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Title 20 Impact on Inflatable Spas

Presented on behalf of

Market Fundamentals of Inflatable Spas

Market Fundamentals of Inflatable Spas

- ✓ Inflatable spas began to receive significant placement across major US retail, specialty stores and online commerce sites in 2012.
  - The product was non-existent in US retail when portable spas were defined or when test methods were originally established for CEC regulation.

- ✓ The market for inflatable spas focuses on the price conscience consumer which ranges from young adults to senior citizens.
  - Sizes range from 135 gal. – 250 gal. of water capacity (2-6 adult capacity)
  - Average cost is $300-$400 vs. $2,000-3,000 for similar sized portable spas
  - For many consumers (low and middle income, renters) they are the only access to the benefits of a portable spa

Market Fundamentals of Inflatable Spas

✓ Due to their ease in storage and inability to operate in cold climates, these products are marketed and used as seasonal products

- Therefore annualized projections of energy usage and consumer cost cannot be applied.
- Testing under current or proposed formula produces misleading results

Definition of Portable Spa Proposed by CEC

Portable electric spas are factory-built, free-standing electric spas or hot tub units that can be rigid, flexible, or inflatable. They are defined as above-ground units that are electrically heated and not permanently installed in the ground or attached to a pool. They are supplied with pumps, heaters, and jets for heating, circulation, filtration, and maintenance, all of which result in significant energy consumption statewide.

Title 20 Effect on Inflatable Spas

- ✓ Testing on inflatable spas by industry leading manufacturers has shown that all models of inflatable spas test substantially above the threshold set by CEC for legal sale and distribution in California
  - Inflatable spas on average test at 126% higher than the Maximum Allowable Normalized Standby Power as defined in Section 1604 G (2)

- ✓ By default, all models inflatable spas have become illegal for sale in California due to the inability to test to an efficiency level established for rigid or soft-sided portable spas.

- ✓ When actual energy usages and seasonal metrics are applied, annualized consumption and cost is much closer to compliant portable spas of similar size.

Inflatable Spa Energy Usage

- ✓ CEC has estimated that inflatable spas utilize $65 in electricity costs per month for consumers
- ✓ Manufacturer test results per Section 1604 G(2) suggests that energy consumption by inflatable spas in standby mode is less than CEC estimates

Average Measured Normalized Standby Power: 426 (E/t)

Total watts per month: 426 (E/t) x 720 hours = 306.72KWh

Total cost per month @ $0.1619KWh = $49.65

As these products are seasonal, we assume a 7 month usage and therefore a normalized monthly cost of **$28.96** over a year

If manufacturers could implement 10% energy savings via improvements on the shell and cover, then these costs would reduce to $26.06

Total cost over 3 year lifespan, plus cost of product at $310, equals roughly $1,250, less than that of a portable hard shell spa.

CEC Proposal in Revised Staff Reports

Per the evaluation of the CEC, the following recommendations have been made;

- ✓ Inflatable spas should not be granted prescriptive measures, such as a 72 hour shut-down function, as it will create loop holes for other spa type manufactures to satisfy the prescriptive requirement and therefore supersede the need for improved energy efficiency
  - Adopting this standard would show no increased efficiency levels in this particular product category due to the offset of energy savings 35GWh in the first year, with only 20GWh predicted to be gained from a prescriptive measure.

- ✓ According to CEC assumptions and calculations on product energy use, the overall amount in energy cost generated throughout the product's lifetime would make it unfit for low income consumers

Industry Recommendations

The industry, with the support of APSP-14 & IHTA, proposes that the CEC does not adopt uniform standby power performance standards across all types of portable spa products and that inflatable spas be held to their own unique standard based off of efficiency standards that are achievable without compromising the price sensitivity and inflatable functionality of this item.

Inflatable Spas at Current Standards

- ✓ Improvements to the products in order to increase energy savings can only be performed on the inflatable shell and cover as 97% of the energy usage in the inflatable spa comes from heating water, which in itself does not present great opportunity to improve efficiency.
- ✓ The inflatable properties of the spa cause a greater amount of heat convection due to the air chambers inside the spa shell and cover. Eliminating the air chambers would in turn make the space more expensive and eliminate the user benefits of an inflatable and storable product.
- ✓According to manufacturers, the estimated cost of developing and manufacturing a product that is able to achieve the Title 20 standards would drive manufacturing costs up $200-$300.
- ✓ Increases in shipping costs would also occur as products would incur added weight and larger retail packaging to accommodate the design changes
- ✓ Will likely alter seasonal usage

Industry's Proposal

- ✓ The industry would commit to an improved level of energy efficiency based upon achievable improvements to the covers and inflatable shells that would not show significant increases on product cost and will still allow the spas to maintain its inflatable function
- ✓ Concise definition of an inflatable spa would need to be adopted in order to keep the unique energy standards exclusive to inflatable spas and avoid other product types from being able to modify product to qualify for inflatable spa efficiency standards

Conclusion

- ✓ Under this proposal, we believe that this is the best solution for the CEC and California consumers as it will add stricter requirements for this product category which will push manufacturers toward continued development and improvement on product efficiency
- ✓ By setting different efficiency standard levels than other portable spas, it allows the inflatable spa market to exist, which will allow consumers of a broader demographic range the ability to own a convenient & user friendly entry level spa