

## Memorandum

**Date :** November 25, 2003

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**to :** James D. Boyd, Presiding Commissioner  
Robert Pernell, Associate Member

**File:** **PMPD Comments**

**from :** **California Energy Commission -**  
**1516 Ninth Street**  
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**subject : STAFF PMPD COMMENTS, MID ELECTRIC GENERATION STATION (03-SPPE-01)**

On November 7, 2003, the Committee assigned to review the MID Electric Generation Station Project (MEGS) SPPE issued its Presiding Member's Proposed Small Power Plant Exemption Decision (PMPD) and Notice of Intent to Adopt a Mitigated Negative Declaration (NOI), requesting comments for the record of this proceeding. Staff is providing comments on the topics of energy resources, transmission system engineering, air quality, biological resources, cultural resources, general conditions of exemption, hazardous materials management, noise, and visual resources.

## ENERGY RESOURCES

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The Committee has proposed to limit project operation to 5,000 hours per year because:

- a project allowed to potentially operate for 8,760 hours per year is not a peaking facility; and
- a simple cycle project allowed to potentially operate 8,760 hours per year would waste significant amounts of energy (PMPD, p. 18).

Staff believes such a limit on plant operation is unnecessary because:

- the proposed project is a peaking facility, and will be required to provide the services (peaking power and ancillary services) that only a peaking facility operating without restrictions can provide;
- a 5,000 hour per year limitation on operation could prevent the project from providing the ancillary services necessary to ensure system reliability. MID has selected this project to provide quick response to changes in system load, and to maintain system stability during unplanned outages or system disruptions; and
- the proposed project will not, in fact, waste significant amounts of energy. MID has chosen the most efficient power plant design to provide the needed service.

### **The Project Must Be Available to Operate When Needed as a Peaking Facility**

Staff has testified that the proposed project, two simple cycle gas turbine generators, is well suited to satisfying the project's objectives (Exhibit 22, p. 6-3). Those objectives are to "...be a peaking facility that will...meet [MID's] growing native load, and provide other ancillary services and benefits to MID" (Exhibit 1, p. 1-1). Staff further testified that the electric system needs that MID will satisfy with this project require a simple cycle power plant; these needs cannot be met with a combined cycle plant (9/2/03 Evid. Hrg., RT pp. 130-132), and the Committee agreed with this (9/2/03 Evid. Hrg., RT pp. 136-137).

The applicant has also testified at length to the need for a peaking facility. Mr. Hill, the MID Project Manager, testified that the MID Board, after weighing its staff's recommendations, approved pursuing a simple cycle power project (9/2/03 Evid. Hrg., RT pp. 13, 16-17, 19-20). Mr. Kreamer, the MID Manager of Long-Term Resource Planning and Development, explained MID's need for peaking power and ancillary services, which can be provided only by a simple cycle peaking facility, and not by a combined cycle facility (9/2/03 Evid. Hrg., RT pp. 149-150, 154-155, 157-158).

The applicant has testified to the fact that the project must be available not only to serve predicted load, but to act as an additional resource in the event MID is called upon to serve other loads (9/2/03 Evid. Hrg., RT p. 17, lines 2-8). Emergencies such as the unexpected loss of another MID generating asset, the unexpected extension of a scheduled outage of another MID generating asset, or the unplanned appearance of a transmission system constraint would necessitate operation of the project beyond currently planned hours. MID's responsibility to maintain power quality and reliability on its system render the immediate and unrestricted availability of additional resources,

such as the MEGS, essential. The Committee's proposed operating limit of 5,000 hours per year could impair the ability of MID to maintain system reliability.

In light of this, staff believes the record shows that MID requires peaking power and ancillary services that only a peaking power plant can provide, and may require them at unplanned times and for unpredictable durations.

### **The Proposed Project Will Not Waste Significant Amounts of Energy**

The provision of ancillary services is one of the project's stated objectives (Exhibit 1, pp. 1-1, 1-3, 7-1, 9-11). These services were described by MID's Mr. Kreamer (9/2/03 Evid. Hrg., RT pp. 149-151, 154-158) and by staff (9/2/03 Evid. Hrg., RT pp. 121-122, 130-132, 134-136). Ancillary services include such functions as Automatic Generation Control, voltage control, frequency control, spinning reserve, and VAR control, functions that can only be provided by a simple cycle machine that responds instantly to control system demands. It is impossible to estimate in advance how often MID would need to operate MEGS in order to provide these services over the life of the project.

Staff has testified that the proposed gas turbine generators, two General Electric LM6000 Sprint machines, would meet the project's objectives and produce power at efficiency levels from one to three percentage points greater than the feasible alternatives. These machines are the most efficient available to meet the project's objectives (Exhibit 22, pp. 6-3 to 6-4).

Staff has previously concluded that, even though the project will operate for three months of the year in round-the-clock service, the project would not constitute a significant adverse impact on energy resources (Exhibit 22, pp. 6-5 and 6-6). Given that a combined cycle plant cannot serve the project's objectives of providing peaking power and ancillary services, there is no more fuel efficient alternative available to serve the project's objectives. Accordingly, the project would not constitute a significant adverse impact on energy resources were it to operate up to 8,760 hours in a year.

### **Conclusion and Recommendation**

Staff believes that the project, as proposed, will not cause significant adverse impacts on energy resources. Accordingly, staff concludes that a limitation on annual operating hours is unnecessary. Staff recommends that the limit of 5,000 hours per year be deleted from the PMPD.

## **TRANSMISSION SYSTEM ENGINEERING**

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Pgs 17 & 18: The Proposed Decision argues that the record concerning the impact on Energy Resources is deficient. Staff respectfully disagrees. The MID system is short of local generation and reactive power, and its import capability is also limited. The addition of the MEGS project will significantly improve the reliability performance of the MID system to meet NERC planning standards and WSCC reliability criteria and reduce import requirements, (Ex 22, pg 16-7). The simple-cycle configuration is the most efficient in response to system anomalies. More reactive power will be available and the voltage profile will improve. Staff concurred with the MID study that the addition of the MEGS generation would not degrade system transient stability performance, nor

would it contribute to system instability. Staff also found that the MEGS project would help stabilize the MID transmission system (Ex 22, pgs 16-6). Also, because the MEGS project is to be sited near the local load and imports into its area would be less, overall system losses very likely would be reduced (Ex 22, pgs 16-4).

This potential need for fast response to system destabilization and the need for local generation, reactive power and import reduction could require the maximum flexibility that 8760 hours would allow. The record clearly demonstrates that there are significant benefits due to the proposed operation of MEGS. Staff believes there is no impact that relates to the wasteful or inefficient use of energy resources and that the subject benefits counter-balance and outweigh any potential negative impacts.

## AIR QUALITY

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Pg 26: **AQ-C1**,

Delete "~~prior to the commencement of ground disturbance~~" in the Condition.

Pg 27: **AQ-C2**

Verification: Change to 60 days prior "to start of ~~any~~ " ground disturbance

### **AQ-C3**

g) ~~No~~ Construction vehicles ~~can~~ shall enter the construction site ~~unless only...~~

o) 1) Add: after 15ppm sulfur, "unless otherwise agreed to by CPM."

Pg 29: **Verification:** Add "Monthly Compliance Report" prior to the first use of the acronym (MCR).

Pg 30: **AQ-C4**

Add: "or any other distances as approved by CPM" to the end of the Condition.

**Verification:** Change, ~~a monthly report~~ to "the MCR".

### **AQ-C5**

**Verification:** Change ~~as part of a monthly report to~~ "in the MCR".

## BIOLOGICAL RESOURCES

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Pg 31: **BIO-1**

Add, "San Joaquin Multi-Species Conservation Plan" prior to the first use of the acronym (SJMSCP).

### **Verification:**

1<sup>st</sup> Line: Delete "~~any project related~~" and "~~activities~~".

2<sup>nd</sup> Line: Change project owner ~~must~~ to "shall".

3<sup>rd</sup> Line: Insert "owner" after project...has provided

## CULTURAL RESOURCES

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Pg 34: **CUL-2 Verification:**

Add: “and to the CPM for review and/or comment.” at the end of the Verification paragraph.

**CUL-3**

Delete: ~~including landscaping.~~ It is in conflict with VIS 1 (page 40) which states that landscaping must be completed prior to commercial operation.

## HAZARDOUS MATERIALS MANAGEMENT

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Pg 35 **HAZ-2 Verification:** Add: “and to the City of Ripon for review and comment,” after “to the CPM,”

Pg 35 **HAZ-3 Verification:** Add: “and to the City of Ripon for review and comment.” at the end of the sentence.

## NOISE

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Pg 37 **NOISE-2:** delete ~~“The project owner or authorized agent shall.”~~ at the start of the bullets. Repeated in previous paragraph.

## GENERAL CONDITIONS OF EXEMPTION

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Pg 44: **CONSTRUCTION MONTHLY REPORTS**

Delete last sentence. ~~During construction... and water.~~

Add paragraphs #1 and #2 from Annual Reports section Page 45, change “year” to “month” and ~~“annual”~~ to “monthly.”

1. a transmittal letter summarizing the current project operating status and an explanation of any significant changes to the facility operations during the month;
2. documents required by specific conditions to be submitted along with the monthly report. Each of these items should be identified in the transmittal letter.

## VISUAL RESOURCES

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In light of the committee comments as to why they were including the **VIS-1** condition (“...we have the responsibility to retain a level of oversight to ensure that measures to mitigate specifically identified significant impacts are implemented.”), staff believes the CPM must retain his/her's authority to “not only” approve the plan, but also the authority to inspect the landscaping after installation to verify that it was indeed planted consistent with the approved plan, and in a manner that will mitigate the impact. Revising the condition as suggested below is consistent with the Committee's discussion of the issue.

Pg 39: Replace **VIS-1** with the following

**VIS-1** The project owner shall provide landscaping along the western site boundary that is effective in screening the MEGS project from the KOP 1 viewing area. Fast-growing, tall evergreen trees shall be planted at sufficient density to provide maximum effective screening of the project structures (not the upper portions of the exhaust and brine concentrator stacks) within the shortest feasible time after the start of commercial operation. Landscaping shall be provided in compliance with the City of Ripon ordinances.

The project owner shall submit to the ~~City of Ripon~~ CPM for review and approval a landscaping plan whose proper implementation will satisfy these requirements. A copy of the plan shall be submitted to the ~~CPM~~ City of Ripon for review and comment. The plan shall include:

- a) A detailed landscape, grading, and irrigation plan, at a reasonable scale, prepared by a licensed landscape architect. The plan shall demonstrate how the screening requirements stated above shall be met. The plan shall provide a detailed installation schedule demonstrating installation of as much of the landscaping as early in the construction process as is feasible in coordination with project construction;
- b) A list, prepared by a qualified professional arborist familiar with local growing conditions, of proposed species, specifying installation sizes, growth rate, the expected time to maturity, the expected size at five years and at maturity, spacing, number, availability, and a discussion of the suitability of the plants for the site conditions and mitigation objectives;
- c) Maintenance procedures, including any needed irrigation and a plan for routine annual or semi-annual debris removal for the life of the project;
- d) A procedure for monitoring for and replacement of unsuccessful plantings for the life of the project; and
- e) ~~A~~ 11" x 17" color photo simulations of the proposed landscaping at five years and twenty years after planting, as viewed from KOP 1.

The project owner shall not implement the plan until the project owner receives approval of the submittal from the ~~City of Ripon~~ CPM. The plantings must occur during the 1st optimal planting season and must be completed prior to the start of commercial operations unless otherwise authorized by the ~~City of Ripon~~ CPM.

**Verification:** Prior to commercial operation and at least 90 days prior to installing the landscaping, the project owner shall submit the landscaping plan to the CPM for review and ~~comment~~ approval and to the City of Ripon for review and ~~approval~~ comment.

If the ~~CMP~~ CPM determines that the plan requires revision, the project owner shall provide to the CPM and the City of Ripon a plan with the specified revision(s) within 30 days.

The project owner shall notify the CPM and the City of Ripon prior to commercial operation, and within seven days after completing installation of the landscaping, that the landscaping is ready for inspection.

The project owner shall report landscape maintenance activities, including replacement of dead or dying vegetation, for the previous year of operation in each Annual Report to the City of Ripon and the CPM