APSP
The Association of Pool & Spa Professionals™

2111 Eisenhower Avenue
Alexandria VA 22314-4695

703.838.0083
703.549.0493 fax
www.TheAPSP.org

The Global Source and Voice for the Recreational Water Industry

January 3, 2008

California Energy Commission
Attention: Docket No. 07-BSTD-1
Dockets Office
1516 Ninth Street, MS4
Sacramento, CA 95814

To Whom It May Concern:

The Association of Pool & Spa Professionals appreciates this opportunity to comment on the proposed revisions to the proposed 45 Day Language-California Title 24, Pool Systems and Equipment Installation Standards. As the world's largest pool and spa trade association, we offer the following comments of particular interest to the APSP.

SECTION 114 - MANDATORY REQUIREMENTS FOR POOL AND SPA ~~HEATING~~ SYSTEMS AND EQUIPMENT

By removing "heating" from the Section 114 heading, this section is no longer consistent with other sections in Title 24 dealing with building heating equipment. This leads to confusion when attempting to understand the regulations. The apparent intent is to require all pools (with and without heaters or heat pumps) to have directional inlets and time clocks. However with these requirements buried under heater and heat pump regulations, they are easily overlooked.

> **Suggested revision.** Restore "heating" to the title and the other locations within Section 114. Move Section 114 (b) "Installation." to Section 150 (p) "Mandatory features and devices."
>
> **Rationale.** This achieves the goal of applying these requirements to all residential swimming pools without making Section 114 different for all other Sections addressing similar issues.

By applying Section 114, (b) 1. "Piping" to all pools, as currently written, it could be concluded that heaters are required. To allow for the future addition of solar heating equipment, this regulation requires pipe or fittings between the filter and the "heater". What if the buyer does not want a heater?

> **Suggested revision.** Add "for pools that have a heat pump or gas heater."
>
> **Rationale.** This addition clarifies the intent whether this remains in Section 114, or is moved to Section 150 as suggested above.

SECTION 150 - MANDATORY FEATURES AND DEVICES

Section 150 (p) 1. E. addresses "auxiliary pool loads," requiring the use of a multi-speed pump or a separate pump. This prohibits the use of small pumps (less than 1 HP) for auxiliary feature like waterfalls, solar heating, etc. If a single-speed pump less than 1 HP is all that is needed to power a water feature it should be permitted. This proposed regulation does produce an energy savings benefit for California or the pool owner. To the contrary, it may have the affect of two pumps running instead of one; the first to filter and the second to run the auxiliary pool load.

Suggested revision. Delete this requirement.

Rationale. This requirement does not provide any additional energy savings and it increases installation cost without a corresponding reduction in operating costs.

Section 150 (p) 2. A. requires the pipe leading into the pump to be four times the pipe diameter (4 x 2" pipe = 8" straight pipe before pump). This is an important design feature for pumps without strainer baskets; however it does nothing for pumps with integrated strainer baskets. Any benefit gained by the straight pipe is lost when the water passes through a strainer basket. Energy saving contemplated by this change are superseded by the saving derived by limiting velocities in the pipe.

Suggested revision. Add "... for pumps without strainer baskets."

Rationale. The requirement does not provided any additional energy savings for pumps with strainer baskets and it increases installation cost without a corresponding reduction in operating costs.

Section 150 (p) 2. C. requires the use of "sweep elbows" in place of "hard elbows," the style typically used. The rationale found in the PGE-SCG CASE-RESIDENTIAL-SWIMMING-POOLS study (CASE) explains that the reduced friction results in increased system flow rates. Increased flow results in reduced turnover time and therefore energy is saved by allowing the pool to operate less hours per day. However, there is no requirement to run a pool less; therefore there is no means to realize the energy savings found in the CASE study. Without regulating hours of operation, there is no means for the pool owner to recover the additional costs of the sweep elbows.

Even if run time was regulated, sweep elbows do not result in energy savings shown in the CASE study example because the CASE study does not consider the savings gained by the velocity limits of Section 150 (p) 2. B.

Suggested revision. Delete Section 150 (p) 2. C., the sweep elbow requirement.

Rationale. This requirement does not provided any additional energy savings and it increases installation cost significantly without a corresponding reduction in operating costs.

For more details on these suggested changes, please see the attached report. Also, appended is the PG&E CASE Draft Report Residential Swimming Pools, February 19, 2007.

Thank you for considering these comments. The APSP will continue to work with the CEC staff and consultants as the Commission considers appropriate pool and spa regulations.

Sincerely,

Carvin DiGiovanni

Senior Director, Technical and Standards