



GE Energy

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Ms. Kathleen Truesdell  
Air Quality Engineer  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

**RE: Contra Costa Generating Station (Oakley) – Preliminary Determination of Compliance Combustion Turbine Tuning**

Dear Ms. Truesdell

The Bay Area Air Quality Management District (BAAQMD) requested that General Electric (GE) provide an explanation regarding the time required for gas turbine tuning for the Contra Costa Generating Station LLC's (CCGS) Oakley Generating Station project.

GE Energy has reviewed the Preliminary Determination of Compliance for the Oakley Generating Station, in particular Conditions 18 and 20 pertaining to combustion turbine tuning and to which GE provides the following comments.

GE's primary concern is with respect to the duration allowed for each tuning event. Contra Costa Generating Station LLC had originally requested that eight (8) hours be allowed for each tuning event. BAAQMD proposed a condition reducing that to allow only six (6) hours. While 6 hours may be a sufficient duration for tuning the GE 7FA combustion turbines presently in operation, the 7FA.03, manual tuning the 7FA.05 is expected to take up to eight (8) hours. The reason is explained in that a sophisticated model-based control (MBC) system will be included in the design of the 7FA.05 turbine. This system must be tuned at each turbine operating point. These tuning set points will then be saved in the plant's control system algorithms.

During normal operation, the 7FA.05 will continuously and automatically tune itself using the established model-based set points and controls. As such, the need for manual tuning should be less frequent than the currently operating GE 7FA systems without MBC. A scenario where manual tuning is expected to be necessary is when combustion turbine components are replaced. Following replacement of a component, it may be necessary to reset the model-based controls to reflect the new hardware conditions. This may require a detailed retuning of the combustion turbine over the entire operating range be performed again.



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It will not be necessary to increase the daily emissions limits in Condition 20 to accommodate an increase in the tuning duration from 6 hours to 8 hours. The peak hourly emissions rates indicated in Condition 18 are reflective of worst turbine emission points over the turbine operating range.

GE's additional concern relates to the 7-day advance notice prior to combustion turbine tuning activities in Condition 18. During commissioning, subsequent outages, and normal operation, it can be impossible to predict 7 days in advance when tuning will be occurring. This would be especially true for component failures or unscheduled maintenance requiring re-tuning of a gas turbine. A 7 day delay could result in an unreasonable loss of power generation to meet grid needs and revenue loss to the operator. GE suggests that the BAAMQD revise Condition 18 to allow a shorter and more realistic advance notice of 24 hours prior to tuning.

I hope that this satisfactorily explains the need to amend these two conditions of the PDOC. If there are any further questions or concerns, always please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Pete Bukunt'.

Pete Bukunt

Cc: J McLucas, Radback  
C Matis, GE