CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

DELTA ENERGY CENTER (98-AFC-03C)

Staff Analysis of the

Petition to Amend Commission Decision

On January 29, 2017, a generator fire occurred at Calpine's Delta Energy Center (DEC). No injuries to any employees or first responders occurred. All three units are currently down while Calpine continues to investigate the root cause analysis of the fire.

On February 22, 2017, Delta Energy Center, LLC, filed a Petition to Amend (PTA) with the California Energy Commission (Energy Commission) requesting modifications to the DEC. DEC is a nominal 880 megawatt (MW) combined-cycle natural gas-fired power plant that was certified by the Energy Commission in February 2000, and commenced commercial operation on June 17, 2002. The power plant is located in the city of Pittsburg in eastern Contra Costa County.

DESCRIPTION OF PROPOSED MODIFICATIONS

The PTA is seeking approval to modify the DEC to make temporary modifications to the steam turbine condenser to run the facility in simple cycle mode. The proposed project modifications would enable DEC to continue repairs to the steam turbine while the facility returns to service in simple cycle mode to support the California Independent System Operator in resource planning for the summer of 2017. In simple cycle mode, DEC would provide approximately 500 to 544 MW of capacity and voltage support to the applicable resource area.

For additional information, the Energy Commission's webpage for this facility, http://www.energy.ca.gov/sitingcases/delta/index.html, has a link to the petition (TN 216134) accessible through the webpage in the box labeled "Compliance Proceeding." Click on the "Documents for this Proceeding (Docket Log)" option.

STAFF'S ASSESSMENT OF THE PROPOSED PROJECT CHANGES

A summary of staff's review of the PTA is provide in the table below.

SUMMARY OF STAFF RESPONSES TO PETITION

TECHNICAL/ENVIRONMENTAL AREAS REVIEWED	STAFF RESPONSE			Revised Conditions of Certification Recommended
	Technical Area Not Affected	No Significant Environmental Impact or LORS Inconsistency	Process As Amendment	
Air Quality		X		No
Biological Resources	X			N/A
Cultural Resources	X			N/A
Facility Design		X		No
Geological and Paleontological Resources	X			N/A
Hazardous Materials Management		X		No
Land Use	X			N/A
Noise and Vibration		X		No
Public Health	X			N/A
Socioeconomics	X			N/A
Soil and Water Resources		X		No
Traffic and Transportation		X		No
Transmission Line Safety and Nuisance	X			N/A
Transmission System Engineering	X			N/A
Visual Resources		X		No
Waste Management		X		No
Worker Safety and Fire Protection		X		No

Energy Commission technical staff reviewed the petition for potential environmental effects and consistency with applicable laws, ordinances, regulations and standards (LORS). Staff has determined that the technical or environmental areas of Biological Resources, Cultural Resources, Geological and Paleontological Resources, Land Use, Public Health, Socioeconomics, Transmission Line Safety and Nuisance, and Transmission System Engineering, are not affected by the proposed changes.

For the technical areas of Air Quality, Facility Design, Hazardous Materials Management, Noise and Vibration, Soil and Water Resources, Traffic and Transportation, Visual Resources, Waste Management, and Worker Safety and Fire Protection, staff has determined the project would continue to comply with applicable LORS and no changes to any conditions of certification are necessary to ensure that no significant impacts occur. Staff notes the following for these technical areas:

- **Air Quality**. The proposed modification to the steam turbine condenser is not expected to cause any significant impact to air quality. Additionally, the proposed amendment would not result in changes or deletion of any Air Quality conditions of certification.

- **Facility Design**. Installation of the steam turbine bypass system would comply with the California Building Code (CBC) and related engineering LORS through the implementation of the existing Facility Design conditions of certification adopted in the 2000 Decision.
- **Hazardous Materials Management**. During the installation of a new temporary blind flange to isolate the steam turbine, several hazardous materials will be used onsite. Similar to equipment maintenance activities, these materials would include solvents, gasoline, lubricants, and welding gases which are already included in the annual compliance report under the existing **HAZ-1** Condition of Certification. No extremely hazardous or regulated hazardous materials will be used on site specifically for any of the construction activities listed above. Therefore, with petitioner's continued compliance with existing Conditions of Certification, specifically **HAZ-1**, the proposed modifications would not have a significant effect on the environment and the project would continue to comply with all applicable LORS.
- **Noise and Vibration**. With the limited scope of installation activities related to the steam turbine bypass system, noise levels would be no greater than what occurs periodically from maintenance work. Since the steam turbine would be out of commission during the proposed project modifications, the work associated with this PTA would result in lower operational noise levels. However, in the event of unanticipated overpressure of the condenser occurs, the pressure relief vent would engage and potentially generate additional noise. However, the noise at the project boundary would not be affected and the additional noise would be the result of an upset condition and would not be continuous. Any noise generated as the result of this PTA would create a less than significant impact with implementation of the existing Noise conditions of certification in the 2000 Decision. In an event of a noise complaint about the steam venting, Condition of Certification **NOISE-2** would address and resolve it, and such a resolution may involve installing enhanced noise mufflers to sufficiently reduce the impact.
- **Soil and Water Resources**. Storm Water Pollution Prevention Plan (SWPPP) documents, required in accordance with Condition of Certification **SOIL & WATER-1,** are adequate for the project with the proposed modifications. However, the plan should be updated to show the proposed changes and necessary stormwater controls. The project owner must ensure that the change in operation does not affect the quality and volume of industrial wastewater discharge. The project owner shall maintain compliance with the wastewater discharge limits in Condition of Certification **SOIL & WATER-5**. The proposed modifications would not have additional significant impacts in terms of volumes and sources of water supply to the project. The proposed modification would not require any changes to conditions of certification. With the project owner's continued to compliance with the existing conditions of certification, potential impacts to soil and water resources would be mitigated, and the project will remain in compliance with all applicable LORS.
- **Traffic and Transportation**. The proposed project modifications would result in approximately two weeks of construction and would require six contract workers. No heavy haul deliveries are associated with the proposed installation. The proposed

temporary modification would not impact levels of service on nearby roadways; therefore, traffic impacts would be less than significant.

- **Visual Resources**. The temporary modifications would be located entirely within the steam turbine structure and would not be publicly visible. During operation in simple cycle mode increased heat rejection from the condenser may temporarily increase visible plumes; however, operation in simple cycle mode is expected to occur during summer months when visible water vapor plumes are typically minimal due to ambient conditions. Impacts of the proposed modifications on visual resources would remain less than significant.
- **Waste Management**. The proposed project modifications would not significantly impact the types of waste associated with the construction and operation of the facility, nor would it significantly impact waste management.
- **Worker Safety and Fire Protection**. By continuing to comply with the existing conditions of certification, the petitioner's proposed installation of a new temporary blind flange to isolate the steam turbine would not have a significant effect on the environment, and would continue to comply with all applicable LORS. Activities to be performed during construction would comply with worker safety and fire safety requirements specified in the health and safety plans utilized for construction of the licensed facility in accordance with Condition of Certification **WORKER SAFETY-1**.

The **Environmental Justice Population Figure** (attached) shows 2010 census blocks in the six-mile radius of the DEC with a minority population greater than or equal to 50 percent. The population in these census blocks represents an Environmental Justice (EJ) population based on race and ethnicity as defined in the *United States Environmental Protection Agency's Guidance on Considering Environmental Justice During the Development of Regulatory Actions*. Additionally, data from California Department of Education in the **Environmental Justice Population Table** (below), indicate that, people living within Antioch Unified School District and Pittsburg Unified School District (within a six-mile radius of the project site), and enrolled in the free or reduced price meal program are comparatively greater than those in the reference geography (Contra Costa County). Therefore, the population within the six-mile radius of the DEC represents an EJ population based on race, ethnicity, and poverty, as defined in the Council on Environmental Quality's *Environmental Justice: Guidance Under the National Environmental Policy Act*. Staff has determined that the proposed modifications would not cause any significant environmental impacts. Therefore, there are no significant impacts to any population within the DEC six-mile radius, including environmental justice population.

Environmental Justice Population Table
Low Income Data within the Project Area

SCHOOL DISTRICTS IN SIX-MILE RADIUS	Enrollment Used for Meals	Free or Reduced Price Meals	
Antioch Unified School District	17,874	12,192	68.2%
Pittsburg Unified School District	11,076	8,449	76.3%
REFERENCE GEOGRAPHY			
Contra Costa County	176,437	70,588	40.0%
Source: CDE 2016. California Department of Education, DataQuest, Free or Reduced Price Meals, District level data for the year 2015-2016, <http://dq.cde.ca.gov/dataquest/>.			

STAFF RECOMMENDATIONS AND CONCLUSIONS

Staff concludes that the following required findings mandated by Title 20, section 1769(a)(3) of the California Code of Regulations can be made and will recommend approval of the petition to the Energy Commission:

A. There will be no new or additional unmitigated significant environmental impacts associated with the proposed changes;

B. The facility will remain in compliance with all applicable laws, ordinances, regulations and standards;

C. The changes will be beneficial to the project owner and the public by enabling the Delta Energy Center to support the California Independent System Operator in resource planning for the summer of 2017; and

D. There has been a substantial change in circumstances since the Energy Commission certification justifying the changes.

Any person may comment on this Staff Analysis. Those who wish to comment on the analysis are asked to submit their comments by 10:00 am March 8, 2017. This item will be heard at the Commission's March 8, 2017 Business Meeting. To use the Energy Commission's electronic commenting feature, go to the Energy Commission's webpage for this facility, cited above, click on the "Submit e-Comment" link, and follow the instructions in the on-line form. Be sure to include the facility name in your comments. Once submitted, the Energy Commission Dockets Unit reviews and approves your comments, and you will receive an e-mail with a link to them.

Written comments may also be mailed or hand-delivered to:

California Energy Commission
Dockets Unit, MS-4
Docket No. 98-AFC-03C
1516 Ninth Street
Sacramento, CA 95814-5512

All comments and materials filed with and approved by the Dockets Unit will be added to the facility Docket Log and be publicly accessible on the Energy Commission's webpage for the facility.

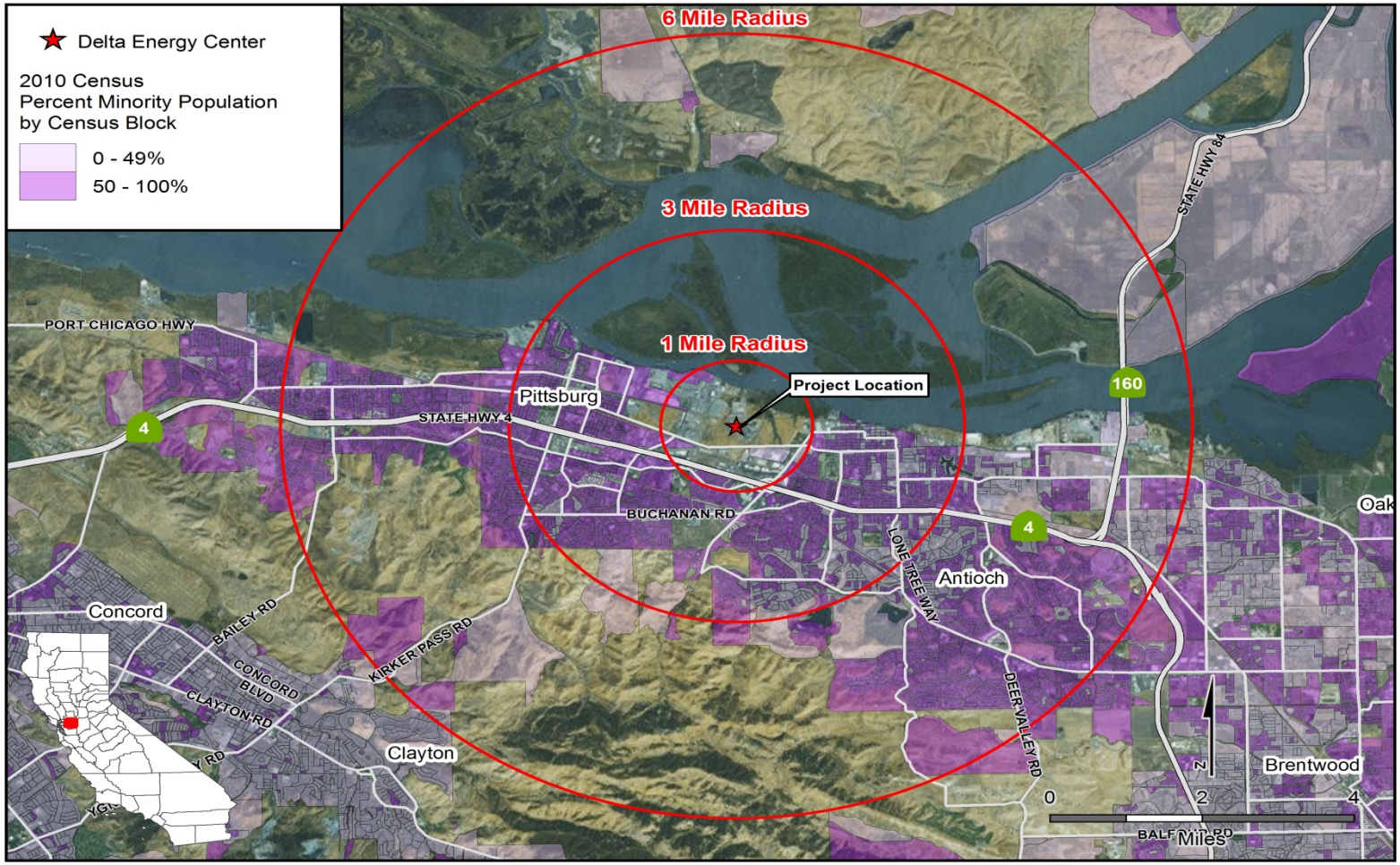
If you have questions about this Notice, please contact Anwar Ali, Compliance Project Manager, at (916) 654-5020, or by fax to (916) 654-3882, or via e-mail at anwar.ali@energy.ca.gov.

For information on participating in the Energy Commission's review of the petition, please call the Public Adviser at (800) 822-6228 (toll-free in California) or send your e-mail to publicadviser@energy.ca.gov. News media inquiries should be directed to the Energy Commission Media Office at (916) 654-4989, or by e-mail to mediaoffice@energy.ca.gov.

CC: DEC Mail list 744
DEC listserv

ENVIRONMENTAL JUSTICE POPULATION FIGURE

Delta Energy Center - Census 2010 Minority Population by Census Block



CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCES: Census 2010 PL 94-171 Data