



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

### **AGENDA ITEM**

**Report: Grayson Repowering Project, GWP Power Supply Planning and Clean Energy Initiatives**

1. Resolution rejecting the sole bid received in response to Glendale Water & Power Bid Specification No. 3904, Unit 9 Separation, dispensing with further competitive bidding, and authorizing the City Manager, or designee, to negotiate and execute a contract with ARB, Inc. for the Grayson Power Plant Unit 9 Separation for an amount not to exceed \$4,247,507 plus a 10% reserve for contingencies in the amount of \$424,750;
2. Resolution authorizing the General Manager of GWP to utilize an Alternative Project Delivery Method for the Engineering, Procurement, and Construction of the Balance of Site work for the Grayson Repowering Project;
3. Motion authorizing the City Manager, or his designee, to execute a Professional Services Agreement with Wartsila North America, Inc. for Phase 2 Limited Notice to Proceed Engineering Services for the Grayson Repowering Project for an amount not to exceed \$9,882,000 plus a 10% (\$988,200) reserve for contingencies;
4. Motion authorizing the City Manager, or his designee, to execute an amendment to Professional Services Agreement No. 800053 with Stantec Consulting Services, Inc. to increase the contract by an amount not to exceed \$164,000 for environmental support services for the Grayson Repowering Project;
5. Motion authorizing an amendment to Professional Services Agreement No. 8000847 with Black & Veatch to increase the contract by an amount not to exceed \$1,570,668 plus a 10% (\$157,067) reserve for contingencies for additional owner's engineering services for the Grayson Repowering Project;
6. Motion authorizing an amendment to Professional Services Agreement No. 8000941 with Clean Power Consulting Partners to increase the contract by an amount not to exceed \$150,000 for project management and professional support services for the Grayson Repowering Project
7. Resolution of Appropriation
8. Motion to Note and File the Report
9. Motion directing staff to prepare the necessary actions and approvals for Council approval of the purchase and installation of five Wartsila engines for the Grayson Repowering Project

### **COUNCIL ACTION**

**Item Type: Action**

**Approved for**

**August 16, 2022**

**Calendar**

**{{section.number}}c**

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## EXECUTIVE SUMMARY

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This report provides an update on the Grayson Repowering Project and GWP power supply planning and clean energy initiatives and seeks City Council authorization to execute contracts, contract amendments, and procurement strategies and a resolution appropriating funds to implement the City Council's March 1, 2022 direction regarding the Grayson Repowering Project. The report also includes an update on the City's discussions with Los Angeles Department of Water & Power (LADWP) regarding obtaining 100 megawatts of reserve power for Glendale, and the status of various other key GWP clean energy programs.

## COUNCIL PRIORITIES

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Infrastructure: The Grayson Repowering Project will replace the aging infrastructure at the Grayson Power Plant with state of the art generation and storage technology providing GWP with the ability to quickly starting and generating smaller increments of power when needed, the ability to balance and integrate renewable resources, and the ability to store energy. A reliable source of power is essential for the City's residents and businesses.

Environmental Stewardship. The Grayson Repowering Project and other clean energy initiatives underway at GWP implement the City Council's direction to pursue sustainable and clean energy solutions for the City.

## RECOMMENDATION

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It is recommended that the City Council:

- (1) Note and file the report;
- (2) Authorize the following agreements and actions associated with the Grayson Repowering Project:
  - a. Reject the sole bid received, dispense with further competitive bidding and authorize negotiation and execution of a contract with ARB, Inc. for the Grayson Unit 9 Separation Work for an amount not to exceed \$4,247,507 plus a 10% (\$424,750) reserve for contingencies;
  - b. Alternative Project Delivery Method for the "Balance of Site" Engineer, Procure, Construct contract for the Grayson Repowering Project;
  - c. New Professional Services Agreement with Wartsila North America, Inc. for Phase 2 Limited Notice to Proceed Engineering Services in an amount not to exceed \$9,882,000 plus a 10% (\$988,200) reserve for contingencies;
  - d. Amendment to Agreement with Stantec Consulting Services, Inc. for environmental support services in an amount not to exceed \$164,000;
  - e. Amendment to Agreement with Black & Veatch for owner's engineering services in an amount not to exceed \$1,570,668, plus a 10% (\$157,067) reserve for contingencies;
  - f. Amendment to Agreement with Clean Power Consulting Partners for

- project management and professional support services in an amount not to exceed \$150,000; and
- g. Adopt a resolution appropriating funds to cover the development of the Grayson Repowering Project.

An optional motion is included for Council to provide direction to staff to prepare the necessary actions for Council approval for the purchase and installation of five Wartsila engines for the Grayson Repower Project.

## **BACKGROUND**

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The Grayson Power Plant, first commissioned in the 1940s, is well beyond its design life and needs to be modernized to continue to meet the energy needs of the City of Glendale and its residents and businesses.

Over the past seven years, the City Council, along with City staff, has explored, analyzed, and developed options for, and alternatives to, the originally-proposed, 262 megawatt (MW) repowering of the Grayson Power Plant in order to minimize the City's carbon footprint and provide clean power to the community. A chronology of key dates for the Grayson project is attached to this report as Exhibit 4.

The City's clean power goals must be balanced against the City's obligation to ensure that a reliable source of power is always available to meet the City of Glendale's needs.

### Glendale's Power and Energy Needs and Supplies:

Glendale needs both power capacity (the maximum amount of power that a generator can produce, measured in Megawatts "MW") and energy (the amount of electricity that is produced and used over time, measured in Megawatt-hours, "MWh"). Power is the capacity/ size of the generator; energy is the amount of electrons actually produced and flowing over the grid over time to turn on lights. Glendale's need for capacity and energy are expected to increase over time with increased electrification of vehicles and buildings.

### Capacity

To comply with California Energy Commission requirements, GWP must maintain sufficient power generation resources to meet the peak demand (peak load). Glendale's historic peak load is 346 MW, and on that day, GWP delivered 5,654 MWh of energy. In the future, GWP's load is expected to grow with electrification of buildings and vehicles. For example, by 2027, the forecasted peak load, based upon the modeling in the 2019 Integrated Resource Plan (IRP), is 398 MW. In addition to meeting peak load, GWP must maintain backup power (reserves) at the ready in case it loses its two largest individual resources -- the N-1 and N-1-1 contingencies.

Forecasted peak load (2027)	398 MW
N-1 Contingency (Pacific DC Intertie)	100 MW
N-1-1 Contingency (Southern Transmission System)	64 MW

<b>Total</b>	<b>562 MW</b>
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The below table provides the sources of generation available to cover the City's capacity requirements, assuming all such resources are developed and operating at full capacity.

<b>Resource</b>	<b>Capacity (MW)</b>
Existing Transmission (100 MW Pacific DC, 112 MW Southwest Transmission System)	212 MW
Post-2027 Transmission Addition on Southwest Transmission System	72 MW
Reduction due to transmission losses on Southwest Transmission System (losses are 5.6%)	-16 MW
Eland I Solar and Storage Project <sup>1</sup>	25 MW
Local new Distributed Energy Resources (2019 IRP contemplated 50 MW of DER; of this, 3 MW have materialized; the 25.25 MW Sunrun VPP proposal has been withdrawn. The 2022 DER RFP seeks additional DER resources.) <sup>2</sup>	50 MW
Magnolia Power Plant	35 MW
Grayson Unit 9	48 MW
Scholl Canyon Biogas	11 MW
Tesla Battery Energy Storage System (BESS) contribution for peak load <sup>3</sup>	75 MW
Grayson Wartsila engines	93 MW
<b>Total</b>	<b>605 MW</b>

On the surface, assuming all resources are implemented, operating at maximum capacity, and available, there appears to be a margin of 43 MW. However, that is not an accurate conclusion. The above is a best case evaluation in that it assumes all resources are maximally available at the same time as the peak load. Not all resources are available around the clock; for example, solar is time-limited (only available during

<sup>1</sup> The full 25 MW capacity was assumed for this analysis; actual performance may be less.

<sup>2</sup> There are limits as to time of day and/or number of times these resources can be called upon.

<sup>3</sup> This is a 4-hour energy limited resource.

day), batteries, energy response, and some resources such as Eland are energy-limited [finite capacity] or can only be called under during events for a limited time).

## Energy

In addition to having sufficient capacity (MW), GWP requires sufficient energy (MWh) to serve Glendale. GWP performed an hourly evaluation of the City's energy needs, considering: (1) the varying energy demand for each hour, (2) how much power and energy each resource can provide; and (3) when each resource can provide energy. This analysis looked the peak load day, when 346 MW of capacity was needed, and a total energy demand of 5,654 MWh<sup>4</sup>. The analysis also factors in the loss of GWP's two largest resources, i.e., the N-1 and N-1-1 contingencies – i.e., transmission lines going down. The result is that under these conditions, up to 83 MW of dispatchable, reliable generation (such as Wartsila engines<sup>5</sup>) would be required. This does not mean those engines are normally in operation; rather they are available as reserve capacity in the event the N-1 or N-1 and N-1-1 contingencies were to occur impacting transmission resources. In this event, Grayson Unit 9 and the Wartsila engines would need to operate to provide adequate power for Glendale. The Table below shows the hourly average load and generation to illustrate this analysis. In this scenario, local thermal resources – Unit 9 and Wartsila engines - were dispatched only as needed to serve load and charge the battery.

<b>Resource</b>	<b>Capacity MW</b>	<b>Energy MWH</b>
Existing Transmission (100 MW Pacific DC, 112 MW Southwest Transmission System)	212	5,088
Post-2027 Transmission Addition on Southwest Transmission System	72	1,728
Reduction due to transmission losses on Southwest Transmission System (losses are 5.6%)	-17	-400
Loss of N-1 (Pacific DC Intertie)	-100	-2,400
Loss of N-1-1 (Southern Transmission System)	-64	-1,536
Reduction in Transmission Losses	10	231
Eland I Solar and Storage Project	25	358

<sup>4</sup> The MW and MWh values are actual values from August 31, 2017.

<sup>5</sup> In the dispatch model, the Wartsila engines were dispatched last and the electric load varied from 10 to 83 MW over a ten-hour period.

<b>Resource</b>	<b>Capacity MW</b>	<b>Energy MWH</b>
Local new DER (2019 IRP contemplated 50 MW of DER; as of 2022, 3 MW have materialized; the 25.25 MW Sunrun VPP proposal has been withdrawn. The 2022 DER RFP seeks additional DER resources.) <sup>6</sup>	50	183
Magnolia Power Plant	35	840
Grayson Unit 9	48	871
Scholl Canyon Biogas	11	264
Tesla Battery Energy Storage System (BESS) Charging Energy	75	-353
Tesla BESS contribution for peak load <sup>7</sup>	75	300
Grayson Wartsila engines	93	479
<b>Total</b>	<b>605</b>	<b>5,653</b>

As noted above, on GWP's historical peak load day, it delivered 5,654 MWh of power. As shown in the table above, with the 2027 resources in place, GWP would have 5,653 MWh of energy, barely meeting the energy required on the peak load day.

#### Clean Energy Programs

In 2018, at the City Council's direction, GWP issued a Request for Proposals (RFP) seeking clean energy alternatives to the then-proposed 262 MW Grayson Repowering Project. Clean energy proposals received in response to the RFP were modeled as part of GWP's energy integrated resource planning process. In July 2019, the City Council adopted an Integrated Resource Plan (IRP) that included a plan to add 50 MW of local clean energy resources to the GWP portfolio. Of these planned resources, the City currently has been able to acquire 3 MW of capacity.

In May 2022, GWP issued a new RFP seeking additional clean distributed energy resource, with proposals due on September 30, 2022. GWP has also retained a consultant to evaluate GWP's clean energy programs and provide suggestions for new programs. However, even with additional Clean Energy Programs, as noted above, the Grayson Repowering Project is a critical component of GWP's power supply plan.

#### Grayson Repowering Project

Grayson provides a vital source of local generation to provide power when demand exceeds GWP's limited transmission imports. Grayson also provides the power needed to cope with contingencies and maintain reserves. It has become critical to take action

<sup>6</sup> There are limits as to time of day and/or number of times these resources can be called upon.

<sup>7</sup> This is a 4-hour energy limited resource.

to modernize Grayson in order for GWP to continue to supply reliable electricity to the City of Glendale.

New air quality regulations establish deadlines for the repowering of the Grayson Power Plant. By December 31, 2023, GWP will need to shut down all units that do not meet South Coast Air Quality Management District (SCAQMD) air quality standards that will then come into force.<sup>8</sup> By December 31, 2022 – within the next five months – the City must deliver to the SCAQMD the City’s written plan to bring the power plant into compliance with the new air quality requirements.

The City Council, GWP Commission, and City staff have been engaged in a lengthy process of analysis, development work, and exploration of alternatives to replace Grayson, including:

- 2015 Integrated Resource Plan adopted, recommending 262 MW Repower Project
- 2016-2022 Environmental Impact Report preparation and project development
- 2018 Initial Hearing on Environmental Impact Report  
Clean Energy RFP issued; proposals modeled, interim IRP adopted
- 2019 Integrated Resource Plan adopted, recommending new portfolio including more clean energy resources, 93 MW Wartsila Engines and Tesla Batteries  
Negotiation of new Clean Energy contracts  
Council authorizes Limited Notice to Proceed with Wartsila & Tesla
- 2020 City Council authorizes study of additional Grayson EIR alternatives
- 2021 100% Clean by 2030 Study completed and presented
- 2022 Final Environmental Impact Report certified  
2022 Clean Distributed Energy Resource RFP issued  
EcoMotion retained to consult on RFP and Clean Energy options

On February 15, 2022, the City Council certified the Final Environmental Impact Report for the Grayson Repowering Project. On the same day, the City Council approved Project Alternative 7 which would demolish and replace existing Grayson Power Plant Units 1 through 8 with a 75 Megawatt (MW)/ 300 Megawatt-hour (MWh) Tesla Battery Energy Storage System (“BESS”) and five Wartsila Reciprocating Internal Combustion Engines, for a combined capacity of 93 Megawatts (MW). Alternative 7 also adds a new Glendale Switching Station and related improvements to the Grayson Power Plant Site.

On March 1, 2022, the City Council modified Grayson Project Alternative 7, directing staff to hold off on procuring the five Wartsila Reciprocating Internal Combustion Engines but to proceed with all other aspects of the project, including making the site ready for up to five Wartsila engines. Council also directed staff to return to City Council no later than the end of December 2022 for a decision regarding the procurement of the Wartsila engines.

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<sup>8</sup> Modifying Units 1-5 to comply with the new air emissions requirements is infeasible. Modifying Units 8A and 8BC would require a major project- replacement of the Heat Recovery System Generator (HRSG). Unit 9 can be modified to meet the new air emissions requirements.

At the March 1, 2022 City Council meeting, Councilmembers Brotman and Najarian also recommended that Glendale meet with the City of Los Angeles/ Los Angeles Department of Water & Power (LADWP) to determine whether LADWP might be able to supply Glendale with 100 MW of reserve power, in order for Glendale to completely avoid or reduce the number of Wartsila engines needed.

On March 21, 2022, Councilmembers Brotman and Najarian, along with the City Manager and General Manager of GWP, met with senior representatives of LADWP and a Member of the LADWP Board of Commissioners to discuss the amount of reserves that GWP must carry (N-1, N-1-1) and the possibility of LADWP providing power and/or reserves to Glendale to help GWP avoid the need to repower the Grayson Power Plant. LADWP confirmed during the meeting and in a follow up written communication that 1) LADWP does not have 100 MW of capacity available to provide to Glendale, and that 2) GWP must maintain adequate reserves at all times (except during the first 60 minutes of a contingency event) to cover GWP's N-1 and N-1-1 reserve obligations -- even if that means turning off power to Glendale customers.

GWP and LADWP have continued to meet on a bi-weekly basis. GWP and LADWP have discussed identifying and collaborating on longer-term initiatives such as LADWP Strategic Transmission Plan and opportunities for future joint transmission and/or generation projects which would be implemented over a much longer time horizon, i.e. 20+ years. However, LADWP's position -- that it is unable to sell reserves or energy to Glendale to meet Glendale's reserve obligations -- has not changed.

GWP provides this update on its efforts to implement the City's Council's direction and seeks City Council approval of various contracts, amendments, and procurement methodologies described in this report, in order to implement the City Council's direction regarding the Grayson Repowering Project.

## **ANALYSIS**

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### **I. Clean Energy Initiatives**

GWP has been working on adding reliable, economic, and dispatchable local distributed energy resources, demand response, and energy efficiency programs to supplement its clean energy portfolio. In 2018, the City issued an RFP seeking clean energy solutions to meet the City's power supply needs. The proposals were modeled in the GWP 2019 Integrated Resource Planning process. The Integrated Resource Plan recommended a portfolio that included 50 MW of local clean energy resources, along with the Alternative 7 Grayson Repowering Project. The status of key clean energy initiatives follows.

#### **(A) Franklin Energy Smart Thermostat and Demand Response Program**

In 2021, GWP launched the Franklin Energy Smart Thermostat and Demand Response Program. This four-year program will reduce energy demand during up to 15 peak load events per year, by incentivizing residential and commercial customers who agree to allow their thermostat setting to be adjusted during periods of high energy demand. The Franklin Energy program is contracted to provide up to 10 MW of demand response capacity by fourth and final year of the program. Current program metrics are as follows:



	<b>Enrollment</b>	<b>MW under control</b>	<b>Percent of annual guarantee met</b>
<b>Program Year 1 (2021)</b>	926 residential thermostats and 10 commercial/ industrial (C&I) customers	1.2 MW	39% of year 1 guarantee
<b>Program Year 2 (2022)<sup>9</sup></b>	766 residential thermostats and 5 C&I customers	0.8 MW	19% of year 2 guarantee
<b>Cumulative</b>		2.08 MW	21% of total guarantee

(B) Willdan Commercial Direct Install Energy Efficiency Program

In November of 2021, GWP launched a Commercial Direct Install Energy Efficiency Program. This program provided under contract with Willdan, is intended to reduce the City's energy demand by 8.3 MW through efficiency measures installed at commercial properties over a seven-year installation period. Current program performance is as follows:

	<b>Enrollment</b>	<b>MW under control</b>	<b>Megawatt-hour (MWh) savings</b>	<b>Percent of annual guarantee met</b>
<b>Program Year 1 (2022)<sup>4</sup></b>	204 projects completed	0.2 MW	1,358 MWh	104% of year 1 guarantee
<b>Overall</b>				4% of total guarantee

(C) Sunrun, Inc. Virtual Power Plant

The 2019 Integrated Resource Plan also included a proposed 25.25 MW residential Virtual Power Plant program offered by Sunrun, Inc. which would have provided the City with 25.25 MW of battery capacity powered by residential photovoltaic systems. The staff presented the Sunrun Virtual Power Plant project to the City Council on February 8, 2022. Upon deliberation, the City Council directed staff to further negotiate with Sunrun to address Councilmembers' questions and concerns regarding the program. City staff and Sunrun finalized negotiations of further changes to the Sunrun program, including a proposed reduction in the program size to address City Council concerns regarding the program's cost. However, on April 21, 2022, Sunrun notified GWP verbally that, due to supply chain issues and an anticipated tariff on Chinese imports,

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<sup>9</sup> As of end of June, 2022.

Sunrun would need to increase contract prices across the board by 30%. GWP requested that Sunrun confirm the price increase in writing. On July 8, 2022, Sunrun informed Glendale Water & Power that it is no longer interested in pursuing the Virtual Power Plant project with Glendale. Sunrun cited the recent development of unforeseen circumstances, including historic industry-wide supply chain disruptions, the recent rapid onset of inflation, an abrupt increase in interest rates, the extended process despite both parties' significant efforts, uncertainty regarding general timeline, and continued macro volatility as the reasons for withdrawing its offer.

(D) Solar and Storage on City of Glendale Properties

GWP and its owner's engineering consultant, Black & Veatch, have completed a solar feasibility study for City-owned properties including engineering reviews and technical specifications. A feeder hosting capacity analysis will be included in the final deliverables along with a solar feasibility report.

The final report is expected to be completed in late September 2022 and staff will report on the findings to the City Council in October 2022 and seek City Council direction regarding implementation of the development. The amount of \$3.5 million is included in the FY 2022-2023 budget to fund solar and storage developments on City property. This amount is estimated to fund approximately 1 – 1.25 MW of solar installations (3-5 projects). As noted above, the solar/ storage market is very volatile at this time, and this estimate will need to be confirmed through a bidding process.

(E) 2022 Request for Proposals for Clean Distributed Energy Resources

On May 27, 2022, GWP issued a new RFP for Local Clean Distributed Energy Resources (the Clean DER RFP). The Clean DER RFP seeks up to 50 MW within the following categories:

- Commercial and Industrial Solar Paired with Dispatchable Energy Storage
- Residential Solar Paired with Dispatchable Energy Storage
- Dispatchable Energy Storage to Pair with Existing Residential, Commercial and Industrial PV Solar Customers
- Renewable Distributed Generation (DG)
- Demand Response
- Energy Efficiency
- Any other clean DER solution not encompassed in the above categories

Proposers will need to demonstrate how their proposal is incremental to, and not duplicative of, existing GWP programs. Proposals are due September 30, 2022. The September 30, 2022 due date was chosen to give affected proposers time to adjust their proposals based upon the outcome of a pending federal Commerce Department investigation of Chinese tariff circumvention which may affect pricing of solar panels and infrastructure. At the time the RFP was issued, the Commerce Department determination was expected in late August 2022. On June 6, 2022, GWP learned that the Biden Administration has changed its position on Chinese tariffs, and has suspended tariffs on solar panels for any solar panel imported from the South Asian countries in the next two years while the Commerce Department's investigation

continues. The solar and storage market remains volatile.

The Clean DER RFP was widely advertised. GWP posted it on the City's website, issued a press release, reported on the Clean DER RFP at a GWP Commission meeting, and posted it on social media and on the GWP and the Grayson Repowering websites. The City also directly emailed a link to the Clean Energy RFP to 200 firms directly as well as to the City's list of recipients who have signed up to receive announcements of City RFPs. GWP also sent the RFP link to the California Municipal Utilities Association, Southern California Public Power Authority and American Public Power Association (APPA). APPA posted the link on their social media. GWP also contacted the California Energy Storage Alliance who distributed the RFP link to their membership. As of this report, 20 firms have registered as interested proposers. GWP has issued an addendum extending the deadline to register as an Interested Proposer to September 30, 2022 (same as the deadline for submitting a proposal) and withdrawing the condition that Proposers must have participated in the July 20, 2022 pre-Proposal meeting.

(F) Retention of Clean Energy Consultant

The City of Glendale has retained EcoMotion, Inc. to assist the City with the Clean DER RFP process and to provide recommendations on Clean Energy programs. EcoMotion is evaluating GWP's existing portfolio of clean energy programs and providing information regarding Clean Energy solutions in other jurisdictions that the City might pursue, and other recommendations. EcoMotion's complete analysis is expected to be completed by the end of the calendar year.

## **II. Grayson Repowering Project Update**

On March 1, 2022, the City Council adopted a resolution directing City staff to proceed with the following aspects of the Grayson Repowering Project (Modified Alternative 7):

- (A) separation of Unit 9 from the Grayson Power Plant;
- (B) demolition of Grayson Power Plant Units 1-8 and environmental remediation at the Grayson site;
- (C) procurement of the Tesla Battery Energy Storage System;
- (D) necessary engineering, procurement and construction to integrate the Tesla Battery Energy Storage System into the Grayson Site;
- (E) necessary engineering, procurement and construction to prepare for the potential addition of up to five Wartsila engines at Grayson, should Council decide to proceed with any number of these engines;
- (F) air permits and procurement of emissions reduction credits for the five Wartsila engines; and
- (G) all required bonding to finance the above.

The City Council directed staff to return to the City Council no later than the end of Calendar Year 2022 for a decision regarding the purchase of Wartsila engines.

Staff requests City Council approval to execute the following contracts and procurement methods in furtherance of the City Council's March 1, 2022 direction.

(A) Unit 9 Separation Contract

The first step in the Grayson Repowering Project will be to make Units 1-8 safe for demolition and separate Grayson Unit 9, which will remain in place after the repowering project, from the remaining Grayson Units 1-8, which will be demolished. This will allow Unit 9 to operate “as needed” as a local power generation resource unaffected by the demolition and construction activities. The Request for Bids for the Unit 9 Separation work was issued on September 22, 2021 and advertised in accordance with City process. GWP also reached out to proposers who had been qualified to bid on the 262 MW repowering project. The bidding deadline was June 29, 2022, which had been extended because of uncertainty in 2021 about the project and whether the project or an alternative would be selected. Although three contractors attended the job walk, only one contractor, ARB, Inc., submitted a bid.

The sole bid submitted by ARB, Inc. is for \$4,247,507. This amount is less than the Engineer’s estimate that was developed by the project team for the work. ARB’s bid is deemed technically non-responsive because of proposed modifications to the Specifications. Specifically, ARB proposed converted CONX boxes (intermodal containers) and separate sanitation facilities in lieu of supplying construction trailers, because it could not supply trailers and meet the schedule specified in the Specification. ARB proposed schedule modifications due to the inability of vendors to supply all of the specified materials on the schedule specified in the Specification. While ARB’s included workarounds for several issues, for two key pieces of electrical equipment, ARB was unable to find suppliers with timely delivery, resulting in a lengthened schedule. GWP, along with its Owner’s Engineer and ARB, is looking at modifications to the design that might support shortening the schedule.

Article VI, Section 9 of the Glendale City Charter specifies that the City Council, “after rejecting bids, or if no bids are received, may re-advertise for bids, or may have the work done by city forces if it determines that city forces can economically do the work, or it may have the contract negotiated without further bidding.” Article VI Section 9 of the Charter further provides that: “[u]pon recommendation of the city manager, the council may dispense with competitive bidding for any contract when it determines that it is in the best interests of the city so to do and acts by resolution setting forth the reason for such action.”

In accordance with the Glendale Charter, staff recommends rejecting the sole bid received from ARB, Inc. dispensing with further competitive bidding, and authorizing the negotiation of a contract with ARB, Inc. for the Unit 9 separation work for an amount not to exceed \$4,247,507 plus a reserve for contingencies in the amount of 10% (\$424,750). This amount is less than the Engineer’s estimate for the work.

Re-bidding the work is unlikely to result in other bidders submitting a bid for the Unit 9 separation work, given supply chain challenges, the cost of preparing a bid, the lack of certainty in the City’s plan for Grayson. Additionally, re-bidding the project will result in increased delays. The sole bidder, ARB, was unable to meet the project schedule specified in the bid due to supply chain delays. The same supply chain delays would affect any other bidder. Additionally, ARB is an experienced contractor and has a

lengthy and successful record of working on the Grayson Power Plant equipment. Executing a contract with ARB, rather than engaging in a lengthy re-bid process, which is not likely to yield additional bids, will allow the contractor to begin ordering materials and prevent further delays to the project schedule.

(B) Demolition and Site Improvement Contract

Following separation of Grayson Unit 9 from the remainder of the generating units and making Units 1-8 safe for demolition, the next step in the Grayson Repowering Project will be to demolish Grayson Units 1-8 and prepare the Grayson site for the new facilities. A Request for Proposals for the Demolition and Site Improvement Contract was issued on October 12, 2021 and the procurement process is underway. Proposals are due on October 28, 2022. As with the Unit 9 Specification, the proposal deadline for the demolition and site improvement project was extended to allow for a decision to be made regarding the Project. Without a project decision, proposers would have had to develop multiple proposals for different project alternatives. No action is requested of Council at this time with regard to the Demolition and Site Improvement Contract. In the future, staff will return to City Council for award of the contract. The start of the demolition work is planned for the fall of 2023, after completion of the Unit 9 separation work.

(C) Procurement of the Tesla, Inc. Battery Energy Storage System

The City and Tesla are finalizing negotiations of the Engineer, Procure, Construct (EPC) contract for the supply, delivery, installation, and commissioning a 50 MW/ 200 MWh Battery Energy Storage System (BESS). Thereafter, the parties will negotiate and finalize the terms of the Long Term Maintenance Agreement (LTSA) for the BESS. The LTSA provides preventative and corrective maintenance services and allows GWP to purchase spare parts as needed.

The cost of the Tesla BESS has been increasing and is expected to continue to increase. On June 25, 2022, Tesla provided updated indicative pricing for the EPC contract (50 MW/ 200 MWh BESS) of approximately \$115 million. This is a 45% increase over the indicative pricing of approximately \$79 million that was provided in December 2021. To maintain the BESS, the City will also have to enter into a Long Term Maintenance Agreement for the BESS in a price to be determined.

The price increase arises out of significant supply chain and cost escalation issues occurring for battery and electrical projects at this time, including significant escalation in Lithium pricing over the past several years. The Tesla EPC Contract will include cost escalation provisions for the price of the BESS. This means that the battery price is indexed to market and the price will be established at a future date stipulated in the contract; thus, the BESS price will not be fixed at the time the contract is signed.

In addition, in late June, Tesla notified Glendale that Tesla is no longer offering energy capacity maintenance contracts. That is, the 200 MWh system capacity will not be maintained at 200 MWh for the 20-year contract term and that capacity will degrade over time. In the future, as the batteries degrade, the City will need to purchase, and find the space for, additional modules to maintain the original project capacity.

(D) Engineering, Procurement, and Construction Work to Integrate the

### Facilities into the Site (“Balance of Site” Contract)

In addition to contracting with Tesla and Wartsila to engineer, procure and construct their respective power islands, the City must retain a contractor to engineer, procure, and construct the remainder of the improvements on the site. The “Balance of Site” contractor’s scope of work includes interconnecting the Tesla and Wartsila power islands to the GWP sub-transmission system; engineering and constructing new control room, new power plant operations and maintenance buildings, a new recycled water treatment facility, a new potable/ fire water system, a new storm water drain system and holding tank, a new plant control system; a new fuel piping system, new station service power distribution center, and improvements and paving on the site.

GWP recommends using the “Engineer, Procure Construct” (EPC) project delivery method rather than the traditional “Design-Bid-Build” method for the “Balance of Site” contract, due to the high level of technical complexity of the project and the time savings that can be achieved using the EPC method, and because the project requires expertise that the City does not have.

EPC procurement is an “alternative project delivery method” under the City’s Alternative Project Delivery Method Ordinance (Chapter 4.13 of the Glendale Municipal Code). The Ordinance requires an alternative project delivery method to be authorized by the City Council before an RFP may be issued utilizing the alternative project delivery method. GWP recommends that that City Council authorize the use of the EPC procurement method for the Grayson repowering project and authorize GWP to issue an RFP to solicit proposals from qualified EPC Contractor for the project.

Under the traditional method of Design-Bid-Build, the project would require multiple procurement, contract negotiation, and approval processes which, along with additional administrative processes and project coordination, would extend the project’s delivery date. In contrast, the EPC project delivery method is streamlined. The EPC procurement method means the City would enter into one contract for the design, development of architectural plans, construction, supply of the “balance of site” (BOS) equipment (i.e not supplied by Tesla or Wartsila) and commissioning of the BOS systems. The EPC Contract would be awarded following a competitive RFP process.

With the EPC method, the City can achieve time and cost savings compared to the City’s traditional construction method. This is a critical consideration as the City will only have Grayson Unit 9 available when the site is being demolished and the power islands constructed. Minimizing this window of time, and allowing long-lead procurement to begin relatively soon after the start of engineering, will help reduce the procurement window. Additionally, using the EPC method will enable constant communication and coordination between the engineering and construction teams, thereby reducing design errors, construction mistakes and change orders, leading to lower project cost and risk. Using the EPC method for this complex project will result in early coordination of the construction means, methods and materials. On June 22, 2022 the General Manager of GWP obtained the City Manager’s approval for the proposed alternative procurement method for the Balance of Site Contractor, as required by Glendale Municipal Code Section 4.13.070. (See Exhibit 2).

(E) Phase 2 LNTP Contract for Wartsila Engines

Per the City Council's direction not to move forward at this time with the purchase of the Wartsila engines, the Wartsila contract work will be segregated into two agreements: (1) A "Phase 2 Limited Notice to Proceed" (LNTP) contract for further engineering work to prepare for the five Wartsila engines; and (2) An "Engineer, Procure, Construct" contract for final engineering work, procurement, construction, and commissioning of the Wartsila Power Island.<sup>10</sup> Negotiation of the latter contract, and all procurement activities for the Wartsila power island and the Full Notice to Proceed, are on hold pending the City Council's decision regarding the installation and number of Wartsila engines.

GWP and Wartsila have negotiated a contract for a "Phase 2 LNTP" professional services agreement that would provide GWP with design drawings for the Wartsila foundations and associated piles for a five-engine power island that are ready for "Issued for Construction" for an amount not to exceed \$9,882,000. The proposal includes the necessary engineering work to achieve 60% design completion which is the point in the Wartsila design process where the foundation design can be issued for construction. The "Limited Notice to Proceed" design process will take fifteen months to complete.

It is important to note that the design package that Wartsila will prepare under the Phase 2 LNTP Agreement is premised on a five-engine power island. A change in the project from a 5-engine project to a project with fewer engines would require new design services not included in the contract<sup>11</sup>. The cost and schedule impact of any such additional design work, if fewer than five engines are selected, is unknown at this time.

The proposed Phase 2 LNTP Agreement with Wartsila specifies that if a Notice to Proceed for the engineering work is not issued and a down payment not made within 90 days of contract execution, the prices are subject to change. The City has the right to terminate the contract with Wartsila for convenience at any time subject to payment of cancellation charges to Wartsila. The cancellation payments escalate depending upon when the contract is terminated.

Staff recommends that the City Council authorize a contract with Wartsila for the Phase 2 LNTP professional services agreement so that the work of preparing the design package for the Wartsila power island can begin per the Council's direction. A reserve for contingencies in the amount of \$988,200 (10% of the contract price) is recommended to address any design changes that may arise.

(F) Air Permits and Emissions Reduction Credits for Five Wartsila Engines

The City has submitted an air permit application to the South Coast Air Quality Management District (SCAQMD) for the five Wartsila engines and the application has been reviewed by SCAQMD air permitting engineers. GWP awaits the SCAQMD's decision regarding the emissions reduction credits needed for the project.

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<sup>10</sup> The City Council authorized the use of an Alternative Project Delivery Method was authorized for both the Tesla and the Wartsila Engineer, Procure, and Construct Contracts and the Long Term Service Agreements on July 23, 2019.

<sup>11</sup> A reduction in the number of engines would require modifying the drawings to indicate what should still be built, and some features would need to be re-sized or re-located.

(G) Financing

As discussed with the City Council in its March 1, 2022 meeting, a decision regarding the procurement of the Wartsila engines is needed in order to obtain bond financing pertaining to the Wartsila engines. Since the City Council is still evaluating whether to purchase the Wartsila engines, staff proposes to issue two separate bond financings for the Grayson Repowering Project, a first bond to fund the Tesla batteries, demolition, and site improvement work, and a second bond issuance to fund the Wartsila engines and remaining work after a decision is made regarding Wartsila engines. Rising interest rates are expected to impact the cost of the financing for the project.

(H) Other Services

In order to continue planning and development of the Grayson Repowering Project, it is recommended that the City Council authorize Amendments to the following contracts:

(1) Stantec Consulting Services, Inc.

Staff seeks authorization to amend an existing Professional Services Agreement with Stantec to provide funding for continued environmental support, including air quality permitting work, architectural historian support pertaining to the Grayson Boiler Building, post-CEQA certification support (including support for implementation of the mitigation monitoring and reporting requirement for the project), and litigation support as needed in connection with two lawsuits challenging the Grayson Final EIR. Stantec has served as the City's environmental consultant for the Grayson Repowering Project, including preparation of the Draft and Final EIR. The work would be performed on a time and materials basis for an amount not to exceed \$164,000 which includes a \$30,000 contingency.

(2) Black & Veatch

Black & Veatch is the City's Owner's Engineer for the Limited Notice to Proceed (LNTP) Phase of the Grayson Repowering Project. An Amendment to the Black & Veatch contract is needed to provide funding for owner's engineering services in support of ongoing LNTP tasks including the Demolition/ Site Improvement RFP, the RFP for the Balance of Site EPC contract, an interconnection study, and a closure plan. GWP also recommends that Black & Veatch be retained through the Unit 9 separation work as Black & Veatch performed the detailed design for that project.

Black & Veatch is best suited to perform this work because of the extensive work that has gone into the Grayson project during the permitting process and Black & Veatch's involvement and historical knowledge of that effort. Black & Veatch has extensive experience working with Wartsila and Tesla on the project and historical knowledge regarding the development of the design. Additionally, Black & Veatch performed the geotechnical study upon which the Wartsila and Tesla design will be based. The site geotechnical issues proved to be more complex than were anticipated at the start of the project, and were further complicated by changes in applicable design codes. Further confirmatory geotechnical studies will be required at the end of the site improvement process. Retaining Black & Veatch for this role is the most prudent approach. GWP has obtained a proposal from Black & Veatch for the owner's engineering tasks needed to keep the project moving forward. The estimated cost of the above services is \$1,570,668, broken down as follows:



<b>Change Order</b>	<b>Amount</b>
Interconnection Studies for the Wartsila generators and Tesla batteries	\$92,146
Additional Support for the Balance of Site Engineer Procure Construct Contractor Request for Proposals	\$165,664
Review Wartsila LNTP Phase 2 Submittals	\$81,626
Review Tesla Engineer Procure Construct Submittals	\$42,218
Update the demolition/site improvement and Balance of Site Engineer Procure Construct cost estimates in light of changed market conditions.	\$18,840
Incorporate the Addendum developed for the Tesla batteries into the Fire Protection Design Basis as requested by Glendale Fire Department.	\$9,826
Engineering oversight and geotechnical support for Demolition/Site Improvement	\$1,075,148
Unit 9 Separation Support – design modifications to mitigate longer than desired schedule.	\$85,200
<b>Total</b>	<b>\$1,570,668</b>

A reserve of \$157,067 (10% of the Amendment amount) is also recommended to cover unforeseen contingencies.

### (3) Clean Power Consulting Partners

Mr. David Tateosian, P.E. of Clean Power Consulting Partners, serves as the project manager for the Grayson Repowering Project. Staff seeks authorization to increase the not to exceed amount of an existing Professional Services Agreement by \$150,000 to cover project management and engineering activities for Fiscal Year 2022-2023.

### (4) Miscellaneous Project Costs

In addition to funding the foregoing contracts, the proposed resolution of appropriation includes funding for additional anticipated costs associated with the Project including legal services for ongoing contract negotiations (\$100,000) and Southern California Gas Co. engineering research, analysis, and design services of a new single-meter station assembly for the entire plant to replace existing and obsolete multi-meter stations estimated at \$400,000.

## **III. Conclusion**

As directed by the City Council, staff is proceeding to implement all aspects of the Grayson Repowering Project except for procurement of Wartsila Engines. Staff requests that the City Council approve the contracts, amendments, and procurement actions recommended herein to further the development of the project and note and file this report regarding the status of the Grayson Repowering Project and energy procurement

efforts. Also included for Council consideration is a motion directing staff to prepare the necessary actions and approvals for Council consideration to authorize the purchase and installation of the five Wartsila engines.

## **STAKEHOLDERS/OUTREACH**

The City obtained comments and input from the public regarding the Grayson Repowering Project through the Environmental Impact Report process and through public and community meetings, including City Council and Commission meetings. GWP continues to present updates regarding the Grayson Repowering Project and its Clean Energy initiatives to the Glendale Water & Power Commission. The Glendale Water & Power Commission has prepared and transmitted a letter to the City Councilmembers with recommendations regarding the Grayson Repowering Project, and a copy of that letter is attached to this Report as Exhibit 5.

## **FISCAL IMPACT**

GWP anticipates that the Grayson Repowering Project will be funded through two bond issuances. On July 19, 2016 and July 23, 2019, the City Council adopted Bond Reimbursement Resolutions which allow the City to recoup expenditures made for the Grayson Repowering Project development from bond proceeds, if and when bonds are issued for the project.

Staff is requesting a Resolution of Appropriation to transfer funds from Net Position, Electric Fund Balance to the various accounts listed below for a total amount of \$18,084,192.00.

The contracts and contract amendments, and miscellaneous project expenses described in this report would be funded as follows:

Contract with ARB, Inc. for the Grayson Unit 9 Separation:

<b>Requesting Appropriation</b>			
<b>Amount</b>	<b>From (Account String)</b>	<b>To (Account String)</b>	<b>Funding Source</b>
\$4,672,257.00	GL: 27900-5810-GWP-0000	GL: 52100-5830-GWP-0020  PL: GWP00171AN	GWP Electric Depreciation Fund

Professional Services Agreement with Wartsila North America, Inc. for Phase 2 LNTP:

<b>Requesting Appropriation</b>			
<b>Amount</b>	<b>From (Account String)</b>	<b>To (Account String)</b>	<b>Funding Source</b>
\$10,870,200.00	GL: 27900-5810-GWP-0000	GL: 43110-5830-GWP-0020	GWP Electric Depreciation Fund

		PL: GWP00170BN	
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Amendment to Professional Services Agreement with Stantec Consulting Services, Inc. for environmental consulting services:

Requesting Appropriation			
Amount	From (Account String)	To (Account String)	Funding Source
\$164,000.00	GL: 27900-5810-GWP-0000	GL: 43110-5830-GWP-0020  PL: P13748	GWP Electric Depreciation Fund

Amendment to Professional Services Agreement with Black & Veatch for Owner's Engineering Services:

Requesting Appropriation			
Amount	From (Account String)	To (Account String)	Funding Source
\$1,727,735.00	GL: 27900-5810-GWP-0000	GL: 43110-5830-GWP-0020  PL: GWP00170CN	GWP Electric Depreciation Fund

Amendment to Professional Services Agreement with Clean Power Consulting Partners for Project Management and Technical Support Services:

Requesting Appropriation			
Amount	From (Account String)	To (Account String)	Funding Source
\$150,000.00	GL: 27900-5810-GWP-0000	GL: 43110-5830-GWP-0020  PL: GWP00170CN	GWP Electric Depreciation Fund

Miscellaneous Project Costs for legal and Southern California Gas Co. services:

Requesting Appropriation			
Amount	From (Account String)	To (Account String)	Funding Source
\$500,000.00	GL: 27900-5810-GWP-0000	GL: 43110-5830-GWP-0020  PL: P13748	GWP Electric Depreciation Fund

There is no fiscal impact to the Resolution Approving an Alternative Procurement Method for the "Balance of Site" Engineer, Procure, Construct Contract.

## ENVIRONMENTAL REVIEW

The Final Environmental Impact Report (EIR) for the Grayson Repowering Project was

certified on February 15, 2022.

This report providing updates on the Grayson Repower, power supply planning, and on various clean energy programs is exempt from the requirements of the California Environmental Quality Act (CEQA) as it will not have a direct physical change or reasonably foreseeable indirect physical change in the environment. Cal. Public Resources Code Section 21065.

## **CAMPAIGN DISCLOSURE**

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The names and business addresses of the members of the boards of directors, the chairpersons, CEO, COO, CFO, Subcontractors and any person or entity with more than 10% interest in the companies proposed for contract in this Agenda Item Report are attached in Exhibit 1, in accordance with City Ordinance No. 5744.

## **ALTERNATIVES**

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Alternative 1: Adopt a Motion to Note and File the Report and the Motions and Resolutions as recommended herein.

Alternative 2: Adopt a Motion to Note and File the Report but do not Adopt the Motions and Resolutions described herein.

Alternative 3: Consider any other alternative or adopt a Motion providing direction to staff with regard to the subject matter of this report.

## **ADMINISTRATIVE ACTION**

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**Submitted by:**

Mark Young, General Manager, Glendale Water & Power

**Prepared by:**

Christine Godinez, Principal Assistant City Attorney

**Approved by:**

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

## **EXHIBITS / ATTACHMENTS**

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- Exhibit 1: Campaign Finance Disclosure for ARB, Inc., Wartsila North America, Inc., Stantec Consulting Services, Inc., Black & Veatch, and Clean Power Partners
- Exhibit 2: June 22, 2022 Memorandum from Glendale Water & Power to City Manager re Alternative Project Delivery Method for Balance of Site Contractor
- Exhibit 3: Contract Synopsis for Contracts and Amendments proposed in this Report
- Exhibit 4: Project Chronology and Schedule
- Exhibit 5: GWP Commission letter to Glendale City Council dated June 6, 2022.