



**CITY OF GLENDALE, CALIFORNIA
REPORT TO THE CITY COUNCIL**

AGENDA ITEM

Report: Glendale Water & Power (GWP) Clean Energy Programs

1. Motion authorizing the City Manager, or her designee, to execute an Agreement with Franklin Energy Services LLC for a four-year Commercial and Residential Electric Demand Response Program in an amount not to exceed \$7,494,995 and an online marketplace in an amount not to exceed \$163,368, for a total agreement amount not to exceed \$7,658,363.
2. Motion authorizing the City Manager, or her designee, to execute an Agreement with Lime Energy Services Company for a seven-year Commercial Direct Install Energy Efficiency Program in a total amount not to exceed \$18,900,000.
3. Motion authorizing the City Manager, or her designee, to negotiate contracts with Sunrun, Inc. or its affiliate for a residential Virtual Power Plant for a term of up to 25 years.
4. Motion authorizing an Amendment in the amount of \$150,000 to Professional Services Agreement No. 8000586 with NewGen Strategies & Solutions, LLC to perform a cost of service analysis and develop an electric rate plan for said programs, and review GWP's distributed energy rates.
5. Resolution of Appropriation
6. Motion providing direction to staff.

COUNCIL ACTION

Item Type: Action Item

Approved for October 13, 2020 **calendar**

ADMINISTRATIVE ACTION

Submitted by:

Stephen M. Zurn, General Manager Glendale Water and Power

Prepared by:

Mark Young, Deputy General Manager/Power Management - GWP

Craig Kuennen, Deputy General Manager/Business Operations - GWP

Reviewed by:

Michele Flynn, Director of Finance

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

Michael J. Garcia, City Attorney

Approved by:

Yasmin K. Beers, City Manager

RECOMMENDATION

Glendale Water & Power (GWP) staff presents the following Clean Energy Programs and contracts for the City Council's consideration:

- 1) A four-year residential and commercial Demand Response program and "Smart Thermostat" program with Franklin Energy Services LLC with an online marketplace. This program would deliver up to 10 megawatts (MW) of reductions in energy demand during demand response events on up to 15 peak energy days a year. The not to exceed contract amount would be \$7,658,363. Total program cost, including contract, internal labor, and marketing is estimated at \$7,822,740.
- 2) A seven-year Commercial Direct Install Energy Efficiency Program with Lime Energy Services Company. This Program would deliver up to 8.3 (MW) and 35,000 kilowatt-hours of energy efficiency improvements in commercial buildings over the course of seven years with an expected average 12.5-year life for the installed energy efficiency measures. The not to exceed contract amount would be \$18,900,000. Total program cost, including contract, internal labor, and marketing is estimated at \$19,111,253.
- 3) A single family residential and multi-family housing Virtual Power Plant Program with Sunrun, Inc. or its affiliate. This program would deliver an average 28 MW of solar and 25.25 MW/50.50MWh of battery storage each year over the 25-year life of the program. Based upon the current offer, the not to exceed contract cost would be \$223,428,068 million. Total program cost, including contract, customer payments, internal labor, and marketing is estimated at \$243,030,227 million.
- 4) An amendment to Contract No. 8000586 with NewGen Strategies & Solutions LLC. to increase the contract by an amount not to exceed \$150,000 to perform a cost of service analysis and develop an electric rate plan for said programs, and review GWP's distributed energy rates.

BACKGROUND/ANALYSIS

On April 10, 2018, the City Council directed GWP to seek clean energy alternatives to a proposed 262 MW repowering of the Grayson Power Plant. On May 4, 2018, GWP issued a "Request for Proposals for Local and Regional Renewable, Low-Carbon, and Zero Carbon Resource Options to Serve the City of Glendale" (the Clean Energy RFP). The Clean Energy RFP placed no restrictions on the types of projects, processes, or methodologies that could be proposed. GWP sought solutions that would enable the utility to integrate the maximum amount of renewable, zero-carbon and/or low-carbon energy and minimize the amount of fossil fuel generation in GWP's portfolio. The RFP was open to any technology type, and allowed for clean energy proposals as small as 1 MW in size.

On August 3, 2018, thirty-four firms submitted proposals in response to the Clean Energy RFP. A City evaluation team undertook a comprehensive evaluation of each of the proposals, taking into account compliance with the RFP's criteria; the Proposers' experience and expertise to deliver the project; environmental performance with respect to impact on renewable portfolio standard, air quality and other environmental attributes;

administrative burden and contract terms; the projects' ability to supply reliable energy and capacity, and cost effectiveness, including value attributed to system reliability and deferred or avoided system infrastructure costs.

After the evaluations, interviews and further vetting of top-ranking firms, Ascend Analytics, the City's consultant undertook an in-depth modeling of the top ranked proposals using its PowerSimm Production Cost Modeling Assessment. This modeling process identified the net benefit for individual bids, and also combined and tested various combinations of proposed projects to identify an optimal portfolio for GWP customers.

On July 23, 2019, the Glendale City Council approved an Integrated Resource Plan and authorized GWP to negotiate with short-listed proposers for the supply of clean energy resources to assist the City of Glendale in meeting its power supply needs. The proposed clean energy resources are part of a proposed energy portfolio that would include a Battery Energy Storage System (BESS) at the Grayson Energy Center; up to five Internal Combustion Engines at the Grayson Energy Center to replace Grayson Units 1-8, the continued use of Grayson Unit 9, GWP's existing transmission, and GWP's remote generation resources, new imported renewable resources, and clean energy including distributed energy resources and load reduction.

In accordance with the City Council's direction, GWP staff has engaged in comprehensive negotiations and planning meetings with Franklin Energy Services LLC, Lime Energy Services Company and Sunrun, Inc. to develop Clean Energy Programs for the City of Glendale. The scope of GWP and City Staff's negotiations with the Clean Energy vendors has been comprehensive. Discussions have included contractual terms, permitting and interconnection processes, information-technology, data and cybersecurity, operational protocols, energy dispatch and communications, metering and engineering issues, marketing, billing, and regulatory and legal issues, customer safety, COVID-19 implications, and environmental compliance. Additionally, as part of GWP's routine process, GWP undertook credit review of each of the proposed clean energy firms through the GWP Risk Management/ credit review consultant, ACES Power Management. This report presents each of the proposed Clean Energy Programs for the City Council's consideration.

1. Franklin Energy Demand Response Program

Franklin Energy Services LLC has proposed a four-year Commercial and Residential Demand Response and "Smart Thermostat" program with an online store that would deliver up to 10 MW of demand response capacity to GWP by the fourth program year. Total program cost, including contract, internal labor, and marketing is estimated at \$7,822,740. The Franklin Energy Services LLC contract amount is \$7,658,363 and includes \$6,813,632 for 10MW of Demand Response, a contingency of \$681,363, for an additional 1 MW of Demand Response that may be provided in the City's discretion, and \$163,368 for the online store, where customers may purchase smart thermostats with the GWP rebate and energy efficient products.

"Demand Response" refers to a reduction in customer energy demand during periods of high energy demand. For example, during a heat wave, when GWP is experiencing

energy shortages, GWP may call a “demand response” event. Participating customers will be called upon to reduce their energy usage during the time period of the demand response event by increasing the temperature setting on their thermostats or otherwise reducing energy usage. Customers will receive pre-event notifications prior to actual Demand Response event and receive an “event complete” text notification. The reductions in energy usage can be implemented manually (i.e., the customer takes the action to change their thermostat setting) or automated (i.e., the thermostat setting is automatically reset via load control software managed by Franklin Energy through its subcontractor, Autogrid Systems, Inc.).

The objective of the Franklin Demand Response Program is to deliver up to 10 MW of energy reduction to GWP during demand response events by the fourth year of the program. GWP estimates that the average annual maximum peak MW available over the life of the program at 7.0. The amount of demand reduction that will be achieved will be gradually increased over the four years as additional customers are enrolled.

During the Demand Response season (June to October), GWP may call a maximum of 15 Demand Response events; each event may last for up to four hours. Participating customers will be compensated for their participation. Subject to City Council approval and funding authorization, GWP proposes that the program would commence in January 2021. Specific information regarding the residential and commercial programs follows.

a) Franklin Energy Residential Smart Thermostat-based Demand Response Program

Residential customers can participate through three pathways: (1) “Bring Your Own Thermostat”; (2) Franklin Energy’s Online Marketplace; and (3) In-store Instant Rebates. Customers will have the option to have a smart thermostat professionally installed by a contractor (under a direct contract between Customer and Franklin or another contractor) or may self-install their smart thermostat.

The City would pay each customer \$100 off the Manufacturer’s Suggested Retail Price (MSRP) for purchase of thermostats via the Franklin online store or via in-store rebate. “Bring Your Own Thermostat” participants would receive a \$50 incentive to join the Demand Response program. GWP will additionally pay each participating residential customer a \$50 annual incentive. Customers will receive advance notice of demand response events and will have the ability to opt out of events. If a customer opts out of more than two events in the year, the customer may be removed from the program.

b) Commercial & Industrial Demand Response Program

The Commercial & Industrial Demand Response program targets customers who have a demand of greater than 50 kilowatts (kW). Customers will receive a program site assessment to help with identification of load reduction strategies. These reduction strategies may include the manual control or shutdown of devices or production lines on site; control of load via routines created in a building energy management system (EMS); or direct control of end use devices (equipment and

installation purchased by customer). For the commercial demand response program, customers must sign up for a minimum curtailment of 5% of total load or 25 kW and must complete enrollment agreement with committed peak load. Customers may participate via either Manual Demand Response and Automated Demand Response. Customers will receive a minimum eight-hour notification requirement; typically notified the day ahead of the event.

Participants in the Commercial & Industrial demand response program will receive a utility incentive payment. There are two commitment levels:

- 4-hour reduction - \$10/kW-month (\$50/kW-year)
- 2-hour reduction - \$5/kW-month (\$25/kW-year)

For both the residential and commercial and industrial programs proposed by Franklin Energy, the expected energy savings, capacity reduction¹, and costs are summarized as follows:

Program	Vendor	Annual MWh	Annual MW	Contract Cost	Internal Labor and Marketing Costs	Total Program Costs
Residential & Commercial DR	Franklin Energy Services LLC	Up to 600	Up to 10 MW, 5.9 Firm	\$ 7,658,363	\$ 164,377	\$ 7,822,740

2. Lime Energy - Commercial Direct Install Energy Efficiency Program

The objective of the Lime Energy Commercial Direct Install program is to install energy efficiency measures at commercial properties in GWP’s service territory. The Lime Energy program proposes by year seven of the program to reduce annual electric usage in the City by up to 35,000 MWh and to reduce demand by up to 8.32 MW. GWP estimates that the average annual maximum MW available over the life of the program at 6.2 MW. The program will be implemented over seven years and energy efficiency savings are expected to last an average of 12.5 years with a cumulative reduction of up to 455,000 MWh over the life of the installed measures. Total program cost, including contract, internal labor, and marketing is estimated at \$19,111,253. The Lime Energy Services Company contract would be for an amount not to exceed \$18,900,000.

The program will be available to all commercial customer buildings/premises with electrical demands no greater than 150 KW per meter. Lime Energy will provide a no-cost, no-obligation energy assessment for each interested and eligible commercial customer’s facility. Based upon that assessment, Lime Energy will prepare a scope of work/proposal that includes program-eligible, suggested replacements for existing equipment and details all costs for the upgrades (equipment and installation) using standardized, consistent pricing, approved by GWP for each measure.

The incentives are calculated per project based upon the estimated energy savings of the energy efficiency improvements using the appropriate deemed operating hours of the business type and the existing conditions found within the customer’s facility.

The contract would provide for the City to pay Lime Energy based on kWh saved and verified per installed energy efficiency project, with GWP contributing a fixed amount per first year kWh saved, ranging from \$0.48 per first year kWh savings for the first 5,000,000 kWh of installed energy efficiency measures, to \$0.60 for the final 5,000,000 kWh of installed energy efficiency measures. The program will target an 80%-20% City-customer split of the energy efficiency improvement project costs, with the City paying a fixed cost per kWh for the energy efficiency improvements. Any remainder of each energy efficiency project’s cost not covered by the City would be paid by participating customers to Lime Energy. The City’s compensation shall never exceed 100% of final project costs and the City’s payment will not exceed the following amounts:

kWh savings delivered:	Program Delivery Rate (per first year kWh saved)
First 5,000,000	\$0.48
>5,000,000 up to and including 10,000,000	\$0.50
>10,000,000 up to and including 15,000,000	\$0.52
>15,000,000 up to and including 20,000,000	\$0.54
>20,000,000 up to and including 25,000,000	\$0.56
>25,000,000 up to and including 30,000,000	\$0.58
>30,000,000 up to and including 35,000,000	\$0.60

The expected energy savings, capacity reduction, and costs of the Lime Energy commercial direct install program are summarized as follows:

Program	Vendor	Annual MWh	Annual MW	Contract Cost	Internal Labor and Marketing Costs	Total Program Costs
Commercial Energy Efficiency	Lime Energy	Up to 35,000	Up to 8.32	\$ 18,900,000	\$ 211,253	\$ 19,111,253

3. Sunrun – Virtual Power Plant

Sunrun is proposing to develop a Virtual Power Plant (VPP) for approximately 3,000 to 4,000 single family residential customers and approximately 30-40 multi-family housing properties that would include both solar generation and battery storage. Sunrun proposes that the program would be implemented over a four-year period. Per Sunrun, this would be the largest program of its kind; it is significantly larger than the VPP programs that have been implemented to date in other jurisdictions, which have been introduced on a very small, pilot-scale basis to test the concept.

Through a Purchase Power Agreement (PPA), the Sunrun VPP program would provide GWP up to 28MW of solar and 25.25MW/50.50MWh of storage capacity upon full deployment. As currently proposed, the program would guarantee/provide up to 25.25MW of dispatchable energy during peak demand for two hours.

The advantage of the PPA structure is that GWP would receive the Renewable Energy Credits (RECs), would pay no net energy metering (NEM) fees, and would not lose revenues over the life of the program. GWP will pay each participating single-family residential customer a monthly fee (currently proposed at \$15/month per customer) as an incentive to house the systems on their premises. The facilities would be owned by Sunrun. The capacity of the batteries will be aggregated by Autogrid Systems, Inc., under subcontract to Sunrun, and will be dispatchable by GWP.

For the current VPP program offering by Sunrun, Inc. the expected energy, capacity and costs are summarized as follows:

Program	Vendor	Annual MWh	Annual MW*	Contract Cost	Customer Payments**	Internal Labor and Marketing Costs	Total Program Costs
Virtual Power Plant	Sunrun, Inc	Up to 39,800	Up to 53.25	\$223,428,068	\$13,500,000	\$ 6,102,159	\$ 243,030,227
<p>*As currently proposed, the program only guarantees up to 25.25MW of dispatchable energy during peak demand for 2 hours.</p> <p>**Assumes 3,000 single family participants at \$15 per month over 25 years. This figure could go as high as 4,000 participants and \$18.0 million.</p>							

GWP Commission Recommendation

On September 24, 2020, GWP presented the proposed Clean Energy Programs to the GWP Commission for their recommendation. The GWP Commission recommended that the City Council direct GWP to proceed expeditiously with all three of the proposed Clean Energy Programs on a full scale basis, and undertake an electric cost of service analysis to study the rate impacts of the programs. The GWP Commission recommended that GWP be directed to negotiate a termination provision and right to modify to the Sunrun program structure at the end of the first twelve months of program implementation based upon the cost of service analysis and initial program results, and to report back to the GWP Commission and City Council twelve months after program initiation. The GWP Commission further recommended that the City Council direct GWP to look at the next phases of clean energy programs.

California Environmental Quality Act

The proposed Clean Energy Programs are exempt from the requirements of the California Environmental Quality Act. The proposed VPP is statutorily exempt from CEQA pursuant to California Public Resources Code section 21080.33, which exempts the installation of solar energy systems on the roof of an existing building or parking lot from CEQA where the associated equipment is adjacent or onsite and occupies no more than 500 square feet, and where the project does not involve a federal Clean Water Act permit, streambed alteration permit, or removal of specific required or native trees. All of the proposed Clean Energy Projects are categorically exempt from CEQA as a Class 1 exemption (operation, repair, permitting, leasing, licensing, or minor alteration of existing topographical features involving negligible or no expansion of use);

and Class 2 (replacement or reconstruction of existing structure and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced). Moreover, the Clean Energy Projects are exempt under Section 15061(b)(3) of the State CEQA Guidelines which exempt projects “where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.”

FISCAL IMPACT

Cost Summary, Funding, and Potential Rate and Bill Impacts

GWP estimates the total cost of the proposed Clean Energy programs at \$270,114,220. This includes \$7,822,740 for the Residential & Commercial Demand Response program, \$19,111,253 for the Commercial Energy Efficiency program, and \$243,030,227 for the Virtual Power Plant program. Additionally, GWP would need to conduct a new Cost of Service Analysis to set new rates going forward. That cost is estimated at \$150,000. As part of that process, City Council would determine how much of the new programs would be funded through rate increase or cash reserves. The table below summarizes the estimated total cost of the Clean Energy Programs over the course of the program. The program cost includes contractual obligation, customer payments, and internal labor, IT and marketing costs. Cost estimates do not include any upgrades to the distribution system that may be required to accommodate additional distributed energy resources on the GWP system, which will need to be determined following a distributing system impact study.

Program	Vendor	Contract Term	Contract Cost	Customer Payments*	Internal Labor/ Marketing/IT Integration Costs	Total Costs
Residential & Commercial DR	Franklin Energy	4	\$ 7,658,363	\$ -	\$ 164,377	\$ 7,822,740
Commercial Energy Efficiency	Lime Energy	7	\$ 18,900,000	\$ -	\$ 211,253	\$ 19,111,253
Virtual Power Plant	Sunrun	25	\$ 223,428,068	\$ 13,500,000	\$ 6,102,159	\$ 243,030,227
COSA Analysis	NewGen	1	\$ 150,000	\$ -	\$ -	\$ 150,000
Total			\$ 250,136,431	\$ 13,500,000	\$ 6,477,789	\$ 270,114,220

*Assumes 3,000 single family participants at \$15 per month over 25 years. This figure could go as high 4,000 homes and \$18.0 million.

As the table above shows, in addition to contract and customer payment costs, GWP estimates that these programs would require additional internal labor and marketing support. At a minimum, the programs would require the support of 4.5 FTE over the first five years of the programs, plus additional marketing/IT integration support. The 4.5 FTE would include the addition of one new Senior Building Inspector to process permits for the 3,000 to 4,000 new permits that would be required, and one new Business Transformation Associate (or similar) for direct program support. Additionally, GWP

anticipates that it would need to reallocate one Public Benefits Charge Coordinator to a Business Transformation Manager (or similar) to manage the programs on a daily basis. Over the life of the programs, GWP estimates these costs would approach \$6.5 million. GWP will incorporate staffing in future budget process or come back to the City Council as a separate action item.

The table below summarizes estimated staffing and marketing/IT integration needs for the first five years, and life of programs.

Staff and Marketing Costs	FTE	CY 2021	CY 2022	CY 2023	CY 2024	CY 2025	Life of Programs
Senior Building Inspector - New	1.0	\$ 135,797	\$ 138,513	\$ 141,284	\$ 144,109	\$ 146,992	\$ 706,696
Business Transformation Manager - Incremental Cost	0.1	\$ 20,255	\$ 20,661	\$ 21,074	\$ 21,495	\$ 21,925	\$ 380,649
Business Transformation Associate - New	1.0	\$ 122,667	\$ 125,120	\$ 127,623	\$ 130,175	\$ 132,779	\$ 2,305,210
Electrical Line Mechanic, Supervisor I	0.3	\$ 56,451	\$ 57,580	\$ 58,731	\$ 59,906	\$ 61,104	\$ 293,772
Electrical Line Mechanic	0.3	\$ 52,922	\$ 53,980	\$ 55,060	\$ 56,161	\$ 57,284	\$ 275,408
Electrical Line Mechanic, Apprentice	0.3	\$ 44,985	\$ 45,884	\$ 46,802	\$ 47,738	\$ 48,693	\$ 234,103
Electrical Service Planner	1.0	\$ 148,626	\$ 151,598	\$ 154,630	\$ 157,723	\$ 160,877	\$ 773,455
Sr. Electrical Service Planner	0.5	\$ 79,400	\$ 80,988	\$ 82,608	\$ 84,260	\$ 85,946	\$ 413,204
Marketing/IT Integration Costs	0.0	\$ 218,000	\$ 206,460	\$ 209,989	\$ 213,589	\$ 217,261	\$ 1,095,300
Total	4.5	\$ 879,103	\$ 880,785	\$ 897,801	\$ 915,157	\$ 932,860	\$ 6,477,789

Assuming programs are funded through rates, the table below provides an estimate of the base rate increase needed to support the programs over the period FY 2021-2025. In addition to the already approved 0.0%, 1.0%, 1.0%, 1.0% increases per the 2018 electric rate plan, GWP estimates a one-time base rate increase of 4.5% would be needed as early as FY 2022 to cover the ongoing costs of the proposed clean energy programs. This rate analysis is based upon modeling performed by Ascend Analytics and a preliminary cost analysis performed by NewGen Strategies & Solutions, LLC, a rate consultant. A detailed cost of service analysis would be needed to refine the estimate and develop a rate plan to fund the programs. The preliminary cost of service results are as follows:

Rate Increase	2021	2022	2023	2024	2025
Original Proposal - 2018 COSA	0.0%	1.0%	1.0%	1.0%	TBD
With Current CEP Proposal	0.0%	5.5%	1.0%	1.0%	TBD
Incremental Rate Increase Needed	0.0%	4.5%	0.0%	0.0%	TBD

As summarized below, GWP estimates that the above base rate increases would increase the average annual monthly single family bill starting in FY 2022 by an average

\$5.67 through 2024, and the average monthly multi-family bill by an average \$3.18 a month through 2024. Bill impacts going beyond 2024 are to be determined.

Single Family Bill - Average Monthly*	2021	2022	2023	2024	2025
Original Proposal - 2018 COSA	\$ 124.78	\$ 126.02	\$ 127.28	\$ 128.56	TBD
With Current CEP Proposal	\$ 124.78	\$ 131.64	\$ 132.95	\$ 134.28	TBD
Incremental Bill Increase	\$ -	\$ 5.61	\$ 5.67	\$ 5.73	TBD
Multi-Family Bill - Average Monthly*	2021	2022	2023	2024	2025
Original Proposal - 2018 COSA	\$ 70.05	\$ 70.75	\$ 71.45	\$ 72.17	TBD
With Current CEP Proposal	\$ 70.05	\$ 73.90	\$ 74.64	\$ 75.38	TBD
Incremental Bill Increase	\$ -	\$ 3.15	\$ 3.18	\$ 3.22	TBD

*Does not include any adjustable charges, PBC, or taxes.

The Clean Energy Program costs are not included in the FY 20-21 budget and funding of the programs requires a funding source and direction from City Council.

Should the City Council desire to proceed with some or all the programs in advance of the detailed rate study, the first year costs may be funded through reserves. Funds for the first year of some or all of the programs, prorated to cost of services for six months of Fiscal Year 2020-21, may be requested through electric fund reserve. A Resolution of Appropriation is attached to the report for the City Council’s consideration to transfer funds from Net positions, Electric Fund Balance (27900-581-000) in the amount of \$6,925,856 per table below for contractual obligations cost of the program, anticipated in Fiscal Year 2020-21:

Account Description	Account No.	Amount
Contractual Services, Electric Works Revenue Fund, GWP, Conservation & Utility Modernization,	43110-5820-GWP-4520-P0000-T0000-F0000	\$2,307,295
Purchased Power, Electric Works Revenue Fund, GWP, Power Management, PM Sunrun VPP task, Power Production FERC	45510-5820-GWP-4680-P0000-T1985-F1500	\$4,468,561
Contractual Services, Electric Works Revenue Fund, GWP, Administration	43110-5820-GWP-4505-P0000-T0000-F0000	\$ 150,000
	TOTAL	\$6,925,856

Funding for Clean Energy Programs which will include contractual obligations for the subsequent years, labor, IT/Marketing and customer payment costs will be incorporated in the annual budget for Fiscal Years 2022-2045.

These programs would be funded through an incremental base rate increase (estimated at 4.4%) or could be partially funded through reserves, or some combination thereof, as determined by City Council after a new cost of service study is completed.

The total annual estimated fiscal impact of the programs for the period FY 2020-21 to FY 2024-25 is as follows:

Program	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	Total
Residential & Commercial DR	\$ 977,843	\$ 1,955,685	\$ 1,955,685	\$ 1,955,685	\$ 977,843	\$ 7,822,740
Commercial Energy Efficiency	\$ 1,365,090	\$ 2,730,179	\$ 2,730,179	\$ 2,730,179	\$ 2,730,179	\$ 12,285,806
Virtual Power Plant	\$ 4,860,605	\$ 9,721,209	\$ 9,721,209	\$ 9,721,209	\$ 9,721,209	\$ 43,745,441
COSA Analysis	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000
Total	\$ 7,353,537	\$ 14,407,073	\$ 14,407,073	\$ 14,407,073	\$ 13,429,231	\$ 64,003,986

The total estimated fiscal impact over the life of the programs is as follows:

Program	Vendor	Contract Term	Contract Cost	Customer Payments*	Internal Labor/Marketing/IT Integration Costs	Total Costs
Residential & Commercial DR	Franklin Energy Services LLC	4	\$ 7,658,363	\$ -	\$ 164,377	\$ 7,822,740
Commercial Energy Efficiency	Lime Energy	7	\$ 18,900,000	\$ -	\$ 211,253	\$ 19,111,253
Virtual Power Plant	Sunrun	25	\$ 223,428,068	\$ 13,500,000	\$ 6,102,159	\$ 243,030,227
COSA Analysis	NewGen	1	\$ 150,000	\$ -	\$ -	\$ 150,000
Total			\$ 250,136,431	\$ 13,500,000	\$ 6,477,789	\$ 270,114,220

*Assumes 3,000 single family participants at \$15 per month over 25 years. This figure could go as high 4,000 homes and \$18.0 million.

ALTERNATIVES

Alternative 1: Provide direction to GWP with regard to the Clean Energy Programs. This direction may include:

- a) Authorizing Agreements with Franklin Energy and Lime Energy and authorize negotiation of agreements with Sunrun, Inc. or its affiliate;
- b) Authorizing an Amendment to Contract No. 8000586 with NewGen Strategies and Solutions, LLC as proposed;

- c) Providing direction to City staff regarding the funding or implementation of said programs, which may include development of a COSA and electric rate plan, adoption of a resolution of appropriation, or another alternative.

Alternative 2: Approve some of the Agreements.

Alternative 3: Decline to authorize the Agreements.

Alternative 4: Authorize the Clean Energy Programs, or any of them, on a pilot basis.

Alternative 5: The City Council may consider any other alternative not proposed by staff.

CAMPAIGN DISCLOSURE

Exhibit A to this report.

EXHIBIT(S)

Exhibit A: Campaign Finance Disclosure information.