council's desire to increase solar penetration and is not yet prepared to transition to an NBT. GWP needs to further evaluate the implications and ensure that our infrastructure and customer support systems are equipped to handle this change effectively. Therefore, GWP will continue to support NEM 1.0 for customer owned solar as it is presently represented in Glendale. GWP will continue to promote solar technology adoption as staff works toward a more effective solution for

managing existing cost shifts in the future. In the meantime, as indicated in the graph below, the current NEM 1.0 program continues to grow even without incentives.



To support increased DER adoption, staff have identified and seeks City Council approval to design and implement the three programs below that will facilitate effective energy demand management in support of our clean energy future:

- In-System Solar Power Purchase Agreement (PPA) Program
 - Proposed Launch: November 2025
 - Overview: This program aims to guarantee long-term rates and enhance understanding of return on investment (ROI). It will also explore providing location-specific incentives for utilization of underutilized spaces.
- Comprehensive Residential Energy Efficiency Rebate Program
 - Proposed Launch: August 2025
 - Overview: This program will offer increased incentives for energy efficiency measures to support the adoption of more DER. Lower upfront costs will help customers adopt more above-code technology.
- Comprehensive Energy and Water Assessments, Installations and Concierge Services
 - Proposed Launch: January 2026
 - Overview: This program will provide comprehensive energy and water assessments, direct installation of measures, and concierge services to help customers identify additional local, state, and federal incentives for additional home energy and water upgrades.

Projected solar adoption in Glendale by 2030, considering current customer adoption trends, the proposed In-System PPA Program, and the planned Utility Owned Solar Program is projected to be around 60 MW. This represents around 15% of the forecasted total peak demand for 2030 and is double the current solar generation capacity.

With City Council approval, staff will proceed with the design of the proposed programs, conducting further analysis to identify cost-effective energy and water efficiency measures, and to quantify additional achievable energy efficiency savings for these proposed programs.

To meet Council's request for additional community engagement and cover related E3 travel expenses, and to develop customized GWP avoided costs analysis, the project encountered budget overruns totaling \$52,330. The additional \$52,330 for this completed work increased the total amount of the original PSA from \$335,875 to \$388,205.

A significant factor in this increase was the additional effort E3 dedicated to community meetings. In response to City Council's request during the contractual phase, from the total budget of \$97,080 allocated to community outreach and engagement, \$79,500 was used toward Dakota Communications' staff and marketing materials to ensure effective community outreach and engagement. That left only \$17,580 for E3 and Willdan staff. Dakota communications oversaw community engagement and managed the logistics for five community meetings. This included creating, designing, and implementing all marketing materials, translating documentation into multiple languages, and conducting outreach through various communication channels.

Each community meeting required 40-50 hours of work from the E3 and Willdan teams, involving the development and refinement of presentation materials, incorporating feedback from GWP, and polishing final presentations. Specifically, enhanced outreach efforts included additional time spent preparing for the initial three meetings, including creating breakout room discussions with four posters. For the fourth and fifth meetings, E3 focused on developing a new set of slides based on feedback from the initial community meetings, ensuring they were clear, engaging and informative. This increased effort resulted in an additional budget extension of \$33,330 to cover the additional time and resources dedicated to community meetings and engagement. The additional community meetings also increased travel costs by \$3,000.

Additionally, the rejection of the original Integrated Resource Plan increased the workload and complexity of developing GWP avoided costs, resulting in an additional \$16,000 for the necessary adjustments and updates to the study.

Glendale Water & Power Commission Recommendation:

A summary of the E3 Report was presented to the GWP Commission on October 7, 2024 for their initial discussion and consideration so that they could make their

recommendation to the City Council. Out of consideration for the Commission’s desire to review and digest the full draft report, it was made available for public review on October 17, 2024 via the project website. Notifications were provided to each Commissioner about the posting including the related link, as well as provided to interested community members associated with the Glendale Environmental Coalition. At the following GWP Commission meeting held on November 4, 2024, in full consideration of the additional time and discussion the Commissioners had to review the E3 Report and GWP staff’s recommendations, the GWP Commission recommended that the City Council accept staff’s recommendations outlined in this Report. The GWP Commission Motion capturing the details of this recommendation on November 4, 2024 is attached as Exhibit 3.

STAKEHOLDERS/OUTREACH

Not applicable.

FISCAL IMPACT

The extra cost for E3’s additional work can be absorbed within the approved budget for fiscal year 2024, as there are unspent funds available to offset this expense. The current PSA with E3 is for a total amount not to exceed \$335,875. Amending the PSA to include an additional \$52,330 for additional completed work will increase the total amount to \$388,205.

The proposed Comprehensive Residential Energy Efficiency Rebate Program and the proposed Comprehensive Energy and Water Assessments, Installations and Concierge Services Program will be designed to achieve a zero net impact on the budget by reallocating and optimizing various programs within the existing Public Benefit Charge-funded programs portfolio.

Existing Appropriation		
Amount	Account String	Funding Source
\$52,330	GL: 43110-5820-GWP-4520	Electric Works Revenue Fund

ENVIRONMENTAL REVIEW (CEQA/NEPA)

The action herein is not a project for the purposes of the California Environmental Quality Act (CEQA) and as such CEQA is not applicable.

CAMPAIGN DISCLOSURE

The names and business addresses of the members of the board of directors, the chairperson, CEO, COO, CFO, Subcontractors and any person or entity with more than 10% interest in the company proposed for contract in this Agenda Item Report are attached in Exhibit 4, in accordance with the City Campaign Finance Ordinance No. 5744.

ALTERNATIVES TO STAFF RECOMMENDATION

Alternative 1: Choose not to accept the findings of the E3 study, not to approve the development of the three proposed programs, not to amend the original Resolution No. 22-125 and/or not to approve the PSA amendment request of \$52,330.

Alternative 2: Consider any other alternative not proposed by staff.

ADMINISTRATIVE ACTION

Submitted by:

Manuel Robledo, Interim General Manager - Glendale Water and Power

Prepared by:

Scott K. Mellon, Assistant General Manager - Power Management
Ruzan Soloyan, Clean Energy Officer

Approved by:

Roubik R. Golanian, P.E., City Manager

EXHIBITS/ATTACHMENTS

Exhibit 1: Resolution No. 22-125

Exhibit 2: E3 Study Report: Plan to Increase Solar Adoption and Develop Additional Distributed Resources

Exhibit 3: Glendale Water & Power Commission Motion

Exhibit 4: Campaign Finance Disclosure for E3