

constructed with materials that are not highly reflective. See pages 4.A-32 and 4.A-35 of the Draft EIR and page 2-14 of the Final EIR.

4. The Preferred Alternative will not shade/shadow sensitive uses for a substantial period of time. Specifically, it will not shade off-site shadow-sensitive residential uses at any time between the hours of 9:00 A.M. and 3:00 P.M. during the winter solstice. See pages 4.A-35 and 4.A-36 of the Draft EIR and page 2-14 of the Final EIR.

B. AIR QUALITY

1. The Preferred Alternative will not conflict with or obstruct implementation of the applicable air quality plan. The Preferred Alternative will not result in new employment and therefore would not conflict with the growth projections utilized in the applicable AQMP. In addition, the Preferred Alternative will not result in ambient levels of pollutants that would cause or contribute significantly to an exceedance of the state and federal ambient air quality standards. Therefore, the Preferred Alternative will have a less than significant impact. See page 4.B-33 of the Draft EIR and page 2-14 of the Final EIR.
2. The Preferred Alternative will not violate any air quality standard or contribute to an existing or projected air quality violation. Construction of the Preferred Alternative will not exceed the South Coast Air Quality Management District (SCAQMD) daily mass thresholds; therefore, construction emissions will not violate any air quality standard or contribute to an existing or projected air quality violation and impacts will be less than significant. Although construction of the Preferred Alternative will be less than significant, the Preferred Alternative will commit to emission reduction measures suggested by the SCAQMD. These measures (Mitigation Measures AQ-1 through AQ-9) are provided in Section 3.0, Corrections and Additions to the Draft EIR and Section 4.0, Mitigation Monitoring and Reporting Program of the Final EIR. The mitigation measures are also provided in Exhibit B, Mitigation Monitoring and Reporting Program of this Resolution. Implementation of these measures are not required to support a less than significant determination, since construction of the Preferred Alternative without the measures will result in emissions that are already below the SCAQMD thresholds of significance. Nonetheless, implementation of these measures will result in further reduced emissions, even though they are not required under CEQA. See

pages 4.B-33 to 4.B-37 and 4.B-42 of the Draft EIR and page 2-14 of the Final EIR.

3. Commissioning of the Preferred Alternative will temporarily exceed the SCAQMD daily mass thresholds. In order to determine whether the exceedance will violate any air quality standard or contribute to an existing or projected air quality violation, dispersion modeling was conducted to evaluate ambient pollutant concentrations as a result of commissioning emissions. The results of the dispersion modeling analysis indicate that the commissioning of the Preferred Alternative will result in concentrations of pollutants in the ambient atmosphere that will not violate any air quality standard or contribute to an existing or projected air quality violation. Therefore, commissioning will be less than significant. See pages 4.B-33 to 4.B-37 and 4.B-42 of the Draft EIR, page 2-14 of the Final EIR and Section 3.0, Corrections and Additions to the Draft EIR, pages 3-14 and 3-16 of the Final EIR.
4. Operation of the Preferred Alternative will not exceed the SCAQMD daily mass thresholds with the exception of fine particulate matter (PM_{2.5}). In order to determine whether the exceedance will violate any air quality standard or contribute to an existing or projected air quality violation, dispersion modeling was conducted to evaluate ambient pollutant concentrations as a result of operational emissions. The results of the dispersion modeling analysis indicate that the operation of the Preferred Alternative will result in concentrations of pollutants in the ambient atmosphere that will not violate any air quality standard or contribute to an existing or projected air quality violation. Therefore, operation will be less than significant. See pages 4.B-37 to 4.B-42 of the Draft EIR and page 2-14 of the Final EIR.
5. The Preferred Alternative will not result in a cumulatively considerable net increase of any criteria pollutant for which the region of the Preferred Alternative is non-attainment under an applicable federal or state ambient air quality standard. Construction of the Preferred Alternative will not exceed the SCAQMD daily mass thresholds; therefore, construction emissions will not result in a cumulatively considerable net increase of any criteria pollutant for which the region of the Preferred Alternative is non-attainment. Commissioning of the Preferred Alternative will temporarily exceed the SCAQMD daily mass thresholds. In order to determine whether the exceedance will result in a cumulatively considerable net increase of any criteria pollutant for which the region of the Preferred Alternative is non-attainment,

dispersion modeling was conducted to evaluate ambient pollutant concentrations as a result of commissioning emissions. The results of the dispersion modeling analysis indicate that the commissioning of the Preferred Alternative will result in concentrations of pollutants in the ambient atmosphere that will not be considered a cumulatively considerable net increase of any criteria pollutant for which the region of the Preferred Alternative is non-attainment. Therefore, commissioning will be less than significant. Operation of the Preferred Alternative would not exceed the SCAQMD daily mass thresholds with the exception of PM_{2.5}. In order to determine whether the exceedance will result in a cumulatively considerable net increase of any criteria pollutant for which the region of the Preferred Alternative is non-attainment, dispersion modeling was conducted to evaluate ambient pollutant concentrations as a result of operational emissions. The results of the dispersion modeling analysis indicate that the operation of the Preferred Alternative will result in concentrations of pollutants in the ambient atmosphere that will not be considered a cumulatively considerable net increase of any criteria pollutant for which the region of the Preferred Alternative is non-attainment. Therefore, operation will be less than significant. See pages 4.B-42 to 4.B-45 of the Draft EIR and page 2-14 of the Final EIR.

6. The Preferred Alternative will not expose sensitive receptors to substantial pollutant concentrations. Construction of the Preferred Alternative would result in temporary and short-term emissions. According to SCAQMD methodology, health effects from carcinogenic air toxics are described in terms of incremental increase in individual cancer risk, which is the likelihood that a person exposed air toxic concentrations over a 70-year lifetime would contract cancer based on standard risk assessment procedures. Given the relatively short-term construction schedule of less than two years, construction-related toxic emissions impacts will be less than significant. Similarly, given the relatively short-term commissioning period of 12 days, commissioning-related toxic emissions impacts will be less than significant. Operation of the Preferred Alternative could result in long-term emissions of air toxics. In order to determine if operation will expose sensitive receptors to substantial pollutant concentrations, dispersion modeling was used to estimate concentrations of air toxics at sensitive receptors. The results of the dispersion modeling analysis indicated that the incremental increase in cancer risk from operation of the Preferred Alternative will be up to 0.07 in a million for a resident and

0.02 in a million for a worker. This increase in risk is much less than the SCAQMD Rule 1401 threshold of one in a million. In addition, operation of the Project will not result in chronic or acute impacts in excess of the SCAQMD threshold. Therefore, operation of the Preferred Alternative will result in a less than significant impact. Vehicle traffic associated with the Preferred Alternative will not cause or contribute the formation of carbon monoxide (CO) hotspots due to an increase in congestion at affected roadway intersections. Therefore, the Preferred Alternative's incremental increase in vehicle traffic will not expose sensitive receptors to substantial pollutant concentrations and impacts will be less than significant. See pages 4.B-45 to 4.B-49 of the Draft EIR and page 2-14 of the Final EIR.

7. The Preferred Alternative will not create objectionable odors affecting a substantial number of people. The EIR includes an expanded discussion of the potential for odor impacts and incorporates the information provided in the Initial Study. As identified in the Initial Study, the potential odor impacts will be subject to SCAQMD Rule 402. Upon further evaluation, the EIR determined that the Preferred Alternative does not include any uses identified by the SCAQMD as being associated with substantial odors. Construction of the Preferred Alternative may include the use of architectural coatings and solvents; however, mandatory compliance SCAQMD Rule 1113 will limit the amount of volatile organic compounds (VOCs) in the coatings and solvents. Thus, construction impacts will be less than significant. Commissioning and operation of the Preferred Alternative will utilize natural gas, which itself is odorless. However, natural gas suppliers add an odorous compound as a safety precaution to detect accidental leaks. Previous odor complaints have been received by the public and PWP has determined that the cause was small quantities of natural gas with the odorous compound additive that posed no health or safety concern. The Preferred Alternative will not add any new sources of odors during commissioning and operation, operations will remain largely the same as with the existing Unit B-3, and the use of BACT and BARCT will reduce the occurrence of accidental releases of compounds that could result in odor impacts. Furthermore, the plant has agreed to limit the venting of natural gas associated with maintenance or repair operations to evening hours when nearby Blair High School and Allendale Elementary School are closed. Therefore, the Preferred Alternative will not create objectionable odors affecting a substantial number of people and impacts will be less than significant.

See page 19 of the Initial Study (Appendix A of the Draft EIR), page 4.B-49 of the Draft EIR, and page 2-14 of the Final EIR.

Note: Comments submitted by the public suggested mitigation measures to further reduce air quality impacts. Although such impacts were less than significant and thus did not require mitigation, the City accepts suggested mitigation measures as follows (see pages 2.61 to 2-65 of the Final EIR):

Mitigation Measure AQ-1: The Pasadena Water & Power Department and its contractors, via the City of Pasadena Public Works Department, shall require the implementation of a “Construction Staging and Traffic Management Plan” that provides for a temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.

Mitigation Measure AQ-2: The Pasadena Water & Power Department and its contractors, in consultation with the City of Pasadena Department of Transportation, shall require the implementation of a “Construction Staging and Traffic Management Plan” that identifies an on-site dedicated turn lane for the movement of construction trucks and equipment. When turning off-site, trucks will be required to utilize the on-site dedicated turn lane described in the plan.

Mitigation Measure AQ-3: The Pasadena Water & Power Department and its contractors shall require the implementation of a “Construction Staging and Traffic Management Plan” that provides for a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM10 generation.

Mitigation Measure AQ-4: The Pasadena Water & Power Department and its contractors shall require that all vehicles and equipment are properly tuned and maintained according to manufacturers’ specifications.

Mitigation Measure AQ-5: The Pasadena Water & Power Department and its contractors shall require the use of coatings and solvents with a VOC content that exceeds the requirements of Rule 1113 if available. All coatings and

solvents shall at a minimum meet the requirements of Rule 1113 unless exempted.

Mitigation Measure AQ-6: The Pasadena Water & Power Department and its contractors shall use construction materials that do not require painting to the extent economically feasible and that meet the project's structural, acoustical, aesthetic, or other needs.

Mitigation Measure AQ-7: The Pasadena Water & Power Department and its contractors shall use pre-painted construction materials for major equipment. Materials that require field coating are exempt from this measure.

Mitigation Measure AQ-8: The Pasadena Water & Power Department and its contractors shall require contractors to use model year 2007 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) pursuant to California Code of Regulations, Title 13, §2025.

Mitigation Measure AQ-9: The Pasadena Water & Power Department and its contractors shall require the use of internal combustion engines/construction equipment that operate on the project site to meet the following:

- At least 50 percent of construction equipment greater than 250 hp, which are on-site for 6 or more consecutive work days, shall meet Tier 3 emissions standards and be outfitted with BACT devices (e.g., Level 3 diesel emissions control devices) certified by CARB.
- A copy of each unit's certified tier specification and BACT documentation shall be available for inspection during construction. The contractor(s) shall monitor and record compliance for each project construction phase and document efforts undertaken to increase the use of compliant off-road vehicles, such as but not limited to bid solicitation documents, fleet registration of successful vendor(s), etc.
- Construction contractors supplying heavy duty diesel equipment, greater than 50 hp, will be encouraged to apply

for AQMD SOON funds. Information including the AQMD website will be provided to each contractor which uses heavy duty diesel for on-site construction activities.

C. CULTURAL RESOURCES

1. The Preferred Alternative will not cause a substantial adverse change in the significance of a historical resource, including the Glenarm Building, Pacific Electric Railway Company Substation No. 2, or the electric fountain (part of a designated historic monument). Under the Preferred Alternative, no interior rehabilitation of the Glenarm Building for use by City employees, or seismic upgrades necessary for essential facility designation, will be undertaken, and there will be no construction of the consolidated administrative facilities, control stations, maintenance facilities, and shared and public spaces within the Glenarm Building. As such, the Preferred Alternative will entirely avoid impacts on historical resources in the Glenarm Building. As part of the Preferred Alternative, a mothballing plan for the Glenarm Building will be created to preserve the existing character-defining features in place while the Glenarm Building remained unoccupied. The mothballing plan will be based on the National Park Technical Preservation Services publication Brief 31. Mothballing Historic Buildings. See pages 4.C-15 to 4.C-22 of the Draft EIR and pages 2-10, 2-14, 2-19 and 2-20 of the Final EIR.

D. GREENHOUSE GAS EMISSIONS

1. The Preferred Alternative will not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The Preferred Alternative will be better than the State's emission performance standard (EPS) established in Senate Bill (SB) 1368 of 1,100 pounds of carbon dioxide per megawatt-hour (lbs CO₂/MWh). In addition, PWP is an entity covered by the cap-and-trade program established pursuant to the Global Warming Solutions Act of 2006 (AB 32) and is subject to compliance obligations including the declining GHG emissions cap, which will result in GHG reductions for the facility. PWP will meet its compliance obligation as required under the cap-and-trade program. The Preferred Alternative will also comply with the City of Pasadena's Green Building Program and meet the Tier 2 requirements by achieving the equivalent of a "Silver" rating from the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) green building program.

Therefore, the Preferred Alternative will result in a less than significant impact. See pages 4.D-22 and 4.D-23 of the Draft EIR and page 2-20 of the Final EIR.

E. HAZARDS AND HAZARDOUS MATERIALS

1. The Preferred Alternative will not create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials associated with the limited use of hazardous materials during construction, and the use of aqueous ammonia and natural gas during operation of the Preferred Alternative. PWP will implement safety controls during the delivery and use of ammonia and natural gas including the use of personal protective equipment and compliance with established delivery procedures and safety controls. Therefore impacts will be less than significant. See pages 4.E-16 to 4.E-25 of the Draft EIR and pages 2-20 and 2-21 of the Final EIR.
2. The Preferred Alternative will not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment associated with the limited use of hazardous materials during construction, and the use of aqueous ammonia and natural gas during operation of the Preferred Alternative. In accordance with the U.S. Environmental Protection Agency (EPA) and California Accidental Release Prevention (CalARP) program, a risk management plan (RMP) is maintained by PWP, which details the plants protocol for the handling of and notification of accidental releases. Compliance with the protocols and safety controls will result in a less than significant impact. See pages 4.E-16 to 4.E-25 of the Draft EIR and pages 2-20 and 2-21 of the Final EIR.
3. Although the Preferred Alternative will result in the handling of hazardous materials, substances, and wastes within one-quarter mile of Blair High School and Allendale Elementary School, impacts associated with the limited use of hazardous materials during construction, and the use of aqueous ammonia and natural gas during operation of the Preferred Alternative will be less than significant. PWP will implement safety controls during the delivery and use of ammonia and natural gas including the use of personal protective equipment and compliance with established delivery procedures and safety controls. See pages 4.E-16 to 4.E-25 of the Draft EIR and pages 2-20 and 2-21 of the Final EIR.

4. Construction and operation of the Preferred Alternative will not create a railroad hazard on the adjacent Metro Gold Line Light Rail Railroad right-of-way. Construction of the Preferred Alternative is not expected to occur adjacent to the Metro right-of-way; however, PWP will submit plans to Metro and will permit Metro staff to monitor construction activity to ensure impacts regarding railroad hazards are less than significant. See page 4.E-25 of the Draft EIR, pages 2-20 and 2-21 of the Final EIR, and Section 3.0, Corrections and Additions to the Draft EIR, page 3-13 of the Final EIR.

F. NOISE

1. The Preferred Alternative will not result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Construction of the Preferred Alternative will result in periodic noise levels up to approximately 84 A-weighted decibels (dBA) when measured at 100 feet from the equipment, which is below the City of Pasadena threshold of 85 dBA measured at 100 feet. Therefore, construction noise impacts will be less than significant. Operation of the Preferred Alternative will not result in an increase in noise levels that exceed the City's threshold of an increase of 5 dBA or more at sensitive receptor locations. Therefore, operational noise impacts will be less than significant. See pages 4.G-12 to 4.G-19 of the Draft EIR and page 2-21 of the Final EIR.
2. The Preferred Alternative will not result in exposure of person to or generation of excessive groundborne vibration or groundborne noise levels. The Preferred Alternative will result in groundborne vibration levels that are less than the threshold of 0.5 inches per second (PPV) for older residential structures and 0.2 PPV for historical buildings. The peak estimated vibration level of 0.124 PPV at the Glenarm Building will occur during construction. Impacts will be less than significant. See pages 4.G-12 to 4.G-19 of the Draft EIR and page 2-21 of the Final EIR.
3. The Preferred Alternative will not result in a substantial permanent increase in ambient noise levels in the vicinity of the Preferred Alternative above levels existing without the Preferred Alternative. Operation of the Preferred Alternative will not result in an increase in noise levels that exceed the City's threshold of an increase of 5 dBA or more at sensitive receptor locations. Therefore, operation of the

Preferred Alternative will not result in a substantial permanent increase in ambient noise levels in the vicinity of the Preferred Alternative and noise impacts will be less than significant. See pages 4.G-12 to 4.G-19 of the Draft EIR and page 2-21 of the Final EIR.

4. The Preferred Alternative will not result in a substantial temporary or periodic increase in ambient noise levels in the vicinity of the Preferred Alternative above levels existing without the Preferred Alternative. Construction of the Preferred Alternative will result in periodic noise levels up to approximately 84 A-weighted decibels (dBA) when measured at 100 feet from the equipment, which is below the City of Pasadena threshold of 85 dBA measured at 100 feet. Construction noise levels at the nearest off-site receptor location will be approximately 69 dBA. Therefore, construction of the Preferred Alternative would not result in a substantial temporary or periodic increase in ambient noise levels in the vicinity of the Preferred Alternative and noise impacts will be less than significant. See pages 4.G-12 to 4.G-19 of the Draft EIR and page 2-21 of the Final EIR.

G. WATER SUPPLY

1. The Preferred Alternative will not use water in a wasteful and inefficient manner during construction or operation. Construction of the Preferred Alternative will create temporary, intermittent demand for water over the approximately two-year construction period for such activities as soil watering for site preparation, fugitive dust control, concrete preparation, painting, cleanup, and other short-term activities, but is not expected to have an adverse impact on City's available water supplies or the existing water distribution system. During operation of the Preferred Alternative, Unit GT-5 will operate more efficiently in terms of water usage per megawatt generated than Unit B-3 (10,892 gallons per operating hour versus 20,459 gallons per operating hour), although the increase in anticipated hours of operation will result in greater overall water usage. See pages 4.H-24 to 4.H-28 of the Draft EIR. See pages 4.H-24 to 4.H-28 of the Draft EIR and page 2-22 of the Final EIR.
2. The City has sufficient water supplies available to serve the Preferred Alternative from existing entitlements and resources and the Preferred Alternative will not require new or expanded entitlements. Operation of the Preferred Alternative is projected to increase water demand by approximately 54,660,000 gallons per year or 167.8 acre feet per year

(for a total of 95,410,000 gallons of water annually or about 293 AFY). This increase would constitute approximately 0.39 percent of the City's projected 2035 water demand and can be met by the City's available and projected water supplies. No direct withdrawal from groundwater wells is proposed. See pages 4.H-24 to 4.H-28 of the Draft EIR and page 2-22 of the Final EIR.

VII. Potentially Significant Environmental Impacts Determined to be Mitigated to a Less Than Significant Level

The EIR found that the Preferred Alternative would have impacts that could be mitigated to a less than significant level on the environmental topic of hazards and hazardous materials (contaminated soils),, as discussed below. The Preferred Alternative's less than significant impacts are discussed in Section VI and significant and unavoidable impacts are discussed in Section VIII. In this Resolution, the City Council adopts all of the feasible mitigation measures for the Preferred Alternative described in the Final EIR as conditions of approval of the Preferred Alternative and incorporates those into the Preferred Alternative. The mitigation measures are also provided in Exhibit B, Mitigation Monitoring and Reporting Program of this Resolution.

A. HAZARDS AND HAZARDOUS MATERIALS

1. Contaminated Soils

The Preferred Alternative will include excavation activities during construction that involve the handling and disposal of contaminated soils, which have the potential to create a significant hazard to the public or the environment. However, with the incorporation of Mitigation Measures HAZ-1, HAZ-2, and HAZ-3 described below, this impact would be reduced to a less than significant level. See pages 4.E-16, 4.E-17, 4.E-25 and 4.E-26 of the Draft EIR and pages 2-20 and 3-22 of the Final EIR.

a. Findings

Changes or alterations have been required in, or incorporated into, the Preferred Alternative that avoid or substantially lessen any potential impact associated with the handling and disposal of contaminated soils. Specifically, the following measures are imposed upon the Preferred Alternative to ensure a less than significant impact:

Mitigation Measure HAZ-1: Shallow soil contamination at the proximity of GP32 (total lead concentration of 1,400 ppm at 1.5 feet bgs), as indicated in the Phase II Environmental Site Assessment, shall be excavated and disposed of off-

site. The lateral extent of the remedial excavation may extend to GP-31, GP-33, and BH-7. The vertical extent of remedial excavation is anticipated to be less than 5 feet. In addition, if the soil at the vicinity of the above-mentioned locations is planned for off-site disposal, then the excavated soil shall be stockpiled and a WET test shall be made on stockpile soil samples to determine the soluble lead concentration of the stockpiled soil for soil disposal purposes.

Mitigation Measure HAZ-2: If the soil at the vicinity of the locations (as identified in the Phase II Environmental Site Assessment) where TRPH concentrations exceed 1,000 ppm is planned for off-site disposal, then the excavated soil shall be stockpiled and analytically tested for TPH and VOCs using EPA Method 8015 M and 8260B or per soil disposal facility requirements.

Mitigation Measure HAZ-3: During Project design development and prior to initiation of excavation and grading activities, PWP shall retain a qualified environmental consultant to prepare a soils management plan that shall be submitted to the City of Pasadena Fire Department for review and approval. The soils management plan shall be implemented during excavation and grading activities on the Project site to ensure that any contaminated soils are properly disposed of offsite. The plan shall include, but not necessarily be limited to the following:

- A qualified environmental consultant shall be present as necessary during excavation or grading activities to monitor compliance with the soils management plan and to actively monitor the soils and excavations for evidence of contamination.
- Any soil encountered during excavation or grading activities that appears to have been affected by hydrocarbons or any other contamination shall be evaluated, based upon appropriate laboratory analysis, by a qualified environmental consultant prior to offsite disposal at a licensed facility.

- Soils in the southwestern corner of the site near Boring Location GP32 and where TRPH concentrations exceed 1,000 ppm, as identified in the Limited Phase II ESA, shall be segregated and analyzed prior to offsite disposal. This may require over-excavation in these area and further analysis of this soil to determine the extent of soil contamination.
- All identified contaminated soils shall be properly handled and transported to an appropriately licensed disposal facility.

b. Facts in Support of Findings

Based on the results of a limited Phase II Environmental Site Assessment (ESA), an area of contaminated soil was identified that could yield lead concentration levels that could result in a hazard to the public or the environment during soil construction excavation activities. In addition, soils that yielded samples with TRPH concentrations greater than 1,000 mg/kg could result in similar hazardous materials impacts. These are considered potentially significant impacts. However with the incorporation of Mitigation Measures HAZ-1, HAZ-2, and HAZ-3 potential hazards associated with contaminated soils will be reduced to a less than significant level.

VIII. Significant and Unavoidable Impacts

In the areas of greenhouse gas emissions and land use, there are instances where environmental impacts will remain significant and no feasible mitigation is available. These areas are described below.

A. GREENHOUSE GAS EMISSIONS

1. Project-Generated Greenhouse Gas Emissions

Construction and operation of the Preferred Alternative will result in an increase of greenhouse gas (GHG) emissions that exceed SCAQMD’s mass emissions thresholds. See pages 4.D-19 to 4.D-21, 4.D-23 and 4.D-24 of the Draft EIR and page 2-20 of the Final EIR.

a. Findings

Changes or alterations have been required in, or incorporated into the Preferred Alternative to lessen greenhouse gas emissions impacts. Nonetheless, the Preferred Alternative is anticipated to have a significant impact because the estimated increase in

GHG emissions will exceed the SCAQMD mass emissions thresholds. There are not feasible mitigation measures available to reduce turbine GHG emissions beyond what is included in the design of the Preferred Alternative, and impacts will remain significant and unavoidable.

b. **Facts in Support of Findings**

Construction activities associated with on-site construction and equipment and off-site vehicles used to transport construction workers and supplies will generate GHG emissions. GHG emissions will also result from power generation, vehicle, electrical, and natural gas usage associated with operation of the Preferred Alternative. Construction and operation activities will result in an increase in GHG emissions that exceed SCAQMD's mass emissions thresholds. Therefore, the SCAQMD GHG working group recommends that applicable performance standards be utilized to minimize emissions to the extent feasible. Unit GT-5 is a combined-cycle natural gas fueled power generation unit, which meets the State's EPS and is the best technology available for natural gas fueled power generating equipment. In addition, PWP is an entity covered by the cap-and-trade program established pursuant to AB 32 and is subject to compliance obligations including the declining GHG emissions cap, which will result in GHG reductions for the facility. However, there are no feasible mitigation measures available to reduce turbine emissions beyond what is already included in the design of the Preferred Alternative. Impacts will be significant and unavoidable.

Project Design Features, which ensure compliance with City policies, represent the best feasible strategies for the control room component of the Preferred Alternative. Therefore, no additional mitigation measures are proposed.

Even though emissions from the turbine will meet the State's EPS requirements and the control room building will implement all of the applicable and feasible City's Green Building Ordinance requirements, operational emissions from the Glenarm Repowering Project could cause significant and unavoidable impacts due to the potential for increased use of the new Unit GT-5 over existing Unit B-3 operations

2. **Cumulative Greenhouse Gas Emissions**

The Preferred Alternative has the potential to generate greater GHG emissions than under existing conditions. Therefore, the Preferred Alternative is considered to have a cumulatively considerable contribution to cumulatively significant GHG emissions. See pages 4.D-23 and 4.D-24 of the Draft EIR and page 2-20 of the Final EIR.

a. **Findings**

Changes or alterations have been required in, or incorporated into the Preferred Alternative to lessen GHG emissions impacts. Nonetheless, the Preferred Alternative is anticipated to have a cumulatively considerable net increase in GHG emissions. There are not feasible mitigation measures available to reduce turbine GHG emissions beyond what is included in the design of the Preferred Alternative and impacts will remain significant and unavoidable.

b. **Facts in Support of Findings**

The Preferred Alternative will include numerous Design Features to reduce GHG emissions, as well as features that address strategies consistent with the City of Pasadena's Green Building Standards for reducing GHG emissions. The Preferred Alternative will be consistent with State and City goals, and, therefore, will be consistent with the AB 32 reduction targets.

The Preferred Alternative's use of energy more efficiently and the replacement of older existing Unit B-3 with new Unit GT-5 will further the State's strategy to promote efficiency and reduce fuel use and GHG emissions. From a Statewide perspective, the net GHG emissions for the integrated electricity system will decline when new gas-fired power plants are added, since this would improve the overall efficiency of the electricity system and serve capacity needs more efficiently than the existing system. The Preferred Alternative will be more efficient than the existing Unit B-3 and result in fewer GHG emissions on a per operational hour basis.

However, conservatively assuming that Unit GT-5 will operate up to its permitted limit of 8,760 hours per year, the Preferred Alternative will generate GHG emissions greater than Unit B-3 under existing conditions. Therefore, the Preferred Alternative is considered to have a cumulatively considerable contribution to cumulatively significant GHG emissions. Thus, cumulative GHG emission impacts will be significant and unavoidable.

B. **LAND USE AND PLANNING**

1. **Pasadena Zoning Code**

Components of the Preferred Alternative would conflict with the City's Zoning Code. These impacts are conservatively considered to be significant and unavoidable. See pages 4.F-10 to 4.F-15 of the Draft EIR and page 2-21 of the Final EIR.

a. Findings

10 Changes or alterations have been required in, or incorporated into the Preferred Alternative to lessen land use impacts. Nonetheless, the Preferred Alternative is anticipated to have a significant land use impact because the stack height of the Preferred Alternative will substantially conflict with the maximum height restriction specified in the City's Zoning Code. There are no feasible mitigation measures available to reduce this impact. Therefore, this impact is conservatively considered to be significant and unavoidable.

b. Facts in Support of Findings

The Preferred Alternative will be consistent with the existing land uses on the site and generally consistent with the applicable policies and regulations set forth in the City's General Plan and Zoning Code. However, the 125-foot once-through steam generator (OTSG) stack associated with proposed Unit GT-5 will greatly exceed the maximum 56-foot height limit for the site of the Preferred Alternative under existing zoning (IG district). Based on engineering studies, the 125-foot stack height is required to preclude ground level pollution concentrations. Because the stack height would exceed the maximum height restriction for the site a variance will be required.

Because there are no feasible mitigation measures available to address the nonconforming stack height identified in the Draft EIR, this is conservatively considered to be a significant and unavoidable land use impact.

IX. Project Alternatives

The City Council considered a range of reasonable alternatives for the proposed Project including: Alternative 1 – No Project/No Action Alternative, Alternative 2 – Reduced Operations Alternative, Alternative 3 – Project Site Reconfiguration Alternative, and Alternative 3A – Revised Project Site Reconfiguration Alternative.

Alternatives 1, 2, and 3 were analyzed in the Section 5.0 of the Draft EIR and are discussed below. Alternative 3A was added to the Final EIR in the Topical Response provided in Section 2.0, Comments and Responses on the Draft EIR, of the Final EIR, and the differential between its impacts and Alternative 3's impacts were analyzed therein. The basis for rejecting Alternatives 1, 2, and 3 is discussed on pages 5-13 through 5-31 of the Draft EIR.

A. ALTERNATIVES SCREENED OUT FROM DETAILED CONSIDERATION IN THE EIR

The City Council finds that all of the alternatives eliminated from further consideration in the Draft EIR are infeasible, would not meet the Project Objectives, and/or would not reduce or avoid any of the significant effects of the proposed Project for the reasons detailed on pages 5-7 to 5-13 of the Draft EIR and summarized herein. CEQA only requires a project to reduce impacts to a less than significant level. (See CEQA Guidelines Section 15041, 15126.4(a)(3), and 15126.6(b).) The City has incorporated mitigation measures into the proposed Project that reduces and avoids impacts to cultural resources and hazards and hazardous materials to a less than significant level, as previously described in Section VII, above. As described in Section VIII, above, significant unavoidable impacts will remain for Project-generated and cumulative greenhouse gas emissions and land use impacts associated with the OTSC stack height but nonetheless the Project is proposed as outlined in the Statement of Overriding Considerations. Additional grounds for infeasibility of the alternatives considered but rejected are provided below.

1. Demand Reduction

The implementation of demand-side measures, such as residential energy programs and rebates, will not sufficiently reduce electricity consumption in the City of Pasadena to meet the four Project Objectives to maintain reliable local power generation, maintain the City's ability to generate power locally, implement the energy IRP, and provide for mandated capacity to generate power when required by the CAISO. Therefore, demand reduction is not considered a feasible alternative to the proposed Project. See pages 5-7 and 5-8 of the Draft EIR.

2. Continued Local Power Generation with Existing Equipment

The operating hours of Unit B-3 could theoretically be increased from the current 2,000 hours per year to a maximum of 8,760 hours per year. This would reduce Pasadena's need to import power in the short term, as long as Unit B-3 remains operational. However, this is not economically feasible since operating costs of Unit B-3 are approximately 70 percent higher than for contracted power. Unit B-3 is aging and inefficient, and increasing its operating hours will shorten its lifespan. At some future point, Unit B-3 will no longer be operational and will be decommissioned. At that time, the City will be forced to operate Units GT-1, GT-2, GT-3, and GT-4 almost continuously, replace Unit B-3, or purchase more imported power than under existing conditions. Parts from the existing decommissioned Units B-1 and B-2 are not interchangeable with those of Unit B-3. Likewise, parts are not interchangeable between Units GT-1 and GT-2 and Units GT-3 and GT-4. Moreover, Unit GT-1 is

currently under contract for repair and Unit GT-2 is currently out of commission. For these reasons, continued local power generation with existing equipment was not considered a feasible alternative to the proposed Project and would not meet the four Project Objectives to maintain reliable local power generation, maintain the City's ability to generate power locally, implement the energy IRP, and provide for mandated capacity to generate power when required by the CAISO. See page 5-8 of the Draft EIR.

3. Renewable Energy Sources (Solar, Wind, Landfill Gas, Hydroelectric, Geothermal, and Nuclear)

In 2009, PWP prepared an Integrated Resource Plan (IRP) in which it established the Preferred Resource Plan to manage the supply and demand sides of power consumption in Pasadena. Key action items of the Preferred Resourced Plan include reducing purchases of coal-fueled power from IPP by at least 35 MW (33 percent) by 2016 and meeting and exceeding the state-mandated Renewable Portfolio Standards of 33 percent by 2020. PWP has established interim targets of 20 percent of all retail sales by 2013 and 25 percent by 2016, and the 2012 IRP now recommends meeting at least 40 percent RPS by 2020. The energy IRP reconfigures PWP's electricity portfolio to reduce its greenhouse gas (GHG) emissions while adding a diverse mix of renewable energy supply resources, such as wind, solar, geothermal, and landfill gas, to replace the use of coal-generated power. Additionally, the Plan stipulates implementation of energy efficiency and load management programs to curb demand. It also proposes the construction of an efficient combined-cycle plant to replace existing units located in Pasadena's municipal power plant to ensure reliable local generation. The energy IRP was recently updated (March 2012) to account for the decline in demand and economic downturn since 2008, cap-and-trade program for GHGs, and to establish the path to meeting and exceeding the statewide 33 percent Renewable Portfolio Standard (RPS) established by the California Renewable Energy Resources Act (Senate Bill X1-2).

PWP owns over 200 MW of on-site, natural gas-fueled local generation and is capable of importing up to 215 MW more through its interconnection with Southern California Edison. Pasadena also has ownership shares and long-term contracts with a number of power generation facilities located throughout the west. As of 2011, the energy PWP provides to its customers is produced from the following sources:

- Coal – 57%
- Renewables – 19%
- Gas-fueled - 13%

- Nuclear – 6%
- Hydro – 4%
- Other – 1%

There remain substantial obstacles to expanding renewable power production, both locally and remotely. Renewable resource options are often highly limited by geographic location, which may face transmission obstacles to delivering power to Pasadena, or by general resource availability in the area. Therefore, the increased use of solar, wind, geothermal, landfill gas, hydroelectric, and nuclear power would not meet the Project Objective to provide for mandated capacity to generate power when required by the CAISO. See pages 5-8 to 5-11 of the Draft EIR.

4. Increased Importation of Power

PWP has a single point of connection with the California power grid with Southern California Edison, which is a dominant factor affecting PWP's ability to maintain reliable electric service. In addition, PWP is required to provide for mandated capacity (i.e., guarantee of availability) to generate power when required by CAISO. PWP has a peak load of slightly more than 300 MW; thus, service reliability depends on local power generation units that must be used when customer demand exceeds 215 MW, and when constraints on PWP's cross-town transmission lines limit PWP's ability to serve customers reliably through imports. Accordingly, PWP operates the local units to comply with various reliability criteria, including the 215 MW import limit and constraints on PWP's cross-town transmission system.

Addressing existing power generation reliability concerns through upgrades to PWP's existing import connections and cross-town transmission system is discussed in the Public Input Appendix to the 2009 energy IRP. As stated therein, a qualitative analysis prepared for the report determined that there are substantial financial and schedule obstacles that make those upgrades infeasible at this time and therefore would prevent achievement of the four Project Objectives to maintain reliable local power generation, maintain the City's ability to generate power locally, implement the energy IRP, and provide for mandated capacity to generate power when required by the CAISO. See page 5-12 of the Draft EIR.

5. Alternative Project Location

The proposed Project components are programmatically and operationally linked to one another and to the existing Glenarm and Broadway Power Plants, and physical proximity of the proposed Project components to existing plant operations is essential.

For this reason, no alternative Project site, including other facilities operated by PWP, was considered for further evaluation. Furthermore, this Alternative would not meet any of the Project Objectives. See pages 5-12 and 5-13 of the Draft EIR.

B. ALTERNATIVE 1 – NO PROJECT/NO ACTION

1. Summary of Alternative

The No Project/No Action Alternative assumes that the property would remain in its existing state as there are no known predictable actions, such as an alternative Project, that would occur on the site if the proposed Project were not approved. Under the No Project/No Action Alternative, the existing steam generating Unit B-3, which is located on the Broadway Plant, would not be decommissioned and would continue to operate as it currently does on an intermittent and as-needed basis, and PWP would continue to purchase power from its entitlement of coal-fueled power from the IPP facility, for approximately 60 percent of its needs. In addition, the No Project/No Action Alternative assumes no new construction of the administrative/control room and parking areas and no demolition activities for the removal of boilers in the southwest portion of the Glenarm Building. The Glenarm Building would not be rehabilitated to house City employees and would remain in its current deteriorating state. State Street immediately south of the Glenarm Plant, between Fair Oaks Avenue and the Gold Line, would not be closed and a one-acre parcel south of State Street would not be incorporated into the Glenarm Plant, and the Pump Building would not be renovated to serve as a mechanical shop to support plant-wide operations. The new parking area proposed adjacent to the Pump Building would not be constructed. See pages 5-17 to 5-21 of the Draft EIR.

2. Reasons for Rejecting Alternative

Alternative 1 would not result in any changes in the visual character of the power plant property, including views or shade/shadow generation, since no new construction would take place and no operational practices would change. Although the proposed Project's aesthetic impacts were determined to be less than significant, impacts under Alternative 1 would be reduced compared to those of the Project.

Alternative 1 would have greater local air quality impacts in the short term and reduced local air quality impacts in the long term compared to the proposed Project. Air quality impacts from the proposed Project would be less than significant, as the proposed Unit GT-5 would be required to meet the most stringent (lowest) emission level achieved in practice resulting in substantially lower nitrogen oxides (NO_x, a precursor to atmospheric ozone formation) emissions than B-3.

Under the Alternative 1, there would be no grading and excavation, and therefore, there would be no impacts on archaeological and paleontological resources, as compared to the proposed Project. Under Alternative 1, the seismic upgrades required for designation of the Glenarm Building as an essential facility would not take place, and as such, there would be no impact on historical resources. While the proposed Project includes mitigation measures that would reduce these impacts to a less than significant level, under Alternative 1, the proposed administrative/control room facility, maintenance facilities, and shared and public space would not be constructed and no seismic upgrade of the Glenarm Building would take place. However, it should be noted that the proposed Project would comply with the most current building codes, would arrest the ongoing deterioration of the building, and could increase the ability of the Glenarm Building to withstand a major earthquake. Accordingly, under Alternative 1, the Glenarm Building could remain vulnerable to substantial damage in the event of a major earthquake.

Alternative 1 would result in higher hourly GHG emissions than the proposed Project, since the existing unit operates less efficiently per megawatt hour than the proposed new unit. If operated the maximum 8,760 hours annually that it is permitted for, the existing unit would result in higher annual emissions than the Project. In actuality, because of its long startup time and energy inefficiency, the existing unit would likely operate for the same number of hours in the future (approximately 2,000) that it has operated in recent years. The proposed new unit would also be permitted for the maximum annual hours of operation (8,760). Therefore, Alternative 1 would have reduced annual emissions compared to the Project assuming 2,000 hours of operation annually for the existing unit, but could potentially result in increased total annual GHG emissions, as compared to the proposed Project, by failing to commission a reliable state-of-the-art low-emitting power production unit to be used up to 8,760 hours per year. Project GHG emissions were determined to be cumulatively significant and unavoidable; impacts from hourly and, potentially, annual GHG emissions under Alternative 1 would be greater than those of the proposed Project.

Under Alternative 1, no demolition would take place on the Power Plant site, and no abatement of ACMS or LBPs determined during the Phase II investigation to be present on the Project site would be undertaken. Likewise, no known or unknown contaminated soils on the plant site would be removed, treated, and disposed of off-site. The removal of these hazardous materials was determined to be a significant, but mitigable, impact under the proposed Project. Alternative 1 would avoid the Project's impacts altogether, although these materials would remain on site.

Alternative 1 would not result in the development of a new OTSG stack or employee parking lot, and as such, would avoid the proposed Project's significant and unavoidable land use impacts.

Under Alternative 1, no construction would take place and no changes in the existing operational parameters would occur. Although the proposed Project was determined to result in less than significant construction or operational noise impacts, impacts under Alternative 1 would be reduced compared to the proposed Project.

Under Alternative 1, no new construction or changes in operational practices would occur and water consumption would not increase over existing conditions. Although the proposed Project was determined to result in less than significant impacts with respect to water supply, impacts under Alternative 1 would be reduced compared to the proposed Project.

With respect to the IRP, Alternative 1 would not replace aging and inefficient power generation units at PWP's power plant, and therefore would not achieve the Project Objectives pertaining to maintaining reliable local power generation to ensure uninterrupted power, the ability to make up for shortfalls in imported power, and reduced reliance on coal power; support and implementation of the IRP; or providing for the mandated capacity (i.e., guarantee of availability) to generate power when required by the CAISO.

Alternative 1 would not achieve the Project Objectives of rehabilitating the Glenarm Building for viable work space for City employees and enabling the Glenarm Building to be designated as an essential facility, since it would preclude any interior improvements and the necessary seismic upgrades to current State Building Codes that would assure it remains operational in an emergency.

Alternative 1 would not achieve the Project Objective of consolidation of administrative facilities and control rooms for existing and proposed power generation units, together with public and shared spaces, within the Glenarm Building, nor would it permit the expansion and renovation of the existing Pump Building to serve as a mechanical shop to support the maintenance team for the entire Power Plant. For these reasons, Alternative 1 would not maximize use, efficiency, and security of the Power Plant as would the proposed Project.

Finally, Alternative 1 would entirely preclude achieving the underlying Project purpose of increased reliability of local power generation or any of the eight Project Objectives, as described above.

Although Alternative 1 avoids the significant and unavoidable Project impacts, the City Council finds that this Alternative is infeasible because it fails to fulfill any of the Project Objectives, as described above.

The City Council hereby finds that the reason set forth above for rejecting Alternative 1 justifies rejection of Alternative 1.

C. ALTERNATIVE 2 – REDUCED OPERATIONS ALTERNATIVE

1. Summary of Alternative

Alternative 2 assumes installation of the same power generation equipment and infrastructure as under the proposed Project; however, the new Unit GT-5 would be limited to 2,000 hours of operation per year. The existing steam generating Unit B-3, which is located on the Broadway Plant and currently operates on an intermittent and as-needed basis, would still be decommissioned as under the proposed Project. The new Unit GT-5 (GE LM 6000 or Rolls Royce Trent 60) would still replace the existing Unit B-3 with a cleaner and more reliable and efficient natural gas-fueled combined-cycle generating unit equipped with state-of-the-art air pollution control system. PWP would be required to import energy from outside sources to meet the remainder of its needs not fulfilled by Unit GT-5. Alternative 2 assumes the same infrastructure development, including seismic upgrades to the Glenarm Building required for essential facility designation, and construction of approximately 18,000 square feet of administrative/control room facilities, maintenance facilities, and public and shared space in the southeastern portion of the Glenarm Building, and demolition of the existing Glenarm Building stack, air compressor facility, and restroom, located along the south elevation of the building. Boilers in the southwestern portion of the building's interior, or boiler room, would be removed and the proposed parking area immediately south of the proposed Unit GT-5 would be developed. State Street immediately south of the Glenarm Plant, between Fair Oaks Avenue and the Gold Line, would be closed and the one-acre parcel south of State Street would be incorporated into the Glenarm Plant. Modifications to the existing Pump Building and associated parking area on this parcel, currently occupied by PWP, would also occur. See pages 5-23 to 5-26 of the Draft EIR.

2. Reasons for Rejecting Alternative

Under Alternative 2, impacts on aesthetics, including visual character, views, and shade/shadow, would be the comparable to those of the proposed Project.

Under Alternative 2, construction-related air quality impacts would be comparable to the proposed Project since the same amount of construction would occur as under the Project. Operationally, on an hourly or maximum daily basis, Alternative 2 would function identically to the proposed Project and would result in air pollutant emissions similar to the proposed Project. Annually, air pollutant emissions for Alternative 2 would