1.0 EXECUTIVE SUMMARY

1.1 Introduction

GWF Energy LLC (GWF) is seeking approval of an Application for Certification (AFC) from the California Energy Commission (CEC) for the construction and operation of the Tracy Peaker Project (TPP). GWF proposes to build and operate the TPP, a nominal 169-megawatt (MW), simple-cycle power plant, on a nine-acre fenced site within a 40-acre parcel in an unincorporated portion of San Joaquin County. Figure 1-1 shows the regional location of the TPP site. Figure 1-2 shows the immediate site location, southwest of Tracy, California and approximately 20 miles southwest of Stockton, California. The TPP would consist of the power plant, an onsite 230-kilovolt (kV) switchyard, an onsite natural gas supply interconnection, an approximately five-mile 230-kV electric transmission line, an approximately 1,470-foot water supply pipeline (as measured from the fence line), and improvements to an existing dirt access road approximately one mile in length.

One of the primary goals of the TPP is the rapid introduction of new, more efficient, and environmentally superior power generation to meet California's growing power demand. For the next three years, California is expected to experience a shortfall in available electric generating sources during periods of peak demand. The TPP is being developed on a fast-track schedule to help satisfy this power shortage.

The TPP offers the following environmental and economic features and benefits:

- Use of natural gas, a clean-burning fuel, and state-of-the-art air pollution controls to minimize air emissions;
- Use of aqueous ammonia to reduce the potential for hazardous materials exposure;
- Emission offsets for nitrogen oxide (NO_x), volatile organic compounds (VOC), and particulate matter (PM_{10}) in excess of TPP emissions that create a net air quality benefit to the region, and emission offsets for carbon monoxide (CO) even though none are required by local regulations;
- Use of existing rights-of-way with minimal linear facility lengths;

- Use of existing GWF personnel to operate and maintain the TPP to minimize impacts on local infrastructure;
- Help to reduce an anticipated power shortfall in California in the summer of 2002; and
- Addition of approximately $1 million/year in local property tax revenue accruing to San Joaquin County, and the addition of $3.3 million in local spending for goods and services required for construction. In addition, approximately $44,000 would be spent annually on local goods and services required for TPP operation.

This AFC provides:

- A description of the project;
- A description of the project's need conformance;
- A description of the project alternatives;
- A description of the electric transmission system and natural gas supply;
- An assessment of the project's likely impact on the existing environment;
- The proposed mitigation measures to ensure that environmental issues are properly and responsibly addressed; and
- Compliance with applicable laws, ordinances, regulations, and standards.

A list of contributors to this AFC is provided in Appendix M.

1.2 Project Ownership

GWF Energy LLC would construct, own, and operate the TPP. GWF Energy LLC is 50 percent owned by PSEG California Corporation and 50 percent owned by Harbinger GWF LLC. PSEG California Corporation is owned by PSEG Global USA Inc. Harbinger GWF LLC is owned by Harbert Cogen, Inc. Since 1989, a subsidiary of PSEG Global USA Inc. and Harbert Cogen, Inc., GWF Power Systems has constructed, owned, and operated six solid-fuel small power plant/cogeneration facilities in California with a combined generating capacity of 125 MW. Five of these plants are located in Contra Costa County and one is located in Hanford, California. Electricity produced by the proposed TPP would be sold under a contract from the California Department of Water Resources (CDWR).

1.3 Demand Conformance

The California legislature enacted Senate Bill 110, which, as of January 1, 2000, did away with the integrated assessment of need and with the specific requirement of former Section 25541 of the Public Resources Code to show that a project's generating capacity not be substantially in excess of the resources shown in the integrated assessment of need. The AFC for the TPP is being submitted in response to the state's critical electricity supply shortage and is consistent with the governor's recently signed executive orders (EO). EO D-26-01 and EO D-28-01 direct the CEC and other state and local agencies to expedite review of new power generating facilities. The purpose of this project is to help relieve the state's power shortages.

1.4 Project Schedule

The TPP would be constructed on a schedule of approximately eight months following issuance of the AFC by the CEC. Construction is anticipated to commence in November 2001, with commercial operation anticipated by July 2002.

1.5 Facility Location And Description

1.5.1 Facility Location

The TPP site is located in the southwest quarter of Section 36, Township 2 South, Range 4 East Mount Diablo Base Meridian on Assessor's Parcel Number 209-240-11, as shown on Figure 1-2. The property is bounded by the Delta-Mendota Canal to the southwest, agricultural property to the south and east, and the Union Pacific Railroad to the north. Immediately north of the railroad are the Owens-Brockway glass container manufacturing plant and the Nutting-Rice warehouse. The Tracy Biomass power plant is approximately 0.6 miles to the northwest. The power plant area would be accessed via an improved 3,300-foot, asphalt-paved service road southward from W. Schulte Road to the site (refer to Figure 1-2).

The TPP site location is limited by (a) the need to be located in an air basin where GWF has existing emission reduction credits (such as the San Joaquin Valley Air Pollution Control District), (b) the definition of "minor source" under federal air quality regulations to qualify for expedited permitting, (c) schedule requirements of a fast-track development schedule

to meet a July 2002 commercial operation date, (d) the ability to interconnect at a major substation on North Path 15 that has adequate capacity and provides wide access to the electricity market, (e) the ability to connect to a natural gas supply with adequate capacity, and (f) the provisions of an existing CDWR power purchase agreement. Prior disturbance, compatible land use, land ownership, proximity to natural gas supply, and transmission interconnection points are other key criteria considered in the site selection.

Section 6.0 (Electric Transmission), Section 8.4 (Land Use), and Appendix D provide more information on land ownership, including the assessor's parcel numbers and property owners' names and addresses, for all parcels within 500 feet of the transmission and water supply lines and within 1,000 feet of the TPP site.

1.5.2 Facility Description

The TPP would consist of the nominal 169-MW simple-cycle power plant, an onsite 230-kV switchyard, an approximately five-mile, 230-kV electric transmission line, an approximately 1,470-foot water supply pipeline, an onsite natural gas supply interconnection, and an approximately 3,300-foot site access road. An approximately 5.2-acre area directly to the west of the plant fence line and within the 40-acre parcel would be used for construction laydown and parking. Figure 1-1 shows the regional location of the TPP site. Figure 1-2 shows the immediate site location of the TPP, including the proposed generating facility and proposed transmission, water supply, and access routes.

The TPP would use two General Electric (GE) Model PG7121 (EA) combustion turbine generators (CTG), each with a base load nominal output of 84.4 MW at annual average conditions. The International Standards Organization temperature of 59 degrees Fahrenheit (°F) is considered representative of annual average. Each CTG would be equipped to burn only natural gas and would have an evaporative cooling system installed on the inlet air for use at higher ambient temperatures. Natural gas for the TPP would be delivered via an onsite interconnection with the existing Pacific Gas & Electric Company (PG&E) Line 401 gas transmission pipeline.

The combustion turbines would be equipped with a dry low NO_x (DLN) combustor system to control the NO_x concentration exiting each CTG. The exhaust gas temperature would be reduced with ambient air to allow for additional post-combustion NO_x control with a selective catalytic reduction (SCR) system. NO_x emissions would be controlled to less than 5 ppmvd, corrected to 15 percent O_2 by a combination of a DLN combustor in the CTG and an aqueous-ammonia-type SCR system. CO emissions from the CTG would be reduced to less than 6 ppmvd at 15 percent O_2 with an oxidation catalyst. VOCs would also be controlled to less than 2 ppmvd at 15 percent O_2 with the oxidation catalyst. In addition, GWF would provide offsets for all proposed criteria pollutant emissions from the TPP, including CO.

Plain View Water District would supply the TPP with industrial process water and nonpotable domestic water from the Delta-Mendota Canal. Drinking water for the facility would be provided by a local bottled-water vendor. The plant would be a near-zero wastewater discharge facility. Small quantities (less than one gallon per minute) of industrial wastewater from the plant would be stored on site and periodically transported from the plant via licensed haulers for offsite recycle or disposal.

Figures 8.11-8 and 8.11-15 in Section 8.11 (Visual Resources) provide a photograph and photo-simulation of the TPP site before and after construction, respectively.

The heat balance for power plant base load operation is shown in Section 2.0 (Project Description) on Figures 2-5, 2-6A and 2-6B, and 2-7A and 2-7B at 15 °F, 59 °F, and 115 °F, respectively. The annual average heat balance is based on an ambient temperature of 59 °F, a relative humidity level of 60 percent, and an 85 percent effective evaporative cooler for the CTG combustion air.

1.5.3 Site Layout

Figures 2-3 and 2-4 in Section 2.0 (Project Description) provide the site arrangement, showing the location of the TPP components and the elevation drawings for the project components, respectively.

1.5.4 Transmission Interconnection

The TPP would connect to the Tesla 230-kV substation bus via a new transmission line, designated the TPP Generator Tie-line, owned by PG&E. The TPP Generator Tie-line would be located approximately one-eighth of a mile south of the TPP site and would run in a southwest direction, adjacent to an existing transmission line corridor.

The proposed transmission interconnection would be an approximately five-mile-long, single-circuit, 230-kV line. From the plant, the first 2.8 miles would be a new transmission line that would travel southwest, paralleling the existing 115-kV Tesla-Manteca line to the intersection with the Tesla-Wesley 230-kV line. The Tesla-Wesley 230-kV transmission line is a jumpered double-circuit transmission line. PG&E proposes to break the double circuit at the location of the TPP Generator Tie-line interconnection. The line would turn northwest for approximately 2.1 miles, until it enters Tesla Substation at Breaker 252. This segment of the TPP interconnection would use the existing conductors on one of the two separated circuits on the existing transmission towers of the Tesla-Wesley 230-kV line. In order to accommodate the existing power flow, the second circuit of the unjumpered Tesla-Wesley line would be reconductored with 954-kilo circular mills (kcmil) steel-supported aluminum conductor. In order to accommodate the TPP Generator Tie-line interconnection at Breaker 252, the Tesla-Newark #2 Line (now terminating at Breaker 252) would need to be relocated by the TPP to a new breaker position within the Tesla Substation. This new breaker position is being constructed by PG&E as part of the previously planned Bank 6 Upgrade Project. All Tesla Substation upgrades would occur within the substation fence line. This route is shown on Figure 1-2 as the "proposed transmission route" and "reconductored transmission route." Photo-simulations of the proposed transmission line are shown in Figures 8.11-14 and 8.11-15 in Section 8.11 (Visual Resources).

1.5.5 Fuel Supply

The CTGs would be designed to burn natural gas. Maximum natural gas requirements during base load operation are approximately 23,772 million British thermal units per day on a higher heating value basis.

Natural gas would be delivered to the site via a new interconnect (see Sections 2.0 and 7.0) with PG&E's Line 401 that crosses beneath the proposed site. The natural gas would be delivered at a minimum gas pressure of 500 pounds per square inch gauge (psig) and consequently would not require additional pressurization. The natural gas would flow through gas scrubber/filtering equipment, a gas pressure control station, a fuel gas heater, a flow metering station before entering the CTG.

1.5.6 Water Supply

TPP would not include a cooling tower and would therefore have a minimal water demand. The plant would require water for the CTG evaporative cooler, fire protection, plant general service, and domestic use. Bottled water would be used for drinking and domestic purposes. The industrial water requirements would be met by water from the Delta-Mendota Canal, which would be supplied under an existing contract with the Plain View Water District. Because the water supplied for TPP operation is under a pre-existing contract, the project would not exert an additional or new demand upon Delta-Mendota Canal water and is therefore not projected to cause a significant impact on canal water supply.

1.5.7 Waste Handling and Control

Solid waste generated at the TPP would include small quantities of paper from administration; absorbent materials, packaging, and used parts from operation; and chemical containers, demolition/construction wastes, and other specialized wastes from maintenance. Potentially hazardous waste would be generated during both construction and operation of the TPP. Hazardous wastes could include contaminated soil; waste oil, solvents, and paints; waste SCR and oxidation catalysts; and other maintenance wastes. Hazardous wastes would be minimized by recycling, to the extent possible. Hazardous wastes that are not recycled would be characterized and appropriately treated or disposed.

1.5.8 Site Access

The TPP power plant area would be accessed via an improved 3,300-foot, asphalt-paved service road southward from W. Schulte Road to the site (refer to Figure 1-2).

1.5.9 Facility Closure

The TPP would be designed for an operating life of 30 years. Closure procedures would follow a plan that depends on conditions at the time. Those conditions are largely unknown at this time, but closure could include maximizing recycle of facility components; return of unused chemicals to suppliers; equipment draining and shutdown to ensure public health and safety and environmental protection; and the collection, recycling, or disposal of all solid and hazardous wastes. Facility closure is further described in Section 4.0.

1.6 Plant Operation

The TPP would be operated by operations and maintenance employees of other existing GWF facilities in the area. Operations and maintenance personnel would be dispatched to the plant when the plant is scheduled to operate by the CDWR. GWF has signed a contract with the CDWR that provides for the purchase of up to 4,000 hours per year of plant generating capacity. GWF wishes to retain the flexibility to operate the plant for sale of electricity beyond the contracted hours, contingent upon demand requirements of the Independent System Operator–managed transmission distribution system. The facility would be capable of operation seven days a week, 24 hours a day. The project is expected to have an overall annual capacity factor of approximately 50 percent or more. However, the exact operational profile of the plant cannot be defined, because the facility would be operated to satisfy the demand of the system.

Only the capacity that would be sold through the CDWR contract can be accurately predicted. The contract allows CDWR to purchase up to 4,000 hours per year of the TPP's full generating capacity. It is anticipated that these hours of operation would normally occur during the periods of peak power demand. Operation outside of the contract would be a function of the prices offered for spot purchases, and the exact extent of TPP operation beyond 4,000 hours per year cannot be determined. It is anticipated that any one CTG would either be operated at 100 percent load or would be shut down. Therefore, possible modes of operation include: both CTGs at 100 percent load, one CTG at 100 percent load, or full shutdown. To ensure that other possible operating conditions are evaluated, the operating performance at 60 percent load has also been included.

1.7 Safety

The TPP would be designed to maximize safe operation. Hazards that could affect the facility include earthquake, flood, and fire. Facility operators would be trained in safe operation, maintenance, and emergency response procedures to minimize the risk of personal injury and damage to the plant.

Safety and emergency systems would be incorporated into the design and construction of the facility to ensure safe and reliable operation. The TPP structures would be designed to meet California Building Code 1998 (CBC) Seismic Zone 4 requirements. The facility site would be located above the 100-year floodplain. Fire protection systems would include both automatic and manual systems. Worker safety programs would be developed and implemented for both construction and operation to ensure compliance with federal and state occupational safety and health requirements.

1.8 Environmental Considerations

This AFC for the TPP addresses the following environmental resource issues in detail in Section 8.0 (Environmental Impact):

- Air Quality
- Biological Resources
- Cultural Resources
- Land Use
- Noise
- Public Health
- Worker Health and Safety
- Socioeconomics
- Agriculture and Soils
- Traffic and Transportation

- Visual Resources
- Hazardous Materials Handling
- Waste Management
- Water Resources
- Geologic Resources and Hazards
- Paleontological Resources

The TPP would avoid or substantially reduce potential environmental impacts to insignificant levels through project design and incorporation of proposed mitigation measures.

1.8.1 Air Quality

The TPP would result in a net regional air quality benefit based on the inclusion of state-of-the-art control technology and air emission offsets that are greater than the project emissions. In addition to the emission offsets required by regulation, GWF would voluntarily offset expected CO emissions to ensure a net air quality benefit. The TPP CTG would be equipped with Best Available Control Technology (BACT) to control criteria pollutant emissions. These measures would include clean-burning natural gas, DLN combustors, and effective combustion practices. In addition, the CTG would be equipped with an aqueous-ammonia-type SCR and an oxidation catalyst.

Emissions sources during construction of the TPP include heavy equipment exhaust and fugitive dust from disturbed areas. Water would be routinely applied to minimize fugitive dust emissions.

Operational emission estimates were based on full-load operation of the CTG and considered emissions from startup/shutdown events. The air dispersion modeling analysis was conducted to demonstrate that air emissions from the TPP would not cause or contribute to ambient air quality standard violations or negatively impact visibility in Class I areas.

Air dispersion modeling indicates that NO_x, sulfur dioxide (SO_2), CO, and PM_{10} impacts from the operation of the TPP are below ambient air quality standards. The modeling results for attainment pollutants (i.e., NO_x, CO, and SO_2) indicate that these pollutants would be well below their respective significance levels. A screening analysis concluded that the TPP would not significantly impact visibility. Both California and federal law require major sources of nonattainment pollutants in nonattainment areas to mitigate air quality impacts by providing emission offsets in the form of emission reduction credits (ERCs). The TPP would trigger offset requirements for NO_x, VOC, SO_2, and PM_{10} emissions. In addition, GWF would voluntarily provide ERCs for the project's CO emissions. GWF has finalized agreements with owners of ERCs to meet the applicable offset requirements and would supply all the ERCs needed for the project.

1.8.2 Biological Resources

The proposed TPP site is currently being managed as intensive agricultural land and has no habitat features that are of value to sensitive species. Some areas in San Joaquin County provide habitat for sensitive plant and animal species. Biological surveys at the TPP site were conducted by wildlife biologists and botanists between April 17 and May 16, 2001; a followup survey was conducted on July 16, 2001 along portions of the transmission line not surveyed in April. Surveys were conducted primarily for listed animal species and sensitive plants, following methodologies approved by the U.S. Fish and Wildlife Service and California Department of Fish and Game.

The TPP survey areas included the nine-acre facility site, surrounded by a 500-foot primary buffer area and a one-mile secondary buffer area. The transmission line corridor was surveyed within a 100-foot corridor centered on the transmission line, with primary and secondary buffer zones of 500 feet each on either side of the corridor. Access was not granted by landowners in a one-mile segment between Interstate 580 and the Delta-Mendota Canal. Access was restricted to the right-of-way in Section 4 (see Figure 8.2-2 in Section 8.2, Biological Resources).

During the surveys, all evidence of special-status species was noted. A vascular plant list was compiled of identifiable plant species. The sensitive animals found at or near the

proposed facility and associated utility corridors are listed in Section 8.2. San Joaquin kit fox potential and known dens, burrowing owl burrows, and the locations of other sensitive species were recorded and mapped, including those of golden eagles, great horned owls, prairie falcons, loggerhead shrikes, barn owls, tiger salamander (potential), western spadefoot toad (potential), and raptors (potential). There are no sensitive plant resources at the site. Measures contained in the TPP Biological Resources Mitigation Implementation and Monitoring Plan would reduce any potential impacts to a less-than-significant level.

1.8.3 Cultural Resources

The TPP would be located and constructed to avoid or minimize, to the extent possible, impacts to all cultural resources. To ensure that such resources are protected from construction damage, a qualified monitor would be available during construction activities to assess the nature and importance of any cultural materials discovered. Construction personnel would be trained to recognize cultural materials and would be instructed to halt construction activities upon discovery of such materials. Thus, the TPP's impact on cultural resources would not be significant.

Prior to conducting the field survey of the TPP site, four record searches were performed at the Central California Information Center of the California Historic Resources Information System. The records search included all previously recorded cultural resources within 0.5-miles of the study area. The Native American Heritage Commissions was contacted for information regarding heritage lands or resources located in the study area. Systematic pedestrian surveys of the study area were also completed in June and July 2001. Seven features lie within the survey corridor, but outside the area of potential effect of the project.

No significant or potentially significant cultural resources are known to exist within the study area. The historical Union (Southern) Pacific Railroad and associated telegraph line that would be crossed by the access road to the plant site lack integrity for listing on the National Register of Historic Places. It is recommended that an archaeological monitor be present to inspect the construction of the site access road that crosses the railroad to ensure avoidance of the telegraph poles along the railroad. The access road right-of-way should be kept between the two telegraph poles in this location. Once the crossing route is ensured, monitoring

may cease. No additional mitigation measures are required in this location, unless previously undiscovered cultural resources are detected during construction.

1.8.4 Land Use

The proposed TPP would conform with all local plans and regulations and is compatible with general land uses in the project area. The TPP site is on a previously disturbed parcel within an intensive agricultural area. Construction activities at the TPP would be temporary and would be conducted with minimal interference to adjacent land uses. Overall, the land use impacts associated with construction activities would not be significant.

The proposed use of the site is compatible with adjacent land uses, and the operation of the proposed facility is not expected to result in significant adverse impacts to surrounding uses. Operation of the TPP represents further development of an area already committed to industrial and power generation uses. The TPP would not result in a change of land use, nor would it change the existing character of the area.

The proposed route for the transmission line runs along approximately five miles of existing transmission corridor. Construction activities associated with the transmission line would be undertaken so as to minimize interference with existing land uses in the transmission line corridor. Structures would be located in a way that reduces conflicts with existing and future land uses. The proposed routes for the water supply line and access road run along or beneath existing dirt roads. Construction activities associated with these linears would also be undertaken so as to minimize interference with existing land uses and to reduce conflicts with existing and future land uses. Therefore, no significant land use impacts are identified.

1.8.5 Noise

Assessment of noise impacts from the TPP was accomplished through an ambient noise survey, evaluation of survey results, and modeling of expected construction and operational noise levels. The nearest residence is 2,550 feet southwest of the proposed plant's combustion turbines. The next nearest noise-sensitive receptor is 2,740 feet west of the turbines. The third closest noise-sensitive receptor is on Lammers Road, 3,810 feet east of the site. With

the proposed noise abatement features incorporated, ambient noise levels at both the proposed TPP site boundary and the nearest residences are below significant levels.

Noise levels expected from the operation of the facility would be reduced by noise abatement features incorporated as standard equipment (e.g., acoustic enclosure and inlet air silencers for the CTG) and as proposed mitigation features. Operational noise levels were modeled for the proposed facility. Compared to the ambient noise levels measured at nearby residences, noise from the operation of the project, with noise abatement features incorporated, would be inaudible during all but the quietest periods. No significant noise impacts are expected from the operation and maintenance of the TPP plant, transmission line, or associated switchyard.

Construction noise impacts should be typical of power plant construction activities, with the primary noise sources being associated with equipment and vehicles. To estimate construction noise impacts, the composite noise level estimates were based on noise monitoring during construction of 15 actual power plants. Using this modeling approach, construction noise is not expected to be audible at the nearest residences. Transmission line construction activity is limited in time; thus, any receptor along the corridor would have limited noise exposure. Construction equipment would have appropriate mufflers or silencers to reduce noise levels.

Offsite noise levels associated with the TPP are not expected to be significant or require further mitigation beyond the measures already identified and incorporated into the project.

1.8.6 Public Health

The TPP would utilize clean-burning natural gas and state-of-the-art combustion technology to minimize potentially toxic air emissions. The maximum incremental cancer risk from the CTG emissions would be well below the significance level at one in one million. For sensitive receptors, the maximum chronic “total hazard index” (THI) and the maximum acute THI are both well below the significance criteria of one. Based on this evaluation, the TPP emissions are expected to pose no significant cancer or noncancer health effects. The health risk

assessment performed for the TPP is based on a number of conservative assumptions and is likely to overestimate public health impacts.

Criteria pollutant emissions from the TPP would meet pertinent federal and state ambient air quality standards that have been set at levels designed to protect public health. Therefore, no significant adverse health effects from criteria pollutant emissions are anticipated.

Energized electrical conductors produce electric and magnetic fields at the transmission line that would drop off exponentially with distance away from the transmission line. Current knowledge on this subject indicates that the electric and magnetic field levels expected at the edge of the transmission line right-of-way would not present a health risk.

1.8.7 Worker Health and Safety

The construction, operations, and maintenance activities associated with the TPP may expose workers to physical and chemical hazards. However, worker exposure to these hazards would be minimized through adherence to appropriate engineering design criteria, implementation of appropriate administrative procedures, use of personal protective equipment, and compliance with applicable health and safety regulations. Such practices are already in place at other existing GWF plants.

The TPP site would become the fire protection responsibility of the City of Tracy Fire Department, Stations Nos. 94 and 97, located at 16502 W. Schulte Road and at 595 West Central Avenue, respectively, both of which can respond within five minutes. The onsite fire suppression system would be placed in service as early as practicable. An emergency action plan would be developed to designate responsibilities and actions to be taken in the event of an emergency during construction of the facility. Additional written safety programs would include, but not be limited to, hazard communication standards, a hearing conservation program, a respiratory protection program, heavy equipment procedures, hot work procedures, and others.

Upon startup of the TPP, the construction health and safety programs would transition into an operations and maintenance program. The primary mitigation measures for worker hazards during normal facility operation and maintenance would be contained in the Injury and Illness Prevention Plan. Fire protection would involve physical measures, such as

sprinklers, water supplies, and fire extinguishers, as well as fire prevention measures. The TPP would have a site-specific plan that addresses potential emergencies, actions, and responsibilities. Additional written safety programs would be developed as components of the overall operation and maintenance health and safety plan for the TPP.

The TPP would ensure the safety and well-being of all workers participating in construction and operation of the project. Systems would be implemented to ensure that workers possess the necessary information to recognize hazards and protect themselves from hazards.

1.8.8 Socioeconomics

The TPP would increase fiscal resources in the region by increasing both sales tax and property tax revenues that accrue to San Joaquin County. Construction income earned in the county would also increase. Operation income earned in the county would not change as a result of TPP operations, because additional workers would not be required.

TPP construction is expected to last eight months and would provide short-term job opportunities. A sufficient supply of labor for this project exists through unions and contractors in San Joaquin County, the nearby San Francisco Bay Area, and the Sacramento area. The peak construction period for the TPP is not expected to overlap with the peak construction demands of other projects planned in the area. Due to the availability of a large construction labor force, and to the small number of other projects within the county that would result in a substantial number of permanent new residents, the TPP is not expected to cause significant cumulative impacts.

The impacts associated with increased demand for resources due to TPP construction and operation are not anticipated to be significant or adverse. TPP construction and operation would not have a significant adverse impact on the ability of the county to provide law enforcement, fire and emergency medical services, utilities, or education services.

1.8.9 Agriculture and Soils

The TPP would not cause significant impacts to agriculture or soils. The TPP is located in an intensive agricultural area, where disturbance of soils has already occurred.

During excavation of the TPP site and before compacting and grading, the soils would have susceptibility to erosion. However, compacting and other construction mitigation measures would reduce the potential for erosion. With the exception of the nine-acre proposed facility and minor impacts for additional transmission structures, no agricultural land would be taken out of production as a result of the TPP.

Grading operations and construction activities would meet county and state grading requirements and stormwater best management practices.

1.8.10 Traffic and Transportation

At the TPP, construction activities would add a moderate amount of traffic during the peak construction period. However, the increase in traffic is minor compared to the existing roadway capacity. No significant degradation in the roadway level-of-service is anticipated during construction of the TPP. Therefore, the impact from construction of the TPP is not considered significant.

Operation and maintenance-generated traffic for the TPP would not be significantly increased above existing plant levels, since there would not be an increase in the number of workers traveling to and from the site each day. Potential long-term traffic impacts associated with operation of the TPP include delivery of hazardous and nonhazardous materials and hauling of wastes generated during operations. These operations-related traffic increases would be minimal. Regional and local roadways have adequate capacity to accommodate operations-related traffic. Traffic associated with operation of the transmission line would be limited to preventive maintenance vehicles and repair vehicles required in the event of damage to the lines. Therefore, traffic impacts during operation of the TPP are also considered to be insignificant.

1.8.11 Visual Resources

Construction and operation of the TPP would not introduce elements into the local viewsheds that would be substantially different in character to adjacent industrial development. Nor would the TPP obstruct or intrude on any views in a significant way. The TPP would not significantly diminish the vividness, intactness, or unity of the local viewsheds. In addition, the

activities associated with construction of the plant would not be incompatible with the existing industrial nature of the area and the presence of trucks and equipment. Therefore, the impacts from the TPP on the visual resources in the study area are considered to be less than significant.

1.8.12 Hazardous Materials Handling

The TPP would implement numerous accident prevention and mitigation measures to reduce the risk associated with use and storage of hazardous materials. The quantities of hazardous materials stored or used on site would be evaluated to determine which exceed threshold levels for federal and state risk management and process safety requirements. Plans and programs are already in place at other existing GWF plants, and these programs would be adapted to the TPP. The current programs include hazard assessments, prevention programs, emergency response programs, and process management systems. Although risk cannot be completely eliminated, engineering and procedural features would effectively reduce the possibility and potential consequences of a release.

Hazardous materials at the TPP include insulating and lubricating oils, corrosion inhibitor, detergents, ethylene glycol, carbon dioxide, and aqueous ammonia, which would be used in the SCR system for NO_x control. The ammonia tank would be double walled, and the unloading area would drain to an underground containment structure sized to hold the entire contents of the delivery truck. Personnel protective equipment would be available for emergency response personnel. The evaluation of plausible release scenarios indicates that the likelihood of a release is too small to be considered significant.

Onsite storage of hazardous materials would be minimized. Equipment and containers would be located inside containment berms. All hazardous materials would be handled and stored in accordance with applicable codes and regulations. Incompatible materials would be stored in separate storage containment areas. Areas susceptible to potential leaks and/or spills would be paved and bermed. Piping and tanks would be protected from potential traffic hazards by concrete or other barriers.

1.8.13 Waste Management

Nonhazardous and hazardous wastes generated by the TPP during both construction and operation of the TPP facility would be recycled to the extent possible. Typical wastes include sanitary wastewater, nonhazardous solid and liquid waste, and hazardous solid and liquid waste. When properly handled, both nonhazardous and hazardous waste would not significantly affect the environment or human health.

The nonhazardous waste generation and disposal from the TPP would not significantly decrease the capacity of the waste disposal facilities identified as available for use by the project. With active recycling efforts in place, and the currently available Class II or III waste disposal capacity in Alameda and San Joaquin Counties, the incremental waste disposal capacity needed by the project is insignificant.

Similarly, the hazardous waste generation and disposal from the TPP would be minimized by recycling and would not significantly decrease the capacity of Class I hazardous waste disposal facilities used by the project.

1.8.14 Water Resources

Water from the Delta-Mendota Canal would be supplied under an existing contract with the Plain View Water District. Because the water supplied for TPP operation is under a pre-existing contract, the project would not exert an additional or new demand upon Delta-Mendota Canal water and is therefore not projected to cause a significant impact on canal water supply. Best management practices and drainage control would be implemented along with erosion and sediment control to minimize surface water impacts during construction.

1.8.15 Geologic Resources and Hazards

The TPP would not adversely affect geologic resources of recreational, commercial, or scientific value. The TPP would be designed to conform with the requirements for CBC Seismic Zone 4. The surface and subsurface geologic units are not unique; the potential for encountering rare minerals is very low. In addition, the TPP site has been previously disturbed by historic agricultural activities, and the transmission line route is close to, or within,

rights-of-way of other utilities. No significant impacts to geologic resources are expected. If a mitigation program is adopted during the construction phase of the project, the direct, indirect, and cumulative adverse environmental impacts on paleontological resources would be reduced to insignificant levels.

1.8.16 Paleontological Resources

The literature and archival reviews and the field survey did not identify any specific fossil localities that would be affected by the proposed project. Nonetheless, monitoring would be conducted to ensure that paleontologic resources are not adversely affected by the earthmoving associated with the construction of the TPP. No impacts to paleontologic resources are anticipated during the operation of the TPP, however, deeper excavation at the plant site and other related facilities would, however, disturb soils that have a high potential for significant paleontological resources. Also, no impacts are associated with construction, operation, or maintenance of the TPP transmission line, water supply pipeline, or access road.

1.9 Cumulative Impacts

The incremental impacts of the TPP would not contribute to cumulative impacts, when viewed in connection with other existing projects or reasonably anticipated future projects in the area.

1.10 Summary

The proposed TPP would provide benefits to the local economy and would help the state meet projected electrical power needs. By employing advanced gas-fired combustion turbine technology, the TPP would create a highly efficient and environmentally superior source of electricity for California's energy market.

The impacts associated with the construction and operation of the TPP have been considered throughout the planning process. In instances where potential environmental impacts have been identified, mitigation measures have been proposed to substantially lessen impacts to a level of insignificance.

FIGURES

Figure 1-1. Regional Location

Figure 1-2. Site Location