Trane U.S. Inc.
4145 Delmar Avenue
Rocklin, CA 95658 USA
Tel (916)577-1114 Fax (916)577-1175
www.trane.com/sacramento

September 6, 2012

California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Subject: Trane U.S. Inc. Comments to:

**2012 – 2014 Statewide Permanent Load Shifting Program Proposal
Jointly proposed by: Pacific Gas and Electric (PG&E), San Diego
Gas & Electric (SDG&E), and Southern California Edison Company (SCE)**

Dear Mr. Aloke Gupta & Joanne Leung:

Trane U.S. Inc. has been a leader in the Permanent Load Shifting (PLS) industry for 30+ years utilizing a variety of mature Thermal Energy Storage (TES) Systems. We were one of the only, if not the only, Third Party PLS Pilot Program Implementer that fully subscribed the program and successfully met and exceeded our contracted "On-Peak" shift to "Off Peak". We are intimate with the evaluation, design, construction, control and measurement & verification of these systems. The efficiency of mature TES is unmatched by any other storage technologies in the industry with a round trip storage efficiency of 90% for Ice and 98%+ for stratified chilled water storage systems.

In reviewing the proposal submitted by PG&E, SDG&E, and SCE we have concerns that the proposed program has missed the mark in some areas. I am not going to write a short novel like many others will that describe all the benefits of energy storage. In general, it is the right thing to do for avoiding new peak power plants, reducing emissions, allow for integration of renewables, they can help solve transmission problems, they can lower the fuel consumption of existing generation assets owned by the utilities and the list goes on. Here are some points worthy of consideration.

- The difference between On Peak and Off Peak Tariffs are not enough combined with the proposed incentives. Even with Critical Peak Day Pricing, the proposed incentives are too low to generate a return on investment of a 5 year simple payback or less which is required by 90%+ of the private sector. Even the IOU's own On Bill Financing recognizes this and is set at 5 years for the private sector.

- I would propose that PLS projects be included in the On Bill Financing Program. Offering a zero percent interest loan on these systems would help the financial return on investment to the facility owner / PLS investor. This is another way to incentivize these systems.

- The proposed levels by the IOUs are lower than what is suggested in the Statewide Joint IOU Study of Permanent Load Shifting composed by E3 and StrateGen on December 1st 2010. This reports suggests Rate Payer Neutral Incentive Levels are much higher at the median, up to $1,340 per kW in SCE. The proposed incentives appear to be at the minimum levels suggested in this report. It is my opinion and suggestion that these incentives be offered in the median range of the Rate Payer Neutral Incentive Levels.

- Tariff changes by the utility are a main risk and barrier for PLS systems. I would suggest that if the customer is going to be required to stay on a TOU schedule for 5 years, there should be something that would assure that the rates would not change for the worse for the PLS investor. If On Peak rates get higher and Off Peak rates get lower, than the financial performance of the PLS System would actually generate a higher return. The real concern for the PLS investor is if the On Peak rates get lower and the Off Peak rates get higher. I would propose that the IOUs offer a lock on the tariff through the performance period of the PLS System which is currently set at 5 years.

- There are no persistence payments in the proposed program. Persistence payments would ensure that the customer complies with the five year obligation. Offering persistence payments would incentivize the customer to keep the system up and operational. It also ensures quality M&V data, as the data would be used for the Performance Based Persistence Payment.

- What are the requirements that would allow the 10% cap to be exceeded? Is there defined criteria available or do we just have to catch the Program Manager on a “good mood” day? I suggest removing the 10% cap and stick with the 50% project cost cap.

- The cost of M&V is a significant cost for PLS Projects. These costs were covered by the Implementers in the Pilot Program. These costs can are significant and have an annual cost associated with monitoring and reporting. The proposed rebate levels will not justify the required M&V Systems and Monitoring Services required by the IOUs. This will erode the financial returns if the rebates are not increased. Would the utilities be willing to take on the M&V role and costs?

- The proposal does not clarify if the program will be run as a core utility program or a third party implemented program.

In summary, this first pass proposal is very conservative in my opinion with respect to the rebate levels. I personally would like to see pressure put on the IOU's to increase the rebates. The Pilot Program rebates were $2,000.00 per kW and we had challenges on some projects to get them to financially justify. These lower rates that are proposed will stall the momentum that we have built up until the next program cycle. Please consider raising the rebates and having this included in the 0% On Bill Financing Program.

Sincerely,

John J. Burdette III LEED AP | C.E.M.
CA District Business Development Leader
Comprehensive Energy Solutions Account Executive
Third Party Utility Program Developer | Manager

TRANE **an Ingersoll Rand Company**
4145 Del Mar Avenue, Rocklin, CA 95677
(916)577-1114 Office Direct
(916)577-1100 Office Main
(916)678-4155 Fax
(916)740-5520 Mobile