



Memo

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Date: June 13, 2012

To: Randy Kwok, Pacific Gas & Electric

From: Joseph Ball, Itron

RE: Data Request to Support Savings Claim for PGE 2K12085717 (EEGA 2054)

This request is focused on one particular application undergoing ex ante review:

- PGE 2K12085717 as part of the Customized Incentive Program

Refer to ex ante review report (X132 PGE 2K12085717 EAR 2012_0612 V2.docx) for the full requirements and context of this request. Additional documentation is needed to complete this review, including the following:

1. ED notes that several measures are combined for this project-a new compressor, new compressor controls for all existing compressors, no loss drains, addition of storage and a new 4" compressed air distribution line. The different measures may have different baselines, different cost bases, different EULs, etc. Justify why the measures should not be separated or separate the measures and address these items individually.
2. Describe the location and configuration of the air compressors, storage vessels and controls for the existing and proposed systems. Provide the approximate age, type and condition of the existing compressors.
3. The project impacts are calculated using a customized model that has been developed by the IOU for specific compressed air project measures. The calculation tool appears to have been developed for estimating the energy savings and demand reductions associated with air compressor retrofits, no loss drains, and cycling air dryers. One tab in the Excel workbook appears to reference AIRMaster+ performance specifications but does not contain a description of how the AIRMaster+ data is used. The IOU has previously submitted this model and at that time ED requested that the IOU provide documentation to support the model. ED has not received documentation for this calculation tool describing the methodology it uses or the basis of the analysis performed. Please provide supporting documentation for the model.

4. The submitted calculation seems to define two periods of operation: peak and non-peak seasonal production, and corresponding estimates of average air flow for each period. A calculation is performed for a single average airflow for each period and extrapolated over the entire year to derive the project impacts. Please describe and justify how using single average value for systems that have highly variable demand and non-linear performance relationships is appropriate for estimating the energy impacts for this project.
5. The documentation states “currently all compressors are operated in the on mode” and “the proposed air flows are distributed among the most efficient machines as their algorithms will be able to determine which machines to use based on demand in the facility”. It appears that a large portion of the energy savings impacts are predicated on improving the control of the compressed air system. Please provide a concise description of how the compressed air plant is currently controlled and how it will be controlled after the project is implemented, including whether the proposed control system will include measurement of air compressor power, system pressure and system air flow. Also describe how the calculation tool models the proposed control sequence.
6. The documentation refers to a report by ECOS Air in 2008 that establishes the average airflow during the peak season used in the current IOU analysis. This report has not been provided. Please provide this report, any available raw data collected for the report and justification that it is still relevant to current operation and accurate as the baseline for this project.
7. ED notes that the addition of a new 4” distribution line is being credited with a 10 psig reduction in compressor operating pressure. Please describe the existing and proposed pressure operation for the compressed air system. Explain how the new 4” line will allow a 10 psig reduction in compressor operating pressure. Is the compressed air system usage expected to increase with the addition of a new distribution line? Discuss if this project involves a capacity expansion and if so consider this in the baseline determination.
8. Given the uncertainty about many aspects of the compressed air system operation and the magnitude of the projected savings impacts (755,125 kWh, 132.09 kW) it may be prudent to perform pre/post implementation measurements and analysis. Describe any proposed pre or post installation verification and/or measurements for the project.
9. If applicable, provide a more detailed M&V plan including the source and duration of the data collection, adjustments for seasonality in production, adjustments for ISP (if applicable), include a statement regarding whether or not the frozen ex ante claims will be based upon the final M&V or engineering calculations alone.
10. ED is likely to request additional information as the details of this project become more clearly defined.
11. ED requests that PG&E continues to keep ED informed of progress and next steps on this project.

12. ED requests to be informed of any future site visits including the post-installation inspection, in case it chooses to send a representative on-site.
13. ED requests the opportunity to review the requested data, analysis and calculations prior to the freezing of ex ante savings impacts for this project.

Itron requests this information by June 22, 2012. Your full and prompt response to this data request is appreciated, as Itron is attempting to provide timely feedback to PG&E on the savings claim for this application. The requested information should be provided electronically.

If you have any questions or need additional information, please do not hesitate to ask.

Please send requested information by posting on EEGA or other secure website.