STATE OF CALIFORNIA

Energy Resources Conservation
And Development Commission

In the Matter of: Application for Certification for the Avenal Energy Project	Docket No. 08-AFC-1

Energy Commission Staff's Update to Prehearing Conference Statement and Minor Errata to Final Staff Assessment

In our June 22, 2009 Prehearing Conference Statement, staff indicated we would inform the Committee of any changes to our Prehearing Conference Statement as a result of our June 23, 2009, Final Staff Assessment (FSA) workshop. The workshop was attended by staff; applicant; representatives of intervenors Tehipite Chapter of the Sierra Club and Center on Race, Poverty, and the Environment; and members of the public. The applicant confirmed that it did not intend to dispute any of staff's recommendations contained in the FSA and the intervenors present did not indicate that they would be seeking the presence of additional staff at evidentiary hearings, though several questions were asked concerning the technical area of Public Health in addition to the previously identified areas of Air Quality and Greenhouse Gas Emissions. At this time, staff does not believe it is necessary to modify the Prehearing Conference Statement submitted on June 22, 2009.

In that statement we also indicated that we would be filing errata to the FSA based on comments received from applicant and at the FSA workshop. The errata are contained below with proposed changes shown in underline/strikethrough.

EXECUTIVE SUMMARY section:

Pages 1-1 to 1-2:

PROJECT LOCATION AND DESCRIPTION

The proposed Avenal Energy project would be built on approximately 34 acres of a 148-acre industrial zoned parcel. The approximate 34-acre project would include the power plant footprint and ancillary infrastructure connections of 1.2 acres of permanent disturbance due to tower footing for an electrical transmission line, and approximately 1.3 acres for an access road. The construction phase would require a 24 acre temporary laydown area also within the 148 acre parcel. The geographical location of

the site is (Section 19, Township 21 south, and Range 18 east of the Mt. Diablo Base and Meridian, Assessor's Parcel No. 36-170-035).

The proposed AE project would be a nominal 600 megawatt, natural gas-fired, combined-cycle electrical generating power plant arranged with two combustion turbine generators /heat recovery steam generators to one steam turbine generator (two-on-one configuration). Primary equipment for the generating facility would include 2 natural gas-fired General Electric model PG7241 combustion turbine generators, equipped with model 7FA dry, low nitrogen oxide (NOx) combustors, inlet-air mechanical chillers to enhance output at higher ambient temperatures and selective catalytic reduction in the heat recovery steam generator to control NOx stack emissions. Oxidation catalysts would also be located within each heat recovery steam generator to reduce carbon monoxide (CO) and volatile organic compounds (VOC) in the exhaust gases exiting the stack.

~~AE infrastructure connections would include the following; new underground raw, recycled, potable and waste water pipelines connecting to the City of Avenal water treatment plant. The treatment plant receives raw water from the U. S. Bureau of Reclamation's San Luis Canal, City of Avenal turnout (located adjacent to the site) and from additional underground pipes from existing agricultural wells that would be used as a backup water supply. A plant access road and turn around will connect the project site to the Avenal Cutoff Road (a county road). A 20-inch, 2.5- mile long, underground gas pipeline tie-in to the PG&E Kettleman natural gas compressor station; and a 6.4-mile, single-circuit, 230-kV transmission line to connect the onsite switchyard to the existing PG&E Gates Substation complete the major project-related interconnections.~~

AE infrastructure connections would include the following;

- A new underground water supply pipeline connecting to the City of Avenal water treatment plant that would provide untreated fresh water to the power plant. The City of Avenal water treatment plant receives raw water from the U. S. Bureau of Reclamation's San Luis Canal, City of Avenal turnout (located adjacent to the site),
- A new underground water supply pipeline connected to the City of Avenal potable water pipeline that would provide potable water to the project site,
- New underground pipes from existing agricultural wells would be installed to provide a backup water supply if needed.
- A plant access road and turn around would connect the project site to the Avenal Cutoff Road (a county road).
- A 20-inch, 2.5–mile long, underground gas pipeline would tie-in to the PG&E Kettleman natural gas compressor station; and
- A 6.4-mile, single-circuit, 230-kV transmission line that would connect the onsite switchyard to the existing PG&E Gates Substation completes the major project-related interconnections.

Pages 1-7 to 1-8:

CONCLUSIONS AND RECOMMENDATIONS

The FSA is a document of the Energy Commission staff, therefore, by its very nature, the conclusions and recommendations presented are considered staff's analysis of the project.

Each technical area assessment in the FSA includes a discussion of the project and the existing environmental setting; the project's conformance with laws, ordinances, regulations and standards (LORS), whether the facility can be constructed and operated safely and reliably, project specific direct and cumulative impacts, the environmental consequences of the project using the proposed mitigation measures, conclusions and recommendations, and any proposed conditions of certification under which the project should be constructed and operated, should it be approved.

In summary this FSA finds that:

- As shown in the above table, the project is in conformance with all LORS.
- Although the proposed project area is in a predominately agricultural region, and the project site is currently being farmed in irrigated row crops, the project site has nevertheless been rezoned for industrial uses. All biological, soil, water, and agricultural impacts have been fully mitigated to a less than significant level, not only for the project site but also for the construction laydown areas, and infrastructural connections. Implementation of the Energy Commission staff's proposed conditions of certification is necessary to avoid or minimize potential indirect impacts to biological resources, soil and water impacts and agricultural impacts. The project would not result in take of listed species and no wetlands or other waters of the United States will be directly impacted by the project. The applicant has also agreed to fund, separate from this CEQA process, an additional project mitigation program that will be paid to and administered by the Kern Water Bank <u>or Kreyenhagen Hills Conservation Bank</u>.
- The construction and operation of the project would comply with all federal, state, and local laws, ordinances, regulations, and standards relating to biological resources if staff's conditions of certification are adopted and implemented.
- The proposed AE project, with the effective implementation of the recommended condition's of certification, would be consistent with the applicable laws, ordinances, regulations, and standards pertaining to local land use planning and would not generate a significant impact under the California Environmental Quality Act guidelines.
- The San Joaquin County Air Pollution Control District has determined that the project complies with the appropriate rules and requirements of the District and would not contribute to the degradation of the air quality. The applicant has agreed to fund and supply emission reduction credits in sufficient quantity to fully offset all nonattainment pollutants and their precursors at a minimum ratio of 1:1. Staff evaluated the global climate change and greenhouse gas (GHG) emissions from the project. AE would be an efficient, new, dispatchable natural gas-fired combined

cycle power plant that would provide a net reduction in GHG emissions across the electricity system while generating electricity for California consumers. Its addition to the system would displace less efficient plants and facilitate the integration of renewable resources.

- ~~Staff recommends~~ Mandatory reporting of the GHG emissions is required as part of the California Air Resources Board ~~develops~~ greenhouse gas regulations ~~and/or trading markets~~. The project may be subject to additional reporting requirements and GHG reductions as these regulations become more fully developed and implemented.
- ~~The funding and implementation of the city of Avenal waste water treatment plant recycled water project would eliminate need for potable water generally used in the past for power plant operations. Implementation of this water conservation project is consistent with the intent of Article X of the California State Constitution and the Warren-Alquist Act. The use of a municipal water supply for this project would comply with state water policy found in the State Water Resources Control Board (SWRCB) Resolution 75-58, and the Energy Commission's 2003 Integrated Energy Policy Report (IEPR).~~
- The project's use of dry cooling and zero liquid discharge technology is consistent with State water policy. Effective operation of a zero liquid discharge system would reuse industrial waste water discharge and produce a waste that can be disposed of in a licensed landfill facility. This would protect surface water and/or groundwater quality from potential degradation. The proposed primary process water supply for the project is untreated surface water supplied by the city of Avenal. This proposed water supply would not cause a significant adverse environmental impact or affect current or future users of water or adversely impact biological resources, and is consistent with state water use and conservation policies.
- Transmission system impacts and appropriate mitigation have been identified at this point and are acceptable and would comply with all applicable laws, ordinances, regulations, and standards. The project interconnection to the grid would not result in downstream transmission impacts as a result of the Special Protection Schemes proposed by the applicant. However, staff is awaiting the final System Impact Study from the California ISO and PG&E regarding the final approval and schedule for expansion of the Gates Substation to accommodate this and other area projects.
- With the proposed conditions of certification included in the various technical areas, the project's construction and operation impacts can be mitigated to a level less than significant.

Project Description section:

Page 3-1:

Avenal Power Center, LLC, wholly-owned subsidiary of Macquarie Energy North America Trading Inc, filed an Application for Certification with the California Energy Commission on February 21, 2008, to construct and operate a combined-cycle dry cooling power plant. The proposed Avenal Energy project would be a dry cooled,

nominally rated, 600 megawatt electrical generating facility that would be constructed on ~~approximately 34~~ 36 acres of land including project linear elements. It would be located within the city of Avenal in Kings County, California. The project would consist of two natural gas-fired General Electric 7FA gas turbines with heat recovery steam generators and one General Electric steam turbine.

Page 3-2:

Elements That Will Be Located Outside the Fenced Area Include

- ~~Backup water supply from n~~New underground raw~~, recycled, potable, and waste~~ water supply pipelines connecting to the city of Avenal water treatment plant and additional underground pipes from existing agricultural wells for backup supply and potable water supply pipelines connected to the City of Avenal potable water supply;

Page 3-4:

Wastewater Discharge: A drainage system will route contact water from contained or curbed power block areas to a zero liquid discharge facility. Storm water runoff from the developed portion of the project site outside of the power block area will be collected by a surface water drainage system and routed to a retention basin where water will evaporate and percolate. At the zero liquid discharge facility, a brine slurry would be separated and reduced to dry solids (salt cake) for disposal at a local Class III (non-hazardous) landfill. Treated water would be recycled back to the power production cycle. A sanitary system would collect wastewater from sinks, toilets, and other sanitary facilities and discharge it to a permitted on-site septic system.

Air Quality section:

Page 4.1-18

Air Quality Table 10 through **Air Quality Table 12** summarize the maximum (worst-case) criteria pollutant emissions associated with Avenal Energy's normal operation. Emissions for each of the two combustion turbines are based upon:

- NOx emissions controlled to 2.0 parts per million by volume, dry basis (ppmvd) corrected to 15% oxygen, averaged over any 1-hour period;

- VOC emissions controlled to 2.0 ppmvd at 15% O2 for any 3-hour period;

- CO emissions controlled to ~~4.0~~ 2.0 ppmvd at 15% O2 for any 3-hour period;

- PM10 emissions at 11.8 lb/hr during duct burner firing and 9.0 lb/hr without duct firing based on exclusive use of pipeline-quality natural gas fuel with no provisions for an alternative or backup fuel;

- SOx emissions based on hourly or daily levels of fuel sulfur content of up to 1 gr/100 scf with annual average sulfur content of 0.36 gr/100 scf; and

- CTGs with duct burner firing for 800 hours per year per CTG, up to 1,248 hours per year of operation in startup or shutdown mode for both CTGs combined, and 1,248 hours per year of operation of the auxiliary boiler.

Public Health section:

Page 4.7-12

The cancer risk to the maximally exposed individual from normal project operation is shown as ~~0.046~~ 0.46 in a million, which is well below staff's significance criterion of 10 in one million for this screening-level assessment. Thus, project-related cancer risk from routine operations would be less than significant for all individuals in the project area. The conservatism in these assessments is reflected in the noted fact that (a) the individual considered is assumed to be exposed at the highest possible levels to all the carcinogenic pollutants from the project for a 70-year lifetime, (b) all the carcinogens are assumed to be equally potent in humans and experimental animals, even when their cancer-inducing abilities have not been established in humans, and (c) humans are assumed to be as susceptible as the most sensitive experimental animal, despite knowledge that cancer potencies often differ between humans and experimental animals. Only a relatively few of the many environmental chemicals identified so far as capable of inducing cancer in animals have been shown to also cause cancer in humans.

DATED: June 25, 2009

Respectfully submitted,

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APPLICATION FOR CERTIFICATION
For the AVENAL ENERGY PROJECT

Docket No. 08-AFC-1
PROOF OF SERVICE
(Revised 6/17/2009)

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DECLARATION OF SERVICE

I, Janet Preis, declare that on June 25, 2009, I served and filed copies of the attached Energy Commission Staff's Update to Prehearing Conference Statement and Minor Errata to Final Staff Assessment, dated June 25, 2009. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:
[www.energy.ca.gov/sitingcases/avenal].

The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

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CALIFORNIA ENERGY COMMISSION
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I declare under penalty of perjury that the foregoing is true and correct.

_____/s/_____