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California Energy Commission
c/o Rob Hudler
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**Subject: Response to Stakeholder comments on Proposed Language for Title 24
Residential Swimming Pools. Docket Number 07-BSTD-1**

To Whom It May Concern:

Davis Energy Group is responding on behalf of their clients, Pacific Gas and Electric Company and San Diego Gas & Electric Company, to the comments submitted by the Association of Pool and Spa Professionals (APSP), LASCO Fittings, Inc. (LASCO), and California Spa & Pool Industry Education Council (SPEC). Our comments are in response to the 45-day rulemaking for the proposed language on swimming pool building codes that affect the Efficiency Standards for the California Code of Regulations Title 24, Part 6, in particular Subchapter 2, Section 114 and residential swimming pools building codes under Subchapter 7, Section 150 (p).

Section 114: The APSP would like to maintain §114 as the Pool Heating Systems Section and move the directional inlet and time switch language under §114 b to §150 p. We agree with the intent of the concerns presented by the APSP regarding §114 and suggest collaborating with CEC attorneys to alleviate any potential for future issues as §114 currently pertains to both residential and commercial pools.

Section 150 (p) 1. E: We agree with APSP that small pool systems using a pump of less than 1 hp to serve all auxiliary loads should not be required to use multiple pumps or a multi-speed pump and suggest to add the following exception to the proposed language:

E. Each auxiliary pool load shall be served by either separate pumps or the system shall be served by a multi-speed pump; and

EXCEPTION to Section 150 (p) 1 E: pumps of less than 1hp may be single-speed.

Section 150 (p) 2. A.: APSP and SPEC assert that pumps with strainer baskets do not need an entering length of straight pipe. While we have not been able to determine if the arguments for striking this addition are valid, the pool industry still recommends 4 times the pipe diameter of leading pipe into the pump. We would accept the addition of language "... for pumps without strainer baskets" to the code if a consensus of the pool industry requested it. Considering current industry guidelines, we recommend leaving the proposed language as it is.

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Section 150 (p) 2.C : A PSP recommends deleting the use of sweep elbows based on the incremental savings found in the CASE Report. Incremental measure savings were presented in the CASE study on a decreased run-time valuation. The true savings would be realized if the entire system was run at a lower speed (or with a smaller pump) for longer periods. Even when analyzed individually, sweep elbows were shown to be cost effective.

LA SCO recommends deleting §150 p 2.C because more energy savings can easily be achieved by decreasing the flow rate. While we agree with this, discussions with pool industry stakeholders show that 8 fps and 6 fps for return and suction, respectively, were as low as they recommended. Furthermore, the elbow friction factors presented by LA SCO show higher savings for sweep elbows than was assumed in our calculations, resulting in them being more cost effective.

We agree with LA SCO that the definition of a suitable sweep elbow should be improved. We propose the following for §150 p 2.C :

C . All elbows shall have a pressure drop of less than the equivalent of a length of 30 pipe diameters.

This excludes all hard 90s, the best performing of which have equivalent lengths of 32 diameters, and allows all short and long sweeps, the lowest performing of which is as much as 29 diameters. Enforcement of a 30-diameter multiplier for an elbow equivalent length may be difficult without a listing. Any suggestions for improvements to this section by the Stakeholders would be welcome.

Sincerely,



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Docket Number 07-BSTD -1