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ICC-SRCC 2028 Energy Code Pre-Rulemaking

Additional submitted attachment is included below.

Executive Summary

The Solar Rating & Certification Corporation (ICC-SRCC) strongly **supports the California Energy Commission's (CEC) initiative to expand solar pool heating requirements** for existing non-residential buildings. Solar thermal pool heating is a mature, highly effective technology that significantly reduces fossil fuel consumption and assists the state in meeting its aggressive decarbonization goals. To ensure the long-term safety, durability, and performance of these mandated systems, the CEC should explicitly tie all compliance pathways to established national consensus standards and third-party certifications.

1. Benefits of Solar Thermal Pool Heating

Solar pool heaters are among the most widely utilized and cost-effective solar thermal products on the market.

- **Decarbonization:** They offset immense amounts of natural gas or electrical energy by utilizing direct renewable energy to heat high-volume pool water.
- **Grid Resilience:** Unlike electric heat pumps, solar thermal systems operate independently of the electrical grid, preventing additional demand peaks on California's grid infrastructure.

2. Ensuring System Quality and Safety via Standardization

Mandating a technology requires code officials, designers, and facility operators to have absolute confidence in the hardware being installed. ICC-SRCC urges the CEC to maintain and enforce strict alignment with established standards within the 2028 Energy Code text:

- **Collector Certification:** All solar collectors utilized to satisfy the pool heating requirements should hold a valid ICC 901/SRCC 100 Certification (OG-100) to verify thermal performance, wind loss resistance, and material longevity.
- **System Certification:** Complete solar pool and spa heating systems should be listed to the ICC 902/PHTA 902/SRCC 400 Standard. This standard ensures that on-site installations and manufacturing specifications seamlessly reinforce each other for leak-free, safe operation.

3. Response to Stakeholder Concerns and Rebuttals

ICC-SRCC has reviewed the comments submitted by the Drowning Prevention Foundation, the California Coalition for Children's Safety and Health, and various commercial pool operators. While we recognize the unique structural and operational requirements of public swimming facilities, their core objections regarding **water**

temperature consistency, grid-decarbonization, and financial strain are heavily mitigated when systems utilize national consensus standards.

A. Rebuttal: Temperature Requirements for Swim Lesson and Public Health Pools

- **Opposing Claim:** Opponents state that solar pool heating systems cannot consistently reach or maintain the high temperatures required for public swim lessons and therapeutic aquatic programs.
- **ICC-SRCC Response:** Solar thermal systems are highly modular and capable of substantial, rapid heat transfers when sized correctly. However, ICC-SRCC does **not** advocate for solar thermal to act as the *sole* heat source for high-demand, specialized public facilities.
- **The Solution:** The 2028 Energy Code should encourage **hybrid configurations**. Utilizing certified solar collectors alongside a high-efficiency auxiliary heater (such as a gas or heat pump system listed to ICC 902/PHTA 902/SRCC 400) allows solar to provide the continuous "base load" heating during sunlight hours. This configuration reduces auxiliary fuel usage while guaranteeing that backup systems can seamlessly engage to maintain targeted, medically safe public pool temperatures during adverse weather conditions.

B. Rebuttal: Alleged Lack of Decarbonization and Grid Impact

- **Opposing Claim:** Joint opposition letters argue that the proposed rules yield no real decarbonization savings and introduce undue electrical energy complexities.
- **ICC-SRCC Response:** This claim fundamentally mischaracterizes solar thermal technology. Unlike electric heat pumps, solar thermal systems collect heat directly from the sun, bypass the grid entirely, and do not create added peak demands on California's electrical infrastructure. By feeding pre-warmed water directly back into the pool basin, solar thermal dramatically drives down the operational runtime of natural gas boilers, resulting in an immediate, direct reduction of localized greenhouse gas emissions.

C. Rebuttal: Capital Costs and Prohibitive Financial Burdens

- **Opposing Claim:** Public and private swim providers state that initial capital expenditures are financially prohibitive and lack viable return periods.
- **ICC-SRCC Response:** While upfront capital investment is a valid concern for municipal budgets, solar thermal pool heating offers the **lowest monthly operating cost** of any heating utility on the market.
- The long-term savings derived from offset natural gas consumption allow these systems to rapidly pay for themselves, establishing a permanent hedge against volatile fossil fuel prices.

Conclusion

The ICC-SRCC applauds the CEC's forward-thinking approach to reducing building energy standards emissions. Incorporating robust solar thermal mandates alongside trusted, third-party compliance standards like **ICC 901/SRCC 100** and **ICC 902/SRCC 400** will guarantee that California's public pools transition to sustainable energy safely and reliably. We welcome the opportunity to collaborate with CEC staff to refine this language.

Respectfully submitted,

The Solar Rating & Certification Corporation (ICC-SRCC™)

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