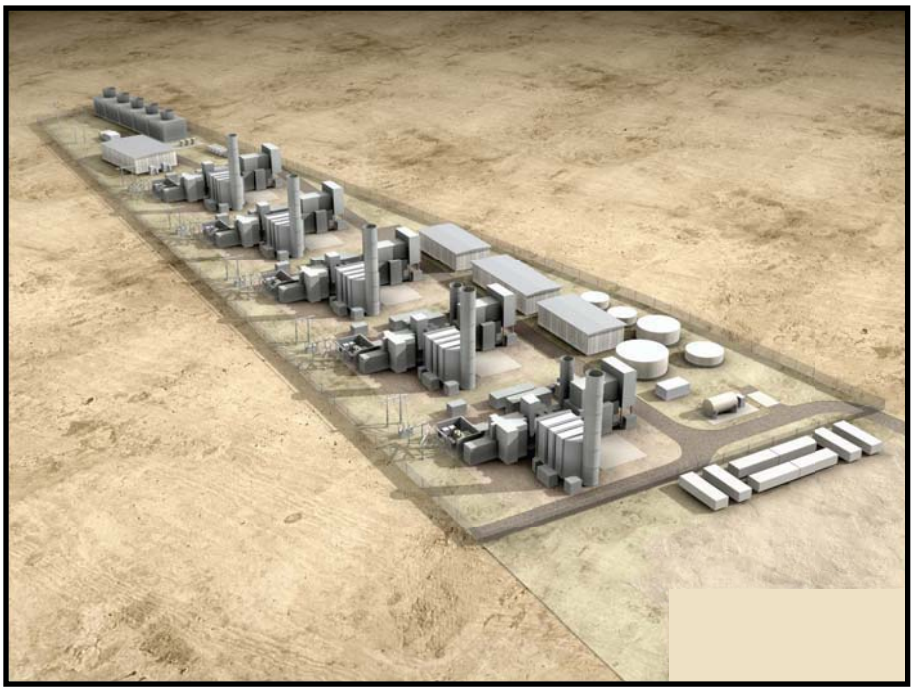
CALIFORNIA
ENERGY
COMMISSION

WALNUT CREEK ENERGY PARK

Application For Certification (05-AFC-2)
Los Angeles County



REVISIONS TO PRESIDING MEMBER'S PROPOSED DECISION

SEPTEMBER 2007
(05-AFC-2)
CEC-800-2007-002-PMPD-REV

CALIFORNIA ENERGY COMMISSION

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REVISIONS TO PRESIDING MEMBER'S PROPOSED DECISION

WALNUT CREEK ENERGY PARK
APPLICATION FOR CERTIFICATION
DOCKET NO. 05-AFC-2

Introduction:

The Committee assigned to the above-captioned matter makes the following revisions to its Presiding Member's Proposed Decision (PMPD) on the Walnut Creek Energy Park (WCEP). The Proposed Decision recommends granting the Application for Certification with conditions that mitigate potential environmental and community impacts.

Printed copies of the Revisions to Presiding Member's Proposed Decision are available from the Commission's Publications Unit, 1516 9th Street, MS-13 Sacramento, CA 95814. You may also telephone the Publications unit at (916) 654-5200 and refer to Publication No. CEC-800-2007-002-PMPD-REV. The Revisions to the Presiding Member's Proposed Decision may also be viewed on the Commission's Internet Web Site at

[www.energy.ca.gov/sitingcases/walnutcreek]

Full Commission Hearing: Oct. 10, 2007

The full Commission will conduct a public hearing to receive comments, consider and possibly adopt the Presiding Member's Proposed Decision and the Revisions to the Presiding Member's Proposed Decision on October 10, 2007, beginning at 10:00 a.m., at the Energy Commission Headquarters, Hearing Room A, 1516 Ninth Street, Sacramento, California.

The parties, public, and interested agencies are encouraged to make comments on the Presiding Member's Proposed Decision and the Revisions to the Presiding Member's Proposed Decision. Oral comments may be made during the public hearing on October 10, 2007. Written comments can be submitted to the Energy Commission, Docket Unit (05-AFC-2), 1516 - 9th Street, Sacramento, CA 95814, prior to October 10, 2007.

Dated: September 24, 2007

ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

/s/
JACKALYNE PFANNENSTIEL
Chairman and Presiding Member
Walnut Creek AFC Committee

/s/
JOHN L. GEESMAN
Commissioner and Associate Member
Walnut Creek AFC Committee

Mailed to Lists: 7096, 7097 & 7098

REVISIONS TO PRESIDING MEMBER'S PROPOSED DECISION

Readers' Guide

The following document contains the substantive Revisions to the Presiding Member's Proposed Decision (PMPD; 8/15/07) of the Committee assigned to the Walnut Creek Energy Park proceeding as well as minor corrections or errata to the PMPD. Added language is underlined; deleted language is ~~stricken through~~.

The substantive Revisions to the PMPD are:

The **PROJECT DESCRIPTION** and **AIR QUALITY** sections are revised to describe the maximum, 4,000 hours of potential annual operation, currently governed by Rule 1309.1 of the South Coast Air Quality Management District (SCAQMD) which was adopted following preparation of the PMPD.

The **PROJECT DESCRIPTION** is revised by deleting language, which was based on Staff's testimony in June 2007, of the project's potential to operate in the future at a capacity factor of 65 percent.

The **NOISE** section is also revised by deleting language, which was based on Staff's testimony in June 2007, of the project's potential to operate in the future at a capacity factor of 65 percent and the resultant potential to create an overnight noise impact.

Reflecting the Applicant's Supplemental Testimony (9/10/07) regarding the historical operation of California peaking power plants and their hours of operation, the **NOISE** section is revised to find that the potential for project operation during the four quietest consecutive nighttime hours is extremely rare. The **NOISE** Conditions of Certification are revised to change the 49 dBA restriction of Condition **NOISE-4** to 52 dba.

However, even though the likelihood of overnight operation is extremely rare, the Applicant offered proposed Condition **NOISE-7** to provide a remedy in the event overnight operation causes a valid complaint from the nearby residential neighborhood. The Committee has accepted the Applicant's proposed Condition **NOISE-7**, making modifications to delete the off-site residence mitigation, since our Compliance staff has concerns about implementing such mitigation for such a large neighborhood. Instead, the Committee accepted the Applicant's proposal to limit operation of the power plant to achieve no more than 49 dBA during the four quietest consecutive hours of the nighttime in the event of a valid noise complaint.

The **VISUAL RESOURCES** section discussion about potential future capacity factors as it might affect visible cooling tower plumes is revised by deleting language, which was based on Staff's testimony in June 2007, of the project's potential to operate in the future at a capacity factor of 65 percent.

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EXECUTIVE SUMMARY:

APPROVED
WITH CONDITIONS

The Energy Commission approves the proposed 500 megawatt Walnut Creek Energy Park in the City of Industry, California, together with the following highlighted measures to mitigate potential environmental and community impacts and comply with applicable laws, ordinances, regulations and standards (LORS):

ENERGY RESOURCES:

- ✓ The proposed project will use state-of-the-art GE LMS100 technology resulting in optimized resource efficiency.

AIR QUALITY

- ✓ The power plant will use state-of-the-art Best Available Control Technology to minimize emissions.
- ✓ Offsets and RECLAIM credits will be used to compensate for any pollutant for which the South Coast Air Quality Management District determines that it is in non-attainment.

VISUAL

- ✓ There is no significant visual impact for hillside residents of Puente Hills and Hacienda Heights, since they generally look from a distance across the valley over the project.

NOISE

- ~~✓ The Commission selected a 49 dbA nighttime noise limit to avoid a significant noise impact to residential receptors from nighttime operation at higher capacity factors.~~ In the event of a noise complaint due to rare overnight operation, the Applicant will limit overnight operation to render the project barely audible at 49 dBA.

PROJECT BENEFITS

- ✓ Average of 220 direct project-related construction jobs.
- ✓ Total capital costs of $220-280 million.
- ✓ Construction payroll of $28.6 million.
- ✓ Operation payroll is $630,000.
- ✓ Property taxes of $3.9 to $4.5 million.
- ✓ Total sales and use tax during construction of $14.8 million.
- ✓ Local sales tax of $247,500 annually
- ✓ $6 to 9 million spent locally for construction materials.
- ✓ $3 million annual operation budget.

~~Dated: August 15, 2007~~

~~**JACKALYNE PFANNENSTIEL**~~	~~**JOHN L. GEESMAN**~~
~~Chairman and Presiding Member~~	~~Commissioner and Associate Member~~
~~Walnut Creek AFC Committee~~	~~Walnut Creek AFC Committee~~

PROJECT OBJECTIVES

The WCEP is designed as a peaking facility to meet electric generation load in Southern California during periods of high demand, which generally occur during daytime hours, and more frequently during the summer than other portions of the year. The facility will be capable of being dispatched throughout the year, but is expected to operate primarily during the utility-defined on-peak and mid-peak periods. (AFC, 2-19.)

The WCEP would use advanced turbine generators that provide faster startup times and are more efficient than previous peaking generators, providing greater flexibility and efficiency. Thus, the WCEP will be more economical to operate than is typical for peaking generators. The project is expected to have an annual capacity factor of approximately 20 to 40 percent, depending on weather-related customer demand, load growth, hydroelectric supplies, generating unit retirements and replacements, the level of generating unit and transmission outages, and other factors. (AFC, 2-19.)

~~The Energy Commission staff reasons that the applicant's estimate of power plant operations may be reasonable for only the short-term; however, Staff believes that this power plant's operation will increase significantly over time. The CEC Electricity Analysis Office estimated that over the long term a reasonable annual capacity factor for this facility would be 65 percent. Additionally, a review of 2005 SCE load data provided by the CEC Electricity Analysis Office shows an overall power demand split of 60/40 between the May to October versus November to April periods. Combining the annual capacity factor and the seasonal power demand splits results in an estimated seasonal capacity factor of 78 percent from May to October and 52 percent from November through April. (FSA, 4.12-28.)~~

PROJECT CONSTRUCTION AND OPERATION

The WCEP is estimated to have a capital cost ranging from $220 to $280 million. The project is expected to take 12 months to construct. The construction workforce would average 220 workers per month, and would peak during the eighth month with 408 workers onsite. Storage of construction materials and equipment and construction worker parking would occur within the project site boundaries and SCE's easement to the north of the site. The WCEP would be run by two operators per shift, plus two relief operators and one maintenance technician, for a total staff of nine. The power plant would be capable of being dispatched throughout the year, but is expected to operate primarily during the utility-defined on-peak and mid-peak periods. The planned life of the generating facility is 30 years, but it could be operated longer if still economically viable.

	PROJECT	*CUMULATIVE IMPACTS*	*LORS COMPLIANCE*
Carbon Monoxide (CO)	**MITIGATION**	**None**	**YES**
	SCAQMD is designated ~~non-~~attainment for federal ~~CO standards~~ and ~~attainment for~~ California CO standards. ~~However, the District is eligible for reclassification to attainment.~~ CO is formed in the combustion process. CO emissions, limited to 6 ppm, will be minimized by good combustion practices. An oxidizing catalyst will be used in the exhaust stream. CO will be continuously monitored in the stack. **MITIGATION:** ☑ The Project Owner shall limit CO emissions to 6.0 ppm. Condition: **AQ-4.** ☑ The Project Owner shall install a continuous emissions monitoring system for CO. Condition: **AQ-12.** ☑ The Project Owner shall use an oxidation catalyst. Condition: **AQ-SC10**.		
Particulate Matter 10 Microns (PM_{10}) and 2.5 Microns ($PM_{2.5}$)	**MITIGATION**	**None**	**YES**
	SCAQMD is designated non-attainment for federal and state PM_{10} and $PM_{2.5}$ standards. Primary PM_{10}/$PM_{2.5}$ are formed by the combustion gases in the exhaust stack. Secondary PM_{10} is formed downstream by mixed gases in the atmosphere. The District has not been able to address $PM_{2.5}$ in its rules within the schedule of this proposed project. The Energy Commission, however, has a CEQA responsibility to address $PM_{2.5}$ emissions since the project region is not in attainment of those standards. Use of CPUC pipeline-quality natural gas is BACT for particulate matter. Since project PM_{10}/$PM_{2.5}$ emissions will contribute to an existing violation of air quality standards, offsets are required. PM_{10} offsets mitigate for $PM_{2.5}$ emissions. The Project Owner will also control cooling tower drift. **MITIGATION:** ☑ The Project Owner shall use CPUC pipeline-quality natural gas to limit PM_{10} emissions. Condition: **AQ-4.** ☑ The Project Owner shall obtain PM_{10} offsets. Condition**: AQ-16.** ☑ The Project Owner shall limit cooling tower drift to 0.0005 percent of the circulating water flow. Condition: **AQ-11.**		

However, the Applicant has used due diligence in an attempt to obtain offsets for NOx, as another precursor to ozone, SOx, CO, and PM_{10} ~~and $PM_{2.5}$~~ without success. Thus, the SCAQMD has reviewed the project's conformity to applicable air quality laws using alternative offset methods.

For NOx offsets (as precursors to ozone), the SCAQMD has instituted its RECLAIM program, which allows facilities flexibility in achieving emission reductions through equipment modifications, operational changes, reformulated products, shutdown or purchase of excess emission reductions. (FSA, 4.1-31.) The Applicant must pay the ~~District~~ private credit holder for RECLAIM Trading Credits (RTCs) to offset the NOx emissions.

The SCAQMD has established a Priority Reserve Credits (PRCs) for SOx, and ~~CO,~~ PM_{10} ~~and $PM_{2.5}$~~, requiring the Applicant to pay a mitigation fee to the District commensurate with the levels of emissions of each pollutant from the project and retire purchased credits at a ratio of 1.0~~1.2~~:1.0, and continue to attempt to secure traditional ERCs for each pollutant. The SCAQMD is directed by its Governing Board to invest the mitigation fees collected in emission reduction projects in the surrounding area impacted by the project (FSA, 4.1-35), with one third of the fees invested in renewable resources, such as solar energy.

Construction Equipment/Fugitive Dust

Demolition

The City of Industry Urban Development Agency oversaw the demolition of the industrial building that occupied the project site. The Initial Study of the environmental impacts of the demolition indicated that all air quality impacts from the demolition would be less than significant. (FSA, 4.1-22)

Construction

The power plant construction requires the use of large earth moving equipment, which generates considerable combustion emissions, along with creating fugitive dust emissions during grading, site preparation, foundations, underground utility installation, and building construction.

The Applicant performed a modeling analysis of the potential construction impacts at the project site indicating the potential to contribute significantly to violations of the state 24-hour and annual PM_{10} Ambient Air Quality Standards (AAQS). Both the Applicant and the Staff agreed that any construction impacts would be mitigated to the extent feasible by "boilerplate" construction Conditions of Certification. The boilerplate construction Conditions of Certification were derived from previously certified large and lengthy construction projects and thus will be very effective for this project. (FSA, 4.1-22-25.)

capacity factor at 40 percent; this would translate to just over 3,500 hours of operation. (FSA, 4.1-18)

As discussed in detail in the **NOISE** section, the Commission finds the projection of our Electricity Analysis Office of potential capacity factors higher than 40 percent is credible since economic dispatch results in more operation of the most efficient plants, such as this LMS100 project.

Both the District's and Staff's reviews were expressly based upon the Applicant's request to assume only approximately 3,500 hours of annual operation. (FSA, 4.1-18; FDOC, p. 14) In its AFC, the Applicant requested that the District use the 3,500 hours emission scenario for its New Source Review and offset calculations. However, the Applicant also requested the District conduct a health risk modeling based upon a "worse case" scenario of 4,800 hours of operation. Applicant stated that it expected to "operate the SVEP [*sic*] project in accordance with the first scenario, [but that] modeling the worst case scenario would allow for future modifications without redoing the modeling impact analysis, should there be a power crisis and the need for peaking capacity exceeded the permitted scenario." (AFC, 8.1-41)

~~The Commission seeks to avoid any appearance that our CEQA analysis would be "piecemealed" by deferring analysis of potential impacts from operation above the 40 percent capacity until, for example, a future amendment proceeding at the Commission or an application for more offsets at the District.~~

~~We recognize that the Applicant has submitted its project both to the Commission and the District as a "3,500-hour project" and that the amount of offsets required for the project may effectively set a limit for the number of hours of operation. We do not propose to redefine the project. However, the evidence in our record shows that the Applicant has expressed its anticipation of future modifications exceeding its currently proposed operating scenario in response to electricity demand and that the Staff predicts economic dispatch would seek to induce project operation in excess of that allowed by the current number of offsets.~~

~~Therefore, during the public comment period on this Presiding Member's Proposed Decision, the Commission will seek confirmation by the Staff and Applicant that the CEQA review submitted to our record is sufficiently comprehensive to include operation of the project up to the seasonal and annual capacity factors predicted by our Electricity Analysis Office testimony. In addition, the Commission will seek information about the regulatory mechanisms which would have to be employed by the Applicant to allow for operation exceeding the proposed level.~~

The proposed maximum criteria air pollutant emissions are based entirely on vendor data for the GE LMS100 turbine and the data presented in the SCAQMD Determination of Compliance. (FSA, 4.1-18.) The CTGs will burn only pipeline natural gas; there are no provisions for an alternative or back-up fuel.

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Carbon Monoxide

Carbon monoxide (CO) is a directly emitted air pollutant generated from most combustion engines and other combustion activities. CO is considered a local pollutant, as it will rapidly oxidize. It is thus found in high concentrations only near the source of emissions. Automobiles and other mobile sources are the principal source of CO emissions. High levels of CO emissions can also be generated from fireplaces and wood-burning stoves. Industrial sources, including power plants, typically constitute less than 10 percent of the ambient CO levels in the South Coast region. (FSA, 4.1-14.)

Currently, the SCAQMD is designated "~~non-~~attainment" for the federal and state CO ambient air quality standards ~~and "attainment" for the state standards~~. Since no violations were recorded at any location in the District in 2003 and 2004, the District has been reclassified as ~~requested reclassification to~~ attainment of the federal standards for CO. ~~The reclassification process is lengthy and likely to be completed in 2007. If reclassified during this proceeding by EPA, the SCAQMD would be considered in attainment for the federal CO ambient air quality standards, and~~ CO offsets ~~would~~ are not ~~be~~ required. Project emissions would not create a violation of CO standards. (FSA, 4.1-8, 14-15, 27 & 32.)

Through the use of advanced combustion control, the Applicant proposed to achieve CO concentrations of 6.0 ppm, using an oxidizing catalyst system. (FSA, 4.1-62.)

MITIGATION:

- ☑ The Project Owner shall limit CO emissions to 6.0 ppm. Condition: AQ-4.
- ☑ The Project Owner shall install a continuous emissions monitoring system for CO. Condition: AQ-12.
- ☑ The Project Owner shall use an oxidation catalyst. Condition: **AQ-SC10**.

Particulate Matter – PM_{10}

PM_{10} is a particulate that is 10 microns in diameter or smaller and is suspended in air. PM_{10} can be directly emitted from a combustion source (primary PM_{10}), soil disturbance (fugitive dust) or it can form miles downwind (secondary PM_{10}) from some of the constituents of combustion exhaust (NOx, SOx, VOC and ammonia). Secondary particulates are probably a minor fraction of the overall PM_{10} concentrations in the project area because there are few major sources of precursors. (FSA, 4.1-11.)

San Bernardino (not the entire South Coast air basin) has been designated a non-attainment zone for the federal 24-hour and annual PM_{10} ambient air quality standards. The South Coast air basin (including a portion of the San Bernardino County within the basin) has been designated as a non-attainment zone for the state 24-hour and annual PM_{10} ambient air quality standards. (FSA, 4.1-12.)

Fine Particulate Matter - $PM_{2.5}$

$PM_{2.5}$, a subset of PM_{10}, consists of particles with an aerodynamic diameter less than or equal to 2.5 microns. Particles within the $PM_{2.5}$ fraction penetrate more deeply into the

MITIGATION:

- ☑ The Project Owner shall control VOC to meet an emission limitation of 6.0 ppm. Condition: **AQ-4**.
- ☑ The Project Owner shall obtain VOC offsets, as a precursor to ozone. Conditions: **AQ-16.**

Ammonia Emissions

Due to the large combustion turbines used in this project and the need to control NOx emissions, significant amounts of ammonia will be injected into the flue gas stream as part of the SCR system. Not all of this ammonia will mix with the flue gases to reduce NOx; a portion of the ammonia will pass through the SCR and will be emitted unaltered, out the stacks. These ammonia emissions are known as ammonia slip. The maximum permitted ammonia slip rate only occurs after significant degradation of the SCR catalyst, usually five years or more after commencing operations. At that point, the SCR catalysts are removed and replaced with new catalysts. During the majority of the operational life of the SCR system, actual ammonia slip will be at 10 to 50 percent of the permitted limit. The Applicant proposes an ammonia emissions limit of 5 ppm for the WCEP. (FSA, 4.1-21.)

MITIGATION:

- ☑ The Project Owner shall limit ammonia slip to 5 ppm. Conditions: **AQ-4 & AQ-11**.

Commissioning and Start-Up

New power generation facilities must go through an initial firing and commissioning phase before being deemed commercially available to generate power. The initial commissioning of a power plant refers to the time frame between completion of construction and the consistent production of electricity for sale on the market. During this period, emissions may exceed permitted levels due to numerous startups and shutdowns, periods of low load operation, and other testing required before emission control systems are fine-tuned for optimum performance.

The Applicant anticipates six distinct commissioning phases, with a total of approximately 94 hours of operation per turbine without full emissions controls, and a further 300 hours of commissioning tuning under full emissions control. (FSA, 4.1-17.)

PSD Review

~~The District has not yet issued a Final Prevention of Significant Deterioration (PSD) permit as part of its Determination of Compliance for the project.~~

~~The Permit to Construct, which will be issued after the Energy Commission Decision, is expected to serve as the basis for the PSD permit for this project when the SCAQMD is~~

~~delegated PSD authority for the WCEP. PSD delegation is expected post-certification and will be specifically limited to this project. (FSA, 4.1-51.)~~

A visibility analysis of a project's gaseous emissions is required under the Federal Prevention of Significant Deterioration (PSD) permitting program. The analysis provided by the Applicant showed that the only Class 1 PSD area, which pertains to national parks and national wildlife refuges, is not beyond the distances prescribed in the SCAQMD Rule 1303 is the San Gabriel Wilderness Area (approximately 26 km from the proposed project site). The Applicant provided an assessment of the potential changes to visibility and nitrogen deposition using the VISCREEN model. The results of the analysis showed that there will be no noticeable effect on visibility at the San Gabriel Wilderness Area from the air pollution emissions at the WCEP. Staff concurs with the conclusion of the analysis provided by the Applicant. (FSA, 4.1-30.)

Cumulative Impacts

"Cumulative impacts" are defined as "two or more individual effects which, when considered together, are considerable or . . . compound or increase other environmental impacts." (CEQA Guidelines, § 15355.) A cumulative impact consists of an impact that is created as a result of a combination of the project evaluated in the EIR together with other projects causing related impacts." [CEQA Guidelines, § 15130(a)(1).] Such impacts may be relatively minor and incremental, yet still be significant because of the existing environmental background, particularly when one considers other closely related past, present, and reasonably foreseeable future projects.

This analysis is primarily concerned with "criteria" air pollutants. Such pollutants have impacts that are usually (though not always) cumulative by nature. Rarely will a project cause a violation of a federal or state criteria pollutant standard. However, a new source of pollution may contribute to violations of criteria pollutant standards because of the existing background sources or foreseeable future projects. Air districts attempt to attain the criteria pollutant standards by adopting attainment plans, which comprise a multi-faceted programmatic approach to such attainment. Depending on the air district, these plans typically include requirements for air "offsets" and the use of "Best Available Control Technology" for new sources of emissions, and restrictions of emissions from existing sources of air pollution.

Since the power plant air quality impacts can be reasonably estimated through air dispersion modeling, the project contributions to localized cumulative impacts can be estimated. To represent past and, to an extent, present projects that contribute to ambient air quality conditions, the Commission staff uses ambient air quality monitoring data.

First, the Commission staff (or the Applicant) works with the air district to identify all projects that have submitted, within the last year of monitoring data, a new application for an authority to construct (ATC) or permit to operate (PTO) and applications to modify an existing PTO within six miles of the project site. Beyond six miles, there is little or no measurable cumulative overlap between stationary emission sources. The non-

Credits (RTCs) shall be provided for NOx as is necessary to demonstrate compliance with Condition of Certification **AQ-16**.

Emission reduction credits (ERCs) or SCAQMD Priority Reserve Credits (PRCs) shall be provided for SOx (45 lb/day) and PM10 (463 lb/day). Emission reduction credits only shall be provided for VOC (220 lb/day, includes an offset ratio of 1.2).

The project owner shall surrender the ERCs, if applicable, for SOx, VOC and PM10 from among those that are listed in the table below or a modified list, as allowed by this condition. If additional ERCs are submitted, the project owner shall submit an updated table including the additional ERCs to the CPM. The project owner shall request CPM approval for any substitutions, modifications, or additions of credits listed.

~~If the South Coast Air Quality Management District is not redesignated by the United States Environmental Protection Agency from non-attainment to attainment for the federal 1-hour and 8-hour carbon monoxide ambient air quality standards prior to the first day of construction, then the project owner shall surrender sufficient CO offsets to satisfy the New Source Review requirements for the project CO emission for the entire facility in the amount of 1,490 lbs/day (include a 1.2 to 1 offset ratio). The project owner shall surrender the ERCs, if applicable, for CO from among those that are listed in the modified table as allowed by this condition.~~

The CPM, in consultation with the District, may approve any such change to the ERC list provided that the project remains in compliance with all applicable laws, ordinances, regulations, and standards, the requested change(s) will not cause the project to result in a significant environmental impact, and the District confirms that each requested change is consistent with applicable federal and state laws and regulations.

The project owner shall request from the District a report of the NSR Ledger Account for the project after the District has issued the Permit to Construct. This report is to specifically identify the ERCs and PRCs used to offset the project emissions.

Certificate Number	Amount (lbs/day)	Pollutant
AQ003679	8	VOC
AQ002683	1	VOC
Former AQ004209	117	VOC
Former AQ006303	100	VOC

Verification: The project owner shall submit to the CPM the NSR Ledger Account, showing that the project's offset requirements have been met, 15 days prior to initiating construction for Priority Reserve credits, and 30 days prior to turbine first fire for traditional ERCs. Prior to commencement of construction, the project owner shall obtain sufficient RTCs to satisfy the District's requirements for the first year of operation as

prescribed in Condition of Certification **AQ-16**. If the CPM approves a substitution or modification to the list of ERCs, the CPM shall file a statement of the approval with the project owner and commission docket. The CPM shall maintain an updated list of approved ERCs for the project.

AQ-SC8 ~~Condition deleted.~~ The project owner/operator shall perform the following requirements prior to construction ground disturbance.

Demonstrate Compliance with Rule 1309.1 Section d(12) by either:

1. Providing a letter from the Executive Officer of the South Coast Air Quality Management District stating that the project capacity is within the first 2,700 MW of capacity requested pursuant to Rule 1309.1 Section d (12).

Or

2. Providing a letter from the Governing Board of the South Coast Air Quality Management District granting a specific waiver to the AQMD Rule 1309.1 section d(12). This letter must be on the Governing Board letterhead and signed by the appropriate members of the Governing Board.

Demonstrate Compliance with Rule 1309.1 Section d(14) by either:

1. Providing non-confidential evidence that the project owner/operator has entered into a long-term power purchase agreement contract as required by AQMD Rule 1309.1 with Southern California Edison Company, San Diego Gas and Electric Company or the State of California.

Or

2. Providing a letter from the Governing Board of the South Coast Air Quality Management District granting a specific waiver to the long term contract requirement of AQMD Rule 1309.1 section d(14). This letter must be on the Governing Board letterhead and signed by the appropriate members of the Governing Board.

Verification: All evidence submitted in compliance with Condition **AQ-SC8** must be submitted 30 days prior to construction ground disturbance.

AQ-SC9 If the project owner does not participate in the voluntary California Climate Action Registry, then the project owner shall report on a quarterly basis to the CPM the quantity of greenhouse gases (GHG) emitted as a direct result of facility electricity production as follows:

The project owner shall maintain a record of fuel use in units of million-Btu (MMBtu) for all fuels burned on site for the purpose of power production. These fuels shall include but are not limited to: (1) all fuel burned in the combustion turbines, (2) HRSGs (if applicable) or auxiliary boiler (if

Commission Discussion

The Commission has reviewed Staff proposed Condition of Certification **CUL-5** with regard to its provision that the Project Owner provide Worker Environmental Awareness Program (WEAP) training to all new workers. The evidence in this proceeding is clear that there are no known surface cultural resources and the potential for impact to cultural resources arises only from the possibility that excavation for foundations and pipeline trenches may disclose an otherwise unknown cultural resource. Based upon the possible discovery of unknown cultural resources during excavation, the Commission has provided mitigation requiring the Project Owner to hire a Cultural Resources Specialist, who may in turn hire additional Cultural Resources Monitors and, if necessary, Cultural Resources Technical Specialists. (**CUL-1**) The Commission has further provided that the supervising Cultural Resources Specialist and any Cultural Resources Monitors shall monitor ground disturbance full-time, if necessary, at the project site where ground disturbance or excavations exceed three feet and for the full width and length of all excavations to ensure no impacts to undiscovered cultural resources. (**CUL-6**) The Cultural Resources Specialist has the authority to halt construction in the event undiscovered cultural resources are discovered. (**CUL-8**)

Notwithstanding these provisions, Staff believes that WEAP training to identify and recover/protect cultural resources should extend to *all* workers, including those who are in no way associated with ground disturbance and excavation. To support this view, Staff believes that it is hard to differentiate who is or is not doing ground disturbing work. Further, Staff suggests the possibility that excavation spoils might be stored on-site and that all workers should have cultural resource training in case one is walking by the pile and sees a potential cultural resource missed by the Cultural Resources Specialist, his/her team and the excavation workers. (RT 6/27/07 42:15-43:11; 45:2-46:4.)

The Commission finds that there is a sufficient nexus between the excavating activity and the potential discovery of unknown cultural resources to support the WEAP training for workers directly involved in excavation and ground disturbance, as well as their supervisors or foremen. However, the Commission finds that there is not a sufficient nexus to establish a WEAP training requirement for workers not directly involved in excavation and ground disturbance. Henceforth, WEAP training will apply to "project managers, construction supervisors, foremen, and general workers who are involved with or operate ground disturbing equipment or tools." Once ground disturbance ends, the WEAP training should likewise end. This shall be the policy of the Commission where the evidence of record finds the potential for impact to cultural resources arises only from the possible excavation of known or unknown resources. Application of this policy will conform to the WEAP training provided for mitigating potential impacts to unknown paleontological resources from ground disturbance. This policy is not intended to prevent the project owner from providing cultural resource training to non-excavation workers if it is otherwise convenient to do so in association with other worker training.

Verification: monthly summary report of cultural resources-related monitoring prepared by the CRS. Copies of daily logs shall be retained by the project owner on-site during construction.

CUL-7 A Native American monitor or monitors shall be obtained to monitor pre-construction site mobilization, construction ground disturbance, construction grading, boring, and trenching and construction (including landscaping) in areas where ground disturbance exceeds three feet and in areas where Native American artifacts may be discovered. Lists of concerned Native Americans, with contact information, and guidelines for monitoring shall be obtained from the Native American Heritage Commission. Preference in selecting a monitor or monitors shall be given to Native Americans with traditional ties to the area that shall be monitored.

Verification: Within one day of obtaining a Native American monitor, the project owner shall send notification to the CPM identifying the person(s) retained to conduct Native American monitoring in areas where there is potential to discover Native American artifacts. ~~At least one week prior to the beginning of pre-construction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction; in areas where there is a potential to discover Native American artifacts, the project owner shall send notification to the CPM identifying the person(s) retained to conduct Native American monitoring.~~ The project owner shall also provide a plan identifying the proposed monitoring schedule and information explaining how Native Americans who wish to provide comments will be allowed to comment. The project owner shall also ensure that the CRS informs Native American groups of any discoveries of Native American archaeological material. If efforts to obtain the services of a qualified Native American monitor are unsuccessful, the project owner shall immediately inform the CPM. The CPM will either identify potential monitors or will allow ground disturbance to proceed without a Native American monitor.

CUL-8 The project owner shall grant authority to halt construction to the CRS, alternate CRS, and the CRMs in the event previously unknown cultural resources sites or materials are encountered (discovery), or if known resources may be impacted in a previously unanticipated manner. Redirection of ground disturbance (including landscaping) shall be accomplished under the direction of the construction supervisor in consultation with the CRS.

In the event cultural resources are found or impacts can be anticipated, construction shall be halted or redirected in the immediate vicinity of the find and shall remain halted or redirected until all of the following have occurred:

1. The CRS has notified the project owner and the CPM has been notified within 24 hours of the discovery, or by the following Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday. Notification to the CPM must include a description of the discovery (or changes in character

NOISE – Summary of Findings and Conditions

	POWER PLANT SITE	*CUMULATIVE IMPACTS*	*LORS COMPLIANCE*
Loudness/ Time of Day	**MITIGATION**	**None**	**Yes**

Construction: Construction activities may cause temporary noise which is not significantly above daytime ambient levels at surrounding residences and nearby Glenelder School.

MITIGATION:

- ☑ The Project Owner shall notify neighboring residents and business owners of impending construction at the power plant site and disseminate a telephone "hotline" number to report any undesirable noise conditions. Condition: **NOISE-1**.
- ☑ The Project Owner shall create a noise complaint process through which it will attempt to resolve all noise complaints. Condition: **NOISE-2**.
- ☑ The Project Owner shall comply with construction time-of-day restrictions. Condition: **NOISE-6**.

Operation: During its operation, the generating facility will represent essentially a steady, continuous noise source. The noise emitted by power plants during normal operations is generally broadband, steady state in nature. Occasional short-term increases in noise level will occur as relief valves open to vent air pressure, or during start-up or shutdown, as the plant transitions to and from steady-state operation. Routine operation will be afternoons during hot weather episodes; nighttime operation is to be "rare."

MITIGATION:

- ☑ The Project Owner shall maintain a telephone "hotline" number to report any undesirable noise conditions for at least one year after operation begins. Condition: **NOISE-1**.
- ☑ The Project Owner shall create a noise complaint process through which it will attempt to resolve all noise complaints. Condition: **NOISE-2**.
- ☑ The Project Owner will ~~not cause noise levels attributable to~~ limit noise from plant operation, during the four quietest consecutive hours of the nighttime, to ~~exceed an average of~~ 49 dBA in response to a valid complaint from a resident ~~measured at~~ near monitoring locations M2 ~~and~~ or M4. Condition: **NOISE-4 7**.

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circumstances of a case, such as the duration and frequency of the noise, and the level of exposure of people to noise levels in excess of standards established in the local LORS. (FSA, 4.6-12.)

An increase of 9 dBA, in a relatively quiet nighttime environment such as that encompassing M2, would typically represent a significant impact. (FSA, 4.6-12.)

In this instance, Staff determined in its FSA analysis that a 9 dBA noise increase at M2 and M4 was not a significant impact. In Staff's Preliminary Staff Assessment (PSA) analysis, Staff concluded that the 9 dBA noise increase would be a significant impact. The Staff stated its change of view is due to new information coming between the PSA and the FSA that the LMS100 technology is relatively new and actual field measurements are expected to result in lower than initial representations by the manufacturer. Therefore, for Staff, the above predicted increase of 9 dBA in the ambient noise level at M2 "will likely prove" to be less than 9 dBA. (FSA, 4.6-12.)

Also, because the WCEP is labeled as a peaking power plant and it is anticipated that nighttime operation of this plant will occur rarely, Staff believes an increase of between 5 and 10 dBA in the ambient noise levels would create a less-than-significant impact at M2 and would thus comply with the noise goals and policy statements of the City of Industry General Plan. (FSA, 4.6-12.)

To account for the daytime hours when Glenelder Elementary School (M3) is open, Staff extrapolated from M1, M2, and M4 data the existing daytime ambient noise level to range between 54 and 58 dBA L_{90}. Staff also estimated the expected operational noise level to be 48 dBA, based upon greater distance from M2. Combining these estimates, Staff calculated an increase of 1 dBA over the daytime ambient, which would be barely noticeable. Combining 48 dBA with the higher ambient level of 58 dBA L_{90} results in 58 dBA L_{90} (no increase over the ambient). Thus, the project operational daytime noise impact at the school will be expected to be less than significant. (FSA, 4.6-12.)

~~Commission Discussion~~

~~The CEQA Guidelines (Cal. Code Regs., tit. 14, App. G) provide that a significant impact from noise may exist if a project would result in a substantial temporary, periodic or permanent increase in ambient noise levels in the project vicinity above levels existing without the project. The Commission has thoroughly reviewed Staff's analysis and proposed Condition of Certification **NOISE-4,** which would allow an 8 dBA increase in nighttime noise. Staff supports its determination that this increase would not constitute a significant noise impact to area residents on the grounds that:~~

- ~~new information on the noise emissions of the LMS100 suggests that the predicted increase of 9 dBA in the ambient nighttime noise level at M2 will likely prove to be less than 9 dBA; and~~

- ~~as a peaking power plant, anticipated nighttime operation will be rare, under emergency conditions, so that an increase of between 5 and 10 dBA in ambient nighttime noise levels will be insignificant.~~

~~In the PSA (PSA, 4.6-11), Staff determined that, based upon test data for the LMS100, the noise emission from the project at M2 would be 52 dBA. Between the publication of the PSA and the preparation of the FSA, Staff was told by the turbine manufacturer that the LMS100 was expected to have actual noise levels lower than the AFC prediction. (6/27/07 RT 33:17-34:2.) There were neither Staff Data Requests filed in this proceeding nor Applicant filings in the record to substantiate this assertion. Notwithstanding this information, which would have supported reducing the value for the project's model-predicted noise at any monitoring location, the FSA retained the same 52 dBA value for project noise at M2 as it had in the PSA.~~

~~The Commission cannot give substantial weight to Staff's hearsay-based assertion that the LMS100 will be quieter than predicted. Furthermore, Staff did not change the project noise value in the PSA to something lower in the FSA. Characterizations such as "expected to" and "likely to" be quieter than predicted are too speculative to support a finding that there will be no significant nighttime noise impact.~~

~~Moreover, Staff's determination of no significant noise impact blends "rare" nighttime operation with the assertion that an increase of between 5 and10 dBA (in this case, 9 dBA) will inherently not be significant. The evidentiary record will not support a finding that, standing alone, an 8 or 9 dBA increase in ambient nighttime noise is not a significant impact. Staff's PSA and FSA both state, "An increase of 9 dBA, in a relatively quiet nighttime environment such as that encompassing M2, would typically represent a significant impact." (PSA, 4.6-12; FSA, 4.6-12.) The Commission concurs that an increase of 9 dBA in the ambient nighttime noise level is a significant impact, and we have found similarly in other power plant proceedings.~~

~~Thus, the only basis for determining whether the project will cause a significant noise impact is the frequency and duration of any nighttime or overnight operation. The Applicant represents this project as follows:~~

> ~~"Nighttime operation of the WCEP, while it may occur, will be relatively rare. As a peaking power facility, the project's annual operating capacity factor will be in the range of 20 to 40 percent, and the most common times of operation will be afternoons during hot weather episodes. (AFC 8.7-13.)~~

~~In the FSA Air Quality section, the Staff notes the Applicant states that a capacity factor of 40 percent translates to just over 3,500 hours of operation annually (FSA 4.1-18), which mathematically would average approximately 10 hours daily throughout the year. The SCAQMD's FDOC states that since the annual hours of project operation will exceed that which is allowed for a traditional peaking unit under its Rule 2012 (1,300 hrs.), the project will not be classified as an "official" peaking unit. (FDOC, p. 14.)~~

~~In the FSA Visual Resources section, the Staff's analysis of potential visible plume frequency turned on the project's expected operation:~~

> ~~Staff considers that, while the Applicant's estimate of power plant summer peak load operations may be reasonable for the short-term, this power plant's operation will increase significantly over time. The CEC Electricity Analysis Office estimated that over the long term a reasonable annual capacity factor for this facility would be 65 percent, not 40 percent. Additionally, a review of 2005 SCE load data provided by the CEC Electricity Analysis Office shows an overall power demand split of 60/40 between the May to October vs. November to April periods. Combining the annual capacity factor and the seasonal power demand splits results in an estimated seasonal capacity factor of 78 percent from May to October and 52 percent from November through April. (FSA 4.12-28.)~~
>
> ~~An evaluation of normal daily load profiles from the 2005 SCE load data then suggests normal daily operating hours of 6 am through 1 am for May through October and 9 am through 9 pm for November through April. (FSA 4.12-28.)~~

~~It does not appear that the Staff, in its FSA Noise section, considered the foregoing operating profile in determining that nighttime operation would not cause a significant impact. A 65 percent capacity factor is mathematically equivalent to 16.5 hours of operation daily throughout the year. If *routine* operation were to extend from 6 am through 1 am as the CEC Electricity Analysis Office estimates, then the Staff's suggested Condition **NOISE-4,** allowing an 8dbA increase in noise during nighttime operation, would provide no mitigation for a noticeable, sleep-disturbing noise impact. If, on the other hand, the frequency of nighttime operation is truly "rare" and the duration of such rare operation is "short," then such an 8dbA noise increase might not cause a significant impact, and each such occurrence would need only be subject to the Noise Complaint process in Condition of Certification **NOISE-2**.~~

~~In the **PROJECT DESCRIPTION**, we highlighted the enhanced efficiencies of the LMS100 with greater output using less natural gas, which may create a competitive advantage for this project over less efficient existing facilities.~~

~~While the LMS100 may have a significant advantage in fuel efficiency over other simple cycle turbine generators, its operating flexibility makes it attractive for peaking, load following and ancillary service than these efficiency numbers reflect. Fuel consumption is one of the most important economic factors in selecting an electric generator; fuel typically accounts for over two-thirds of the total operating costs of a fossil-fired power plant. Under a competitive power market system, operating costs are critical in determining the competitiveness and profitability of a power plant. (FSA, 5.3-8)~~

~~The prediction of our Electricity Analysis Office of higher potential capacity factors is credible since economic dispatch results in more operation of the most efficient plants.~~

~~On this basis, the Commission finds that under marketplace pressure nighttime operation will likely progress from "rare" to occasional, to often, to frequent, to routine. Under such circumstances, our Compliance complaint process, relying upon "rare" as~~

~~the standard for nighttime operation, displays its weakness as a vague and unenforceable standard which would no longer be adequate to assure that the project conforms to both the City of Industry General Plan goals and CEQA.~~

~~Thus, the Commission must decide whether to impose a numerical limitation on the frequency and duration of nighttime operation or impose a numerical limitation for noise levels at sensitive nighttime noise receptors in order to assure no nighttime noise impacts. The requirements of CEQA and the weight of all the evidence lead the Commission to find that establishing a numerical limitation for maximum nighttime noise levels at the residential receptors is the preferred method.~~

~~Given the efficiencies of this project, the Commission would prefer, and the California energy marketplace would be better served, if in the near-term the Applicant is able routinely to operate the project at a 40 percent capacity factor in response to the contracting utility or the demands of the overall grid system *without* significant noise impact. In the long-term, assuming the project retains its competitive efficiencies, the Project Owner should be free to maximize its operation, including nighttime operation, unencumbered by its own assurance of "rare" nighttime operation or a numerical limitation on the duration of nighttime operation due to noise. The Commission views establishing a nighttime numerical noise limit at the nearest residential receptors as the best way to achieve the competing goals of maximizing electricity market efficiency and minimizing noise impact to neighboring communities.~~

~~The Applicant has provided guidance as to how to translate the non-numerical goal of the City of Industry General Plan that "surrounding communities are not infringed upon by noises from [the project]," as well as the "no significant impact" criterion of CEQA, into a more objective, numerical, and enforceable requirement that the Commission can use in this Decision. In its summary of its noise impact analysis, the Applicant states, "the WCEP will not cause the ambient noise at the nearest sensitive receptor to increase by more than 5 dBA (a barely noticeable increase)." (AFC, 1-10.) Applicant's view that a 5 dBA increase, while noticeable, will be barely audible, is in accord with the Staff's CEQA-based view and many prior Commission decisions that an increase of up to 5 dBA has a less-than-significant impact. (FSA, 4.6-12.)~~

~~We interpret the goal of the City's General Plan to "not infringe" to allow for some increase in audible noise in surrounding communities, but that the increase should be barely noticeable so that it does not infringe upon the peace and quiet, particularly at night, of sensitive receptors and that an increase of up to 5 dBA over an established baseline will be acceptable.~~

~~The only remaining task for the Commission, then, is to determine the baseline value of the ambient noise to which a 5 dBA increase limitation will be applied. The Applicant's AFC asserts, "Although the WCEP is a peaking power plant, and so is expected to run most often during the daytime when demand is the highest, the WCEP may run during the nighttime under emergency outage conditions and other circumstances, so the Ldn [day – night noise level] is an appropriate measure." The Ldn takes into consideration the greater sensitivity to nighttime noise by adding 10 decibels between the hours of 10:00 p.m. and 7:00 a.m. to calculate acceptable community noise levels. (AFC, 1-10.)~~

~~Using preliminary data for the new LMS100, the Applicant determined that the noise attributable to the project is not expected to exceed 52 dBA at the closest residential receptor, M2. Using the Applicant-favored Ldn values, 52 dBA at M2 is equivalent to an Ldn of 58, which is lower than the existing Ldn level of 62 dBA at M2. (AFC, 8.7-12.)~~

~~In past Decisions, including "peaking" plant Decisions, the Commission has incorporated a Staff-favored approach for projects that operate during nighttime hours when residents are sleeping. Instead of using an average that incorporates any daytime ambient noise levels, the Staff approach is to use only an average of the four quietest consecutive nighttime hours measured by overnight monitoring. Staff determined that 44 dBA is the nighttime average ambient noise level at M2 using the L90 method, which is the noise level exceeded during 90 percent of the measurement period.~~

~~Applying a 5 dBA increase to the L90 level of 44, the maximum ambient noise level with the project operating during the nighttime would be 49 dBA at M2. The Commission finds that such an increase in nighttime noise level would not infringe upon the surrounding community, in compliance with the City of Industry General Plan goals. Further, we find that such a noise limitation would prevent a significant noise impact under CEQA, even if the project were operated for longer durations in the future.~~

~~We acknowledge the Applicant's concern that noise mitigation to comply with this numerical limit will add to the project's capital cost. However, enabling the project to operate at night will allow the Applicant to generate additional income to help offset those capital costs. Moreover, adequate noise mitigation designed into the project for the beginning is typically less costly that retrofit noise mitigation, which could become necessary to resolve nighttime noise complaints.~~

~~In accordance with the foregoing discussion, the Commission will modify Staff's suggested Condition of Certification **NOISE-4** by changing the allowable nighttime ambient noise level during operation from 52 dBA to 49 dBA.~~

The Commission notes that the County of Los Angeles Department of Public Heath submitted a letter (6/26/07) to the record expressing concern that the project operation as described in CEC documentation (presumably the FSA) would exceed its community noise standards by 4 dBA. The County did not participate in the Evidentiary Hearing. The Commission's review of the record of the proceeding shows that, in the PSA, Staff determined the Los Angeles County noise standards applied to the project, even though the project was not physically located within the County's jurisdiction. In the PSA, the Staff-suggested Condition of Certification **NOISE-4** imposed a Los Angeles County noise standard-based maximum nighttime noise level of 48 dBA, using the L50 method. However, in the FSA, Staff stated that the County noise standard in fact did <u>not</u> apply, and the revised Staff-suggested Condition **NOISE-4** allowed a 52 dBA nighttime noise level, which appears to account for the 4 dBA difference referred to in the County's letter.

The Commission is under no obligation to impose the County's 48 dBA nighttime noise limit in Condition **NOISE-4**, since the project is not in the unincorporated County. However, the noise from this project will be audible in residential neighborhoods where the County's 48 dBA noise limit would apply. ~~Setting a nighttime ambient noise limit of 49 dBA will prevent an increase in ambient noise from being so noticeable as to infringe upon the surrounding residents or create a significant impact. The Commission's L90-based 49 dBA requirement is slightly more beneficial to residents than the County's 48 dBA L50-based limitation would have been if it applied to the project.~~

Commission Discussion

The CEQA Guidelines (Cal. Code Regs., tit. 14, App. G) provide that a significant impact from noise may exist if a project would result in a substantial temporary, periodic or permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

In light of Staff's disavowal of its prior testimony of a potential 65 percent capacity factor (Commission Staff Responses, 9/10/07, p. 8), an evidentiary basis no longer exists for the Committee's PMPD finding that operation of the project during nighttime hours could potentially become routine. Also, the 4,000 hour restriction of SCAQMD Rule 1309.1 effectively creates a limitation which would prevent routine nighttime operation. The Applicant's testimony concerning historical operation of peaking power plants and their historical hours of dispatch further supports a finding that the project operation during nighttime hours would be extremely rare, happening apparently only in an emergency-type situation. (Applicant's Supp. Testimony, 9/10/07, p. 1-3)

From a LORS compliance perspective, the updated evidentiary record supports a finding that the project complies with the City of Industry General Plan requirement that "surrounding communities are not infringed upon by the noises from the project."

From a CEQA perspective, the Applicant's supplemental testimony showing historical data of peaking units and economic dispatch principles supports a finding that nighttime operation would be extremely rare, and thus not a significant impact.

However, the Commission acknowledges what the Applicant also acknowledges, namely that project may operate into the four quietest hours of the nighttime. No one can say never, which means that sleeping residents may be disturbed by the project given a predicted 9 dBA increase in noise over the nighttime ambient condition.

The Commission has routinely provided for all projects a noise complaint resolution process in Condition **NOISE-2**, which provides that the project owner shall promptly investigate the noise complaint and, if attributable to the project, undertake reasonable measures acceptable to the Commission's Compliance Project Manager to reduce the noise *at its source*.

The Applicant represented that it is already using the most effective noise reduction package available from the turbine-generator manufacturer so that further noise reductions "at its source," namely the project, would be so expensive (on the order of

$10 million) that the Applicant offers its proposed **NOISE-7** Condition (Applicant's Comments on PMPD, p. 3 – 4). It provides that, in the event project operation during the four quietest nighttime hours causes a valid complaint, the project owner would limit noise to 49 dBA through operational reductions or implement off-site mitigation at complainants' residences to reduce project noise by 3 dBA. (Applicant's Comments on PMPD, p. 3 & 4) The 49 dBA level represents the 44 dBA quietest ambient nighttime noise level plus 5 dBA, which is generally accepted increment that will not cause an audible noise increase.

The Commission must weigh the competing interests of not imposing upon the project expensive mitigation for an impact that would occur extremely rarely versus the community interest in having a remedy if the rare instances of nighttime operation actually cause valid noise complaints.

The Applicant's proposed Condition **NOISE-7** is an attempt to resolve those competing interests and provides an acceptable means to mitigate a valid complaint of overnight noise, should it happen. However, we are mindful of our Compliance staff's concerns about the workability of off-site residential mitigation, particularly given the large number of potentially affected residents.

The Commission believes that the Applicant's proposed Condition can be effective if the provision for off-site residential mitigation is removed leaving the remaining provision whereby the Applicant agrees to limit potential nighttime project noise by limiting project operation, for example, by reducing the number of units operating.

The 49 dBA limit in proposed Condition **NOISE-7** will be effective in preventing a nighttime noise impact. Moreover, based upon the Applicant's supplemental testimony, such an off-peak operational limitation will not cause economic loss to the project owner. However, in an electricity supply emergency, the community interest in available generation supplies would outweigh the mitigation of nighttime noise from the project. Consequently, the Commission will further modify proposed Condition **NOISE-7** to provide that any limit on operation for noise abatement shall not apply during a Cal ISO-declared Stage 2 Electrical Emergency.

Thus, taken as a whole, our Noise conditions are to have the following effect. Pursuant to Condition **NOISE-4**, the project design shall ensure that operation will not cause noise levels attributable to operation during the four quietest consecutive hours of the nighttime to exceed 52 dBA measured at both neighborhood monitoring locations M2 and M4. In the event of a complaint of nighttime noise during those four hours made pursuant to Condition **NOISE-2**, the project owner shall investigate and attempt to resolve the complaint in a manner acceptable to the Commission's Compliance Project Manager. This process might, for example, rectify a component of project equipment that was defective or operating more noisily than designed. But, if the project is operating within specifications and a legitimate noise complaint for those four hours is made pursuant to **NOISE-2**, the CPM shall determine through either monitoring or mathematical extrapolation of the 25-hour monitoring data obtained pursuant to Condition **NOISE-4** whether project noise exceeded 49 dBA. If project noise exceeded 49 dBA at any time during those four hours at the complainant's residence, the project owner shall limit project operation during the four quietest consecutive hours of the

nighttime so that noise attributable to the project is no more than 49 dBA at the complainant's location, except that such a limitation shall not apply in the event of an electricity supply emergency.

The Commission believes that Condition NOISE-7 addresses the concerns of Los Angeles County regarding potential noise impacts to residents in the unincorporated areas adjoining the City of Industry.

MITIGATION

- ☑ The Project Owner will ~~not cause noise levels attributable to~~ limit noise from plant operation, during the four quietest consecutive hours of the nighttime, to ~~exceed an average of~~ 49 dBA in response to a valid complaint from a resident ~~measured at~~ near monitoring locations M2 ~~and~~ or M4. Condition: **NOISE-4 7**.

Tonal Noises

One possible source of annoyance from a power plant would be strong tonal noises. Tonal noises are individual sounds (such as pure tones) that, while not louder than permissible levels, stand out in sound quality. Some sources of tonal noises within a power plant include combustion turbine air inlets, transformers, pump motors and cooling tower fan gearbox. The Applicant plans to address overall noise in design, and to take appropriate measures, as necessary, to eliminate tonal noises as possible sources of annoyance. Selecting or designing the appropriate measures depends on the individual equipment emanating the tonal noise and the character of the noise generated. To ensure that tonal noises do not cause annoyance, Condition of Certification **NOISE-4** requires testing for tonal noise during full-load operation. (FSA, 4.6-12.)

Worker Noise

Power plant noise can damage workers' hearing if not properly managed. The Applicant recognizes the need to protect plant operating and maintenance personnel from noise hazards, and has committed to comply with applicable LORS. Signs would be posted in areas of the plant with noise levels exceeding 85 dBA (the level that OSHA recognizes as a threat to workers' hearing), and hearing protection would be required. The Applicant would implement a comprehensive hearing conservation program. (FSA, 4.6-13.)

MITIGATION:

- ☑ The Project Owner will implement a noise control program for employee noise exposure. Condition: **NOISE-3**.
- ☑ The Project Owner shall conduct an occupational noise survey and take action based upon its results. Condition: **NOISE-7.**

Verification: At least 30 days prior to the start of ground disturbance, the project owner shall submit to the CPM the noise control program. The project owner shall make the program available to Cal-OSHA upon request.

NOISE RESTRICTIONS

NOISE-4 The project design and implementation shall include appropriate noise mitigation measures adequate to ensure that operation of the project will not cause noise levels attributable to plant operation, during the four quietest consecutive hours of the nighttime, to exceed and average of 52 ~~49~~ dBA measured near the intersection of Fieldgate Avenue and Folger Street (monitoring location M2) and near the intersection of Inyo Street and Roxham Avenue (monitoring location M4).

The measurement of power plant noise for the purposes of demonstrating compliance with this condition of certification may alternatively be made at a location, acceptable to the CPM, closer to the plant (e.g., 400 feet from the plant boundary) and this measured level then mathematically extrapolated to determine the plant noise contribution at the affected residence. However, notwithstanding the use of this alternative method for determining the noise level, the character of the plant noise shall be evaluated at the affected residential locations (M2 and M4) to determine the presence of pure tones or other dominant sources of plant noise.

No new pure-tone components may be introduced. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints.

A. When the project first achieves a sustained output of 90 percent or greater of rated capacity, the project owner shall conduct a 25-hour community noise survey at monitoring sites M2 and M4, or at a closer location acceptable to the CPM. This survey during power plant full load operation shall also include measurement of one-third octave band sound pressure levels to ensure that no new pure-tone noise components have been introduced.

B. If the results from the noise survey indicate that the power plant average noise level at the affected receptor sites exceeds the above value during the four quietest consecutive hours of the nighttime, mitigation measures shall be implemented to reduce noise to a level of compliance with this limit.

C. If the results from the noise survey (A, above) indicate that pure tones are present, mitigation measures shall be implemented to eliminate the pure tones.

Verification: The survey shall take place within 30 days of the project first achieving a sustained output of 90 percent or greater of rated capacity. Within 15 days after completing the survey, the project owner shall submit a summary report of the survey to the CPM. Included in the survey report will be a description of any additional mitigation

measures necessary to achieve compliance with the above listed noise limit, and a schedule, subject to CPM approval, for implementing these measures. When these measures are in place, the project owner shall repeat the noise survey.

Within 15 days of completion of the new survey, the project owner shall submit to the CPM a summary report of the new noise survey, performed as described above and showing compliance with this condition.

EMPLOYEE OPERATION NOISE CONTROL PROGRAM

NOISE-5 Following the project first achieving a sustained output of 90 percent or greater of rated capacity, the project owner shall conduct an occupational noise survey to identify the noise hazardous areas in the facility.

The survey shall be conducted by a qualified person in accordance with the provisions of Title 8, California Code of Regulations, sections 5095-5099 (Article 105) and Title 29, Code of Federal Regulations, section 1910.95. The survey results shall be used to determine the magnitude of employee noise exposure.

The project owner shall prepare a report of the survey results and, if necessary, identify proposed mitigation measures that will be employed to comply with the applicable California and federal regulations.

Verification: Within 30 days after completing the survey, the project owner shall submit the noise survey report to the CPM. The project owner shall make the report available to OSHA and Cal-OSHA upon request by OSHA or Cal-OSHA.

CONSTRUCTION TIME RESTRICTIONS

NOISE-6 Heavy equipment operation and noisy construction work relating to any project features shall be restricted to the times of day delineated below, unless a special permit has been issued by the City Director of Public Works:

Any Day:	7 a.m. to 8 p.m.

Haul trucks and other engine-powered equipment shall be equipped with adequate mufflers. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.

Verification: Prior to ground disturbance, the project owner shall transmit to the CPM a statement acknowledging that the above restrictions will be observed throughout the construction of the project.

NIGHTTIME NOISE

NOISE-7 In the event that a legitimate noise complaint under Condition NOISE-2 is made by an owner of an existing residence located near monitoring locations M2 or M4 and the CPM determines the project was operating during the four quietest consecutive hours of the nighttime and the noise attributable to such operation

was greater than 49 dBA at the complainant's residence, the Project Owner shall limit operations during the four quietest consecutive hours of the nighttime so that noise attributable to the project is no more than 49 dBA at the complainant's residence. The limitation on operation shall not apply during a Cal ISO-declared Stage 2 Electrical Emergency.

Verification: Fifteen (15) days prior to commercial operation, the project owner shall notify by mail all residents within 1,750 feet of the project boundary of the start of commercial operation. The notice shall inform residents of the Noise Complaint Resolution process under Condition of Certification **NOISE-2**.

Within 10 days of the CPM determining that a complaint is legitimate and the project was operating during the four quietest consecutive hours of the nighttime in excess of 49 dBA at the complainant's residence, the project owner shall limit project operation during the four quietest consecutive hours of the nighttime so that noise attributable to project operation does not exceed 49 dBA.

Year-Round, Future Operating Profile

~~Staff considers that, while the Applicant's estimate of power plant summer peak load operations may be reasonable for the short-term, this power plant's operation will increase significantly over time. The CEC Electricity Analysis Office estimated that over the long term a reasonable annual capacity factor for this facility would be 65 percent, not 40 percent. Additionally, a review of 2005 SCE load data provided by the CEC Electricity Analysis Office shows an overall power demand split of 60/40 between the May to October vs. November to April periods. Combining the annual capacity factor and the seasonal power demand splits results in an estimated seasonal capacity factor of 78 percent from May to October and 52 percent from November through April. (FSA, 4.12-28.)~~

~~An evaluation of normal daily load profiles from the 2005 SCE load data then suggests normal daily operating hours of 6 am through 1 am for May through October and 9 am through 9 pm for November through April. (FSA, 4.12-28.)~~

Staff modeled the plume frequency and size assuming ~~the~~ substantially greater operation of the project than proposed. This operating profile results in visible plumes predicted to occur 52 percent (approximately 2800 hours) of clear daylight hours during the months of November through April. This takes into consideration that the plant is anticipated to operate during the hours of 9am through 9pm. (FSA, 4.12-28.)

As shown in the photo-simulation, the winter plume dimensions would be slightly larger than summer plumes. The predicted plume size is taken from the base of the cooling tower stack, and is predicted to be 125 feet tall and 74 feet long. (FSA, 4.12-10.)

Neither the larger winter plume nor the smaller summer plume would dominate the wide, panoramic views available for residences represented by KOP 3. Other than the sky and the silhouette of the mountain range in the backdrop, the plumes would not

many acres of potentially valuable habitat and the interference with fish movements during their life cycles. As a result of these impacts, it is extremely unlikely that new hydropower facilities could be developed and permitted in California within the next several years. (FSA, 6-20.)

Geothermal Energy

Geothermal technologies use steam or high-temperature water obtained from naturally occurring geothermal reservoirs to drive steam turbine/generators. Geothermal is a commercially available technology; however, it is limited to areas where geologic conditions resulting in high subsurface water temperatures occur. There are no viable geothermal resources located in the vicinity of the proposed project.

The nearest commercial geothermal area is in Imperial County. By its nature, geothermal energy provides a baseload source of power and is insufficient for use in situations requiring rapid response to peak demand. Therefore, geothermal technology does not fulfill the basic objective of the project. (Staff Supp. Testimony, 9/10/07, p. 4)

Conclusion

The renewable technologies discussed above have the advantage of not requiring the burning of fossil fuels and avoiding the environmental and resource impacts associated with natural gas-fired power. However, these technologies also have the potential to cause significant land use, biological, cultural resource, and visual impacts. Plus, they have substantial cost and regulatory hurdles to overcome before they can provide substantial amounts of power. Therefore, these technologies do not fulfill a basic objective of the proposed project to provide peak load serving capability in order to ensure a reliable supply of electricity in the region. These renewable technologies are not feasible alternatives to the proposed project. (FSA, 6-20.)

“No Project” Alternative

CEQA Guidelines and Energy Commission regulations require consideration of the “no project” alternative. This alternative assumes that the project is not constructed, and compares that scenario to the proposed project. A determination is made whether the “no project” alternative is superior, equivalent, or inferior to the proposed project.

If the WCEP were not built, the proposed site would likely remain in industrial use and the impacts of project construction and operation at this site would not occur. However, if the WCEP were not constructed, it would not contribute to the region’s electricity resources and would not increase the peaking capacity for a more reliable electric system. The No Project Alternative would not meet the project objectives. This alternative would result in potentially greater demands for more energy production from existing power that currently have older, less efficient generating units than those proposed for the WCEP. (AFC, 9- 2; FSA, 6-12.)