

Ex Ante Show Stopper Review Findings

Table 1-1: Project Information

IOU	Pacific Gas & Electric (PG&E)
Application ID	1206-05
Application Date	11/13/2013
Program ID	PGE2223
Program Name	Heavy Industry Energy Efficiency Program
Program Year	2013
Itron Project ID	X470
IOU Ex Ante Savings Date	1/10/2014
Measure Name	Sawmill Upgrade
Project Description	Replace hydraulic drives with electronic drives; upgrade the large log mill that will increase production by 15%, while simultaneously reducing the connected load by 690 HP.
Date of CPUC Staff Review	2/27/2014
Primary Reviewer / Firm	Joseph Ball / Itron
Review Supervisor / Firm	Nikhil Gandhi / Strategic Energy Technologies, Inc.
CPUC Staff Project Manager	██████████ / California Public Utilities Commission, Energy Division
CPUC Staff Policy Authorization (as needed)	
Type of Review (Desk, On-site, Full M&V, Tool)	Desk
CPUC Staff Recommendation	Ex ante energy savings are not approved pending directives in this disposition.

Measure Description

This sawmill upgrade will re-configure the large log saw mill line at the plant. Measures include 1) the removal of some saws, hydraulic drives, and conveyors, 2) re-use of several existing pieces of equipment and controls, 3) the installation of some new saws, electronic drives, controls, and 4) the re-positioning of sorters and conveyors.

The resulting configuration will reduce the connected horsepower by 690 HP or 12%. It will also enable the production to increase by approximately 15%. This will reduce the amount of energy used to produce a specific MBF of lumber (kWh/MBF). The plant's expected capacity expansion is solely measure induced (not market driven).

Summary of Show Stopper Issues

1. The 3rd party implementer states: "The EUL for the existing and new sawmill equipment is 15 years. As the existing equipment is 1950 vintage, the actual RUL is zero (assuming a DEER EUL value of 15). However, if the equipment is maintained, it can last almost indefinitely." As a normal replacement project, a new construction baseline is appropriate, yet, the implementer maintains that the *in situ* large log mill with its hydraulic drives would still be ISP today. No adjustment for in situ equipment degradation was taken into account. From previous CPUC guidance, the in situ, degraded equipment cannot be the appropriate technical baseline. In addition, the EUL is the capped at the RUL of the reused equipment in the saw mill line.
2. When the project details were entered into PG&E's most current E3 calculator, the TRC benefit-cost ratio was calculated to be 0.76 and the RIM benefit-cost ratio was 0.63, both well below 1.0 for a cost effective project. The customer clearly gets a benefit with a PAC = 8.52.
3. From a NTG perspective the incentive (\$176,462) only reduces the payback period from 4.8 to 4.3 years. The overall project cost is expected to be \$3 million.
4. CPUC policies require that fuel(s) being saved from implementing EE measures must be paying PPP charges and must have demonstrated impact on the grid. For EE projects implemented at sites where self-generation is present PG&E should maintain grid connection diagram, meter number and bills to facilitate verification of the grid impact and the PPP paying status. In order for the EAR team to approve the project savings, the IOU is requested to confirm the saw mill's payment of PPP or PGC charges which reflect the payment of departing load fees¹. Also, a confirmation of whether the on-site

¹ Consistent with the 'Customized Incentive Program' offering rules, which state that energy savings for which incentives are paid cannot exceed the actual usage provided by PG&E. Non-utility supply, such as cogeneration or deliveries from another commodity supplier, does not qualify as usage from PG&E (with the exception of

cogeneration system received any rebates as part of the IOU's prior self-generation incentive program will ensure that the facility is not 'double-dipping' on incentives.

Review Conclusion

Ex ante savings are not approved on several show stopper grounds:

1. PG&E needs to assess the cost effectiveness of this project. CPUC staff calculated TRC benefit cost ratio to be 0.76 and the RIM benefit-cost ratio to be 0.63.
2. Because of the customer's cogen system, the customer payments of PPP charges need to be confirmed, and grid imports need to be accurately analyzed and proportioned.
3. PG&E should expand their ISP baseline search (low rigor study) to include newer sawmills outside of the state but within North America; the question should ask about ISP in newer (most recent vintage) sawmills
4. For a normal replacement claim (ROB), "new" equipment baseline is appropriate; hence the use of degraded or vintage equipment as the technical equipment baseline is suspect.
5. If the project passes all these hurdles, then appropriate level of post-installation M&V should be proposed to establish energy intensities (in MBF/kWh) after demonstrating that the whole-plant method of M&V is appropriate with normalization of production data from pre- to post-retrofit.

Direct Access customers or customers paying departing load fees for which the utility collects PPP or PGC charges).