

Executive Summary

Project Location and Description

Pursuant to the requirements of the California Environmental Quality Act (CEQA), the City of Glendale (City) has prepared this Draft Environmental Impact Report (EIR) to evaluate the potential environmental impacts of the proposed repowering of the Grayson Power Plant ("Repowering Project" or "Project"). The Project site is located at 800 Air Way, Glendale, California 91201, northeast of the Interstate 5 freeway and Hwy 134 interchange.

A majority of the equipment and facilities at the existing Grayson Power Plant were completed between 1941 and 1977, and are proposed to be replaced with more reliable, efficient, flexible, and cleaner units. With the exception of the 2003 simple cycle peaking plant (Unit 9), the City is proposing to replace the existing generation equipment and related facilities with a combination of new combined cycle and simple cycle gas turbine generation units. The generating capacity would increase from 267 megawatts (MW) net to 310 MW net (an increase of 43 MW net) which is necessary for the City to serve its customer load and meet a regulatory requirement for reliability. Because the Project involves less than a 50 MW increase in generation capacity, it is not subject to the California Energy Commission's Power Plant Licensing jurisdiction. The City is the CEQA Lead Agency for the Project.

The Project is designed to provide reliable generating capacity, avoid electrical capacity shortages, facilitate the use of more renewable energy by freeing up transmission line capacity to bring more renewable-based electricity to the City, and to provide flexibility to operate efficiently over the wide range of electrical loads placed on the City's electric system. The Project will allow the City to maintain reliable service, keep rates affordable, and facilitate compliance with state regulations regarding renewable energy supplies mandated through the Renewable Portfolio Standards without the need for new transmission lines. The Project will also allow the City to meet its existing and future electrical demands even if the City is separated from existing interconnections with the electric grid, it will minimize the City's reliance on importing power from remote generation locations across a congested transmission grid, and it will support water conservation efforts by eliminating the use of potable water for generation purposes.

Additional background including the site's history as a power plant, purpose and need, objectives, and benefits of the Project are included in Section 2.0. A detailed Project description is included in Section 3.0

Environmental Impacts and Mitigation Measures

Topics evaluated in this Draft EIR have been identified based on preparation of an Initial Study (Appendix A), the responses to the Notice of Preparation (NOP), and the review of the Project by City staff. The City determined through this initial review process that impacts related to aesthetics, air quality, geology and soils, greenhouse gases, hazards and hazardous materials, hydrology and water quality, noise, traffic and transportation, and tribal cultural resources could be potentially significant and require an assessment in this Draft EIR.

Based on the analysis in the Draft EIR, the City determined that the Project would result in less than significant impacts to air quality, geology and soils, greenhouse gas emissions, hydrology and water quality, and tribal cultural resources. However, it was also determined that aesthetics, hazards and hazardous materials, noise, and transportation and traffic would, with associated mitigation measures, also be reduced to a less than significant level. The Project has no potentially significant impacts that could not be mitigated.

The required mitigation measures for the Project are summarized below. A more detailed summary of all the Project's environmental impacts is included in Table 2-4 and detailed environmental impact analyses are in Sections 4.0.

Aesthetics

During the construction period, construction activities may contrast with the existing visual character/quality of views in the Project area. Mitigation Measure AES-1 requires screening construction activities and laydown areas to reduce their visibility.

Hazards and Hazardous Materials

There would be a potentially significant temporary hazards and hazardous materials impact. The demolition and construction phases of the Project may create temporary hazards and hazardous materials impacts due to the use of fuels, handling of petroleum-impacted soils, and handling of materials containing asbestos/lead based paint. Mitigation Measures HAZ-1, 2, 3, 4, and 5 require adherence to a Soil Management Plan, Hazardous Materials Management Plan, Asbestos and Lead Paint Management Plan, and safe fuel handling practices/spill response.

In addition, to mitigate the off-site consequence of the worst-case accidental release of ammonia during Project operation. Mitigation Measure HAZ-6 requires the surface area of the proposed and existing ammonia tank containment systems to be effectively reduced by 90 percent or greater which would restrict the concentrations of concern within the site boundary.

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Transportation and Traffic

During the demolition and construction phases, traffic would increase in on adjacent public roadways and the acceptable circulation standard at the San Fernando Rd./Doran St. intersection could be exceeded during construction. Mitigation Measures TRA-1, 2, 3, 4, 5, 6, 7, 8, and 9 require adherence to a Traffic Control Plan and number of public safety precautions as well as limiting the number of vehicle trips at the San Fernando Rd./Doran St. intersection during construction.

Noise

The noise from the Project operation has been reduced through engineering design and controls as described in Mitigation Measures NOI-1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 which require limits on source noise levels and controls to ensure acceptable noise levels during facility operation are not exceeded.

Mitigation Measures

Implementation of the above mitigation measures would reduce the Project's potentially significant impacts to aesthetics, hazards and hazardous materials, noise, and transportation and traffic to a less than significant level. When the EIR is certified, a mitigation monitoring program would be adopted to ensure that the mitigation measures are fully implemented. With the implementation of these mitigation measures, the Project would not result in any significant and unavoidable environmental impacts.

Alternatives to the Project

A reasonable range of alternatives that could feasibly attain some of the basic objectives of the Project and their potential environmental impacts are evaluated in the Draft EIR. These alternatives include use of a battery energy storage system, off-site utility-scale renewable energy generation combined with the addition of new high voltage transmission capacity and interconnections, a combination of reduced on-site generating capacity combined with the addition of new high voltage transmission capacity and interconnections, and a combination of reduced on-site generating capacity and a battery energy storage system. A summary of each alternative evaluated in this Draft EIR is set forth below. A more detailed evaluation of alternatives is set forth in Section 5.0.

No Project Alternative

The No Project Alternative would involve running the existing power plant to failure and not proceeding with repowering of the Grayson Power Plant. The No Project Alternative would result in reduced environmental impacts over time as the units are shut down and would have less potential environmental impacts than those of the Project.

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However, the No Project Alternative is not a viable alternative in that it would not serve the needs of the City as the City could no longer meet its obligations as a load serving entity for its residents and customers, placing them at significant risk for decreased electrical system reliability and availability. Moreover, the No Project Alternative would not meet the Project objectives and would fail to comply with Federal and State reliability standards.

Energy Storage Project Alternative

The Energy Storage Project Alternative would involve replacing Units 1 – 8 at the existing Grayson Power Plant with a battery energy storage facility. Use of the City's existing Unit 9 electrical generation, the City's allotment from the Magnolia Power Plant, and transmission capacity to serve the City's electrical load and charge batteries when excess capacity is available. Energy stored in the batteries would then be discharged to serve the electrical load when demand exceeds available transmission and generation resources.

The Energy Storage Project Alternative's potential for local air quality, greenhouse gas emissions, hydrology and water quality, noise, and traffic and transportation impacts are less than those of the Project. More distant impacts due to the additional night-time generation needed to charge the batteries, when renewable solar energy will not be available, are potentially increased. Additionally, during the summer season, it is not possible to import enough electricity to charge the batteries to serve the daytime load. For these reasons, this Alternative was not selected because it does not feasibly meet the Project objectives to the same extent as the Project.

Alternative Energy Project Alternative

The Alternative Energy Project would involve some combination of photovoltaic or wind power production with energy storage and transmission lines. While the Alternative Energy Project Alternative reduces local potential air quality, greenhouse gas emissions, hydrology and water quality, and noise impacts local to the Grayson Power Plant site, it increases off-site impacts due to the need for increased transmission as well as the large area needed for a wind farm or solar field.

Because of the very limited ability to site solar or wind resources within the City, combined with the energy storage considerations discussed in the preceding Energy Storage Project Alternative, as well as the complications associated with building a new transmission line to import alternative energy, the Alternative Energy Project Alternative was not considered an adequate replacement for the power that would be generated by the Project. Additionally, the Alternative Energy Project Alternative does not feasibly meet the Project objectives to the same extent as the Project.

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150 MW Project Alternative

The 150 MW Project Alternative would involve a reduced size power project located on the existing project site with a new transmission interconnection. While the 150 MW Project Alternative would have incrementally less potential air quality, greenhouse gas emissions and noise impacts than those of the Project, the potential impacts at the Grayson Power Plant site are generally similar.

However, the 150 MW Project Alternative also includes construction of a new transmission line that has the potential to result in greater potential impacts to aesthetics, agriculture and forestry resources, cultural/tribal cultural resources, geology and soils, land use and planning, and population and housing. In addition to the potential environmental impacts, the 150 MW Project Alternative does not feasibly meet many of the Project objectives or meet them as well as the Project.

200 MW Project Alternative

The 200 MW Alternative would have reduced air and greenhouse gas emissions and noise from one less generation unit compared to the Project, with the reduction of one unit offset by the addition of a battery energy storage system (one that is smaller than the earlier alternative). The battery energy storage system adds the impact of the cost of periodic battery replacement as well as the need to dispose/recycle the batteries when they reach end of life. If sufficient transmission capacity were not available for charging the BESS, then the air emissions may not be reduced due to the need to operate additional unit(s) to charge the BESS.

Environmentally Superior Alternative

The Draft EIR found that none of the alternatives would totally avoid or significantly lessen significant impacts of the Project. As a result of this analysis, the proposed Project would meet all project objectives while resulting in the fewest impacts when compared to the feasible alternatives evaluated and is therefore considered the environmentally superior alternative.

Alternatives Considered but Not Evaluated in this EIR

A number of alternatives were considered but eliminated from further consideration in this Draft EIR. The alternatives that were not evaluated further include alternative power plant sites, and a variety of alternative technologies (generation technology, fuel technology, and alternative power plant cooling). These alternatives are more fully discussed in Section 5.3.

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