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Filer:	Jessica Lopez
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INITIAL STATEMENT OF REASONS

Portable Electric Spas and Battery Charger Systems Appliance Efficiency Rulemaking

California Energy Commission
Docket No. 18-AAER-02

I. STATEMENT OF SPECIFIC PURPOSE AND RATIONALE - Government Code §11346.2(b)(1)

INTRODUCTION

The California Energy Commission (Energy Commission) is required to reduce the inefficient consumption of energy by prescribing efficiency standards and other cost-effective measures for appliances that require a significant amount of energy to operate on a statewide basis. (Public Resources Code section 25402(c)) One of the ways the Commission satisfies this requirement is through the Appliance Efficiency Regulations (California Code of Regulations, title 20, sections 1601-1609), which contain definitions, test procedures, efficiency standards, marking, and certification requirements for state- and federally-regulated appliances. Further, the regulations require that appliance manufacturers certify to the Commission that their products meet all applicable state and federal appliance efficiency regulations before their products can be included in the Commission's database of appliances approved to be sold or offered for sale within California.

In determining cost-effectiveness, the Energy Commission considers the value of the water or energy saved, the effect on product efficacy for the consumer, and the life-cycle cost to the consumer of complying with the standard. The Commission also considers other relevant factors including, but not limited to, the effect on housing costs, the total statewide costs and benefits of the standard over the lifetime of the standard, the economic effect on California businesses, and alternative approaches and the associated costs.

Appliance energy efficiency is identified as a key to achieving the greenhouse gas (GHG) emission reduction goals of Assembly Bill 32 (Núñez, Chapter 488, Statutes of 2006), as well as the recommendations contained in the California Air Resources Board's Climate Change Scoping Plan and Updates. Energy efficiency regulations are also identified as key components in reducing electrical energy consumption in the Energy Commission's 2013 Integrated Energy Policy Report and the California Public Utilities Commission's 2011 update to its Energy Efficiency Strategic Plan. Finally, Governor Brown identified reduced energy consumption through efficiency standards as a key strategy for achieving his 2030 GHG reduction goals, which was codified in Senate Bill 350 (Stats. 2015, ch. 547), which requires the state's utilities to achieve a cumulative doubling of energy efficiency savings by 2030.

In December 2004, the Energy Commission adopted appliance efficiency regulations for portable electric spas. Portable electric spas are factory-built, free-standing electric spas or hot tub units that can be rigid, flexible, or inflatable. They are characterized 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. The regulations provide that portable electric spas manufactured on or after January 1, 2006 and sold or offered for sale in California must comply with testing, efficiency, marking, and certification requirements in the Appliance Efficiency Regulations. The efficiency regulations focus on reducing the energy consumption of portable electric spas by setting a maximum standby power limit as a function of volume.

The current regulation prohibits the sale or offer for sale of inflatable spas, since inflatable spas are unable to meet the minimum standby power limit. The regulations also specify a uniform test procedure for all portable electric spas. The proposed regulations would update the performance standard to align with the efficiency of portable electric spas currently in the market, create a separate standard for inflatable spas to encourage the design and development of more efficient inflatable spas, update the test procedure to accommodate exercise spas that operate below 100°F, clarify the test procedure and certification requirements for combination spas, and add a labeling requirement to help consumers make informed choices.

In August 2012, the Energy Commission adopted efficiency regulations for battery charger systems. As part of these efficiency regulations, the Commission required manufacturers to mark compliant battery chargers with a “BC” in a circle, allowing for a quick check as to whether a battery charger complied with the standards or not. In addition, battery charger manufacturers are required to certify products to the Commission’s appliance efficiency database. This provides another means to check compliance by comparing the model number of the product with the model number in the database.

In June 2016, the U.S. Department of Energy established energy efficiency standards for many of the battery chargers subject to California’s standards. Those federal standards will take effect on June 13, 2018 and preempt California’s efficiency standards. The U.S. Department of Energy requires certification of battery chargers meeting the efficiency standards, but does not require the “BC” mark to demonstrate compliance. The proposed regulations would harmonize with the U.S. Department of Energy’s approach by removing the “BC” mark for federally regulated battery chargers.

PROBLEM STATEMENT

Portable Electric Spas

The Energy Commission seeks to reduce the energy consumption of inefficient portable electric spas. By tailoring the regulations to the various types of portable electric spas, the Commission hopes to ensure the accuracy of the data certifications. The proposal also looks to improve consumer and seller knowledge of the factors affecting the energy consumption of portable electric spas.

The data in the Energy Commission's appliance efficiency database indicate manufacturers have improved the efficiency of portable electric spas. The proposed regulations will update the performance standard to align with the efficiency of the portable electric spa market and ensure continued development of more efficient portable electric spas.

Since the adoption of the original regulations the inflatable spa industry has grown, creating a new product class. Inflatable spas are intended mostly for recreational use and provide the user with a comforting warm-water massage by electrically heating and aerating the water. Unlike the other types of portable electric spas, inflatable spas are used less, have a shorter design life, and are designed and constructed differently. Inflatable spas are operated seasonally, have a 3-year design life, and are constructed with a collapsible structure, which is filled with air to form the body of the spa. Although the regulations do not explicitly state that inflatable spas or any specific type of portable electric spa are within the scope, inflatable spas meet the broad definition of portable electric spas and are therefore within the scope of the regulations. However, inflatable spas were not explicitly addressed or considered in the original 2004 rulemaking proceeding. The proposed regulations clarify inflatable spas are a type of portable electric spa and are subject to a different performance standard due to their operational usage and design.

Under the current test procedure, all portable electric spas are tested under the same conditions. The test procedure indicates the water temperature shall be 102°F, $\pm 2^\circ\text{F}$ for the duration of the test. Some exercise spas are incapable of operating at the minimum water temperature testing conditions. Exercise spas are intended mainly for health and fitness, such as swimming in place, aquatic exercising, and hydrotherapy. The water temperature for such uses range from 78°F to 95°F. The current testing conditions prevent manufacturers of exercise spas that operate below 100°F to follow the required test procedure, which restricts manufacturers from certifying their products to the Energy Commission. This testing condition unintentionally prohibits exercise spas that operate a lower water temperature to be sold or offered for sale in California. The proposed regulations will allow exercise spas with a maximum water temperature below 100°F to be tested at lower water temperature for the duration of test.

In addition, the test procedure and the certification requirements are not tailored to combination spas, creating some confusion for the manufacturers. Combination spas are designed to have separate distinct reservoirs capable of heating each reservoir to a different temperature. One of the reservoirs, or spa portions, is an exercise spa while the other is a standard spa. Because of the two different temperatures and spa types that make up a combination spa, it is important to separately characterize the energy consumption characteristics of each spa portion. The proposed regulations clarify that each spa portion shall be powered on simultaneously for the duration test and require manufacturers to submit data for each.

Lastly, data in the appliance efficiency database shows that units with the same volume capacity have very different standby power energy consumption values. This wide range of standby power consumption is affected by factors such as the spa cover, construction materials, and design of the unit. Consumers may be unaware that a wide range exists and must rely on the information given by the seller and manufacturer. The proposed regulations will require manufacturers to affix a label to portable electric spas indicating the standby power resulting from the test, the

maximum allowable standby power, an estimate of the annual energy consumption, the spa cover used during testing, and other specifications about the portable electric spa. This will allow consumers to choose a spa based on its efficiency characteristics, and to compare the efficiencies of different spas.

Battery Chargers

The Energy Commission seeks to align the state's marking requirement for battery chargers with federal regulations, which do not include a marking requirement. If left unaddressed, manufacturers would either have to make a product specifically marked for sale in California or all products sold nationwide would have to have a mark, even though the requirement only applies in California. Either approach would potentially increase the costs of complying with the regulations. The proposed regulations address this problem by removing the marking requirement for federally regulated battery chargers.

BENEFITS

Portable Electric Spas

In general, the proposed regulations will benefit individuals and businesses in California by reducing the energy needed to run the targeted appliances. Any initial increase in purchase price will be offset by reduced operational costs. The proposed regulations will lead to more affordable and efficient inflatable spas. Consumers can benefit from having a label affixed to the unit to educate them of the energy consumption, which can lead to energy savings. The regulations will benefit manufacturers of exercise spas that are operated below 100°F and inflatable spas because they will be able to certify their products to the Energy Commission, and allow them to be sold or offered for sale in California. In addition, manufacturers of combination spas will be able to certify their products more accurately.

The proposed standards will lead to improved environmental quality in California. Saved energy translates to less pressure on the limited energy resources, land, and water use associated with power plants. Lower electricity consumption also results in reduced greenhouse gas and criteria pollutant emissions, primarily from lower generation in hydrocarbon-burning power plants, such as natural gas power plants.

Battery Chargers

The benefit from the proposed battery charger regulations is to help reduce manufacturers' cost of compliance. By harmonizing state and federal regulations, manufacturers will eliminate the need to have uniquely marked products for California, without reducing the ability to check compliance through the model numbers certified to both the state and federal appliance databases.

PURPOSE AND NECESSITY

1602 Definitions

Subdivision (g)

Combination spa

Purpose: To define the term combination spa and to distinguish it from the other types of portable electric spas.

Necessity: This definition is necessary to implement the new performance standard for combination spas. The definition also supports the test procedure requirements, labeling requirements, certification requirements, and ensures clarity within the regulations.

Exercise spa

Purpose: To define the term exercise spa and to distinguish it from the other types of portable electric spas.

Necessity: This definition is necessary to implement the new performance standard for exercise spas. The definition also supports the test procedure requirements, labeling requirements, certification requirements, and ensures clarity within the regulations.

Exercise spa portion

Purpose: To define the term exercise spa portion and to distinguish it from the other spa portion within a combination spa.

Necessity: This definition is necessary to implement the new performance standard for combination spas, which have a requirement for the exercise spa portion. The definition also supports the test procedure requirements, labeling requirements, certification requirements, and ensures clarity within the regulations.

Fill volume

Purpose: To define the term fill volume, to define the variable in the standby power standard equation, and to correct the procedure for filling a portable electric spa as referenced in the test procedure ANSI/APSP/ICC-14 2014. This definition also takes the place of the term “spa volume.”

Necessity: This definition is necessary to establish accurate testing conditions and to determine the maximum allowable standby power limit. The definition also supports the test procedure requirements, labeling requirements, certification requirements, and ensures clarity within the regulations.

Inflatable spa

Purpose: To define the term inflatable spa and to distinguish it from the other types of portable electric spas.

Necessity: This definition is necessary to implement the new performance standard for inflatable

spas. The definition also supports the test procedure requirements, labeling requirements, certification requirements, and ensures clarity within the regulations.

Portable electric spa

Purpose: The definition is being amended to cover those products where the equipment for heating and circulating water may be supplied at a time other than at the point of sale.

Necessity: This definition is necessary to ensure portable electric spas with detachable heating and circulating equipment are a covered product. This definition is necessary to implement the new performance standard for inflatable spas, where the heating and circulating equipment are typically sold separately from the remainder of the spa. The definition also ensures clarity within the regulations.

Rated capacity

Purpose: To define the term rated capacity.

Necessity: This definition is necessary to support the labeling requirements and certification requirements, which request information about the rated capacity to allow consumers to make informed decisions about their spas.

Rated voltage

Purpose: To define the term rated voltage.

Necessity: This definition is necessary to support the labeling requirements and certification requirements, which request information about the rated voltage to allow consumers to make informed decisions about their spas.

Rated volume

Purpose: To define the term rated volume and to distinguish it from the term fill volume.

Necessity: This definition is necessary to support the labeling requirements and certification requirements, which request information about the rated voltage to allow consumers to make informed decisions about their spas.

Skimmer

Purpose: To define the term skimmer.

Necessity: This definition is necessary to implement the procedure for filling portable electric spas, which is based on a point measured from the skimmer, and to support the definition for the term fill volume.

Spa volume

Purpose: To remove the term and definition for spa volume, and replace it with the new term and definition for fill volume.

Necessity: This amendment is necessary to ensure clarity within the regulations. See “fill volume” for the purpose and necessity of the replacement term.

Standard spa

Purpose: To define the term standard spa and to distinguish it from the other types of portable electric spas.

Necessity: This definition is necessary to implement the new performance standard for standard spas. The definition also supports the test procedure requirements, labeling requirements, certification requirements, and ensures clarity within the regulations.

Standard spa portion

Purpose: To define standard spa portion for combination spas.

Necessity: This definition is necessary to implement the new performance standard for combination spas, which have separate requirements for the standard spa portion and the exercise spa portion. The definition also supports the test procedure requirements, labeling requirements, certification requirements, and ensures clarity within the regulations.

Standby mode

Purpose: To define the term standby mode and to define the heating cycle in which the efficiency standard is based on.

Necessity: This definition is necessary to implement the new performance standards and the test procedure for portable electric spas, which are based on limiting the standby mode consumption of spas. The definition also supports the labeling requirements and ensures clarity within the regulations.

1604, Test Methods for Specific Appliances

Subdivision (g)(2) Test Method for Portable Electric Spas

Purpose: To limit the existing test procedure to spas manufactured before the effective date of the new standards, to renumber accordingly, and to establish and describe a new test method for portable electric spas manufactured on or after June 1, 2019. This provision also specifies what information must be included in the test lab report.

Necessity: The proposed test procedure is necessary to obtain data required for the label and for certification requirements. Modifications to the referenced test procedure are necessary to correct the procedure for filling a portable electric spa as referenced in the test procedure ANSI/APSP/ICC-14 2014, to differentiate the testing conditions for each type of portable electric spa, to ensure both spa portions in a combination spa are powered on simultaneously, and to ensure the maximum water temperature in standby mode is tested for exercise spas. The proposed test lab report requirements are necessary to verify compliance of the new efficiency standards and labeling requirements. Lastly, the proposed language is necessary to eliminate any ambiguity as to how the subtypes of portable electric spas need to be tested.

The current, uniform test procedure is the result of a collaborative effort dating back to 2005 to develop a method to test the energy use of portable electric spas. This effort included the Association of Pool and Spa Professionals, leading portable spa manufacturers, the Energy Commission, Davis Energy Group, and the California Investor Owned Utilities. The proposed test procedure is derived from the current test method for portable electric spas described in Section 1604 of Title 20, California Code of Regulations, as amended December 3, 2008, and is a result of a continued collaborative effort to improve the test method to accommodate exercise and combination spas. The test procedure ANSI/APSP/ICC-14 2014 addresses combination and exercise spas separately to ensure that the lower temperature for the swim/exercise portion of the spas is reflected in the test results. This is the only established test method available for these appliances.

1605.3 State Standards for Non-Federally Regulated Appliances

Subdivision (g)(6) Portable electric spas

Purpose: To establish and describe the new efficiency standards for portable electric spas manufactured on or after June 1, 2019.

Necessity: The proposed language provides clarity as to which normalized standby power calculation is applicable. Pursuant to public resources code section 25402(c), the Energy Commission has concluded that cost-effective energy efficiency improvements are available for portable electric spas. The proposed language reduces the maximum standby power for standard spas, exercise spas, and combination spas, which is necessary to achieve cost-effective energy savings from these products. The proposed language creates a separate product class of inflatable spas and sets a new standard for that product class. This is necessary to set a cost-effective and technically feasible efficiency level for this product class and allow it to be available for sale in California.

The performance standard for standard, exercise, and combination spas is the result of a collaborative effort with the Codes and Standards Enhancement Team representing the California Investor Owned Utilities, the standard writing committee for ANSI/APSP/ICC-14 2014, leading portable spa manufacturers, and data from the Energy Commission's appliance efficiency database. The proposed standard will tighten the standard on larger spas while providing some relief to smaller spas, a concern that the industry had with the existing standard. The Energy Commission considered making no changes to the current standard and a more stringent standard for portable electric spas. There are no benefits to maintaining the current efficiency standard, but the costs are the lost energy savings (as well as unquantifiable changes in greenhouse gas reductions that will not be avoided through the regulation). Establishing a more stringent energy consumption standard for all portable electric spas would treat all spas equally, providing no relief for smaller spas, would dramatically increase the incremental costs, and would eliminate inflatable spas from the market. Larger spas have more energy-saving opportunities and higher related costs than smaller spas through the design, controls, and insulation. This option may not be cost effective and consumers may accumulate fewer benefits through energy savings due to the higher cost to comply.

The performance standard for inflatable spas is based on a collaborative effort with leading inflatable spa manufacturers and the Energy Commission. The equation of the performance standard aligns with the normalized standby power test results from prototypes the inflatable spa industry has developed. Exempting inflatable spas from an efficiency standard was rejected because it would introduce an inefficient appliance to the market and in doing so increase energy consumption statewide. In this case, since no performance data would be tested and reported during certification, the Energy Commission's ability to pursue any future, potential energy savings opportunities for inflatable spas would be inhibited. A more stringent efficiency standard was rejected because it would continue to eliminate inflatable spas from the market.

1606 Filing by Manufacturers; Listing of Appliances in Database, Table X,

Table X, Part G, Portable electric spas

Purpose: To modify the reporting requirements to collect information necessary to determine what standard applies, what testing conditions apply, and the data yielded from the testing.

Necessity: The changes are necessary to implement and verify the labeling requirements and ensure manufacturers are complying with the efficiency requirements.

Subdivision (a)(4)(A)(5)(i)

Purpose: To require that portable electric spas manufactured on or after June 1, 2019 are marked with information concerning the spa covers that the spa has been tested with.

Necessity: This change is necessary to ensure that the spa cover, which is an important factor in a spa's efficiency, is sold with the spa and that consumers are made aware that a spa cover is a key component of their system. Additionally, the spa's test results depend to a large extent on the cover itself. In order for the consumer to be assured a spa will have the same energy efficiency as is reported, a spa must be sold with the same cover it was tested with.

1607 Marking of Appliances

Subdivision (d)(10) Energy performance information for battery charger systems

Purpose: The purpose of adding "state-regulated" to the marking requirement language is to ensure the requirement only applies to state-regulated battery charger systems. Effectively this removes the marking requirement for federally regulated battery charger systems.

Necessity: This change is necessary to align the state and federal marking requirements for battery charger systems. Federal efficiency standards for battery charger systems take effect for products manufactured on or after June 13, 2018. The federal efficiency standards do not include a marking requirement for these products. Although California is not preempted from requiring the additional mark, removing the marking requirement for federally regulated battery chargers will reduce the costs of compliance. It will not affect California's ability to determine whether battery chargers comply with the applicable federal standards, as such products are still required to certify to both the state and federal appliance databases.

Subdivision (d)(14) Portable electric spas

Purpose: Establishes and describes a labeling requirement for all portable electric spas sold in California, including the appearance of the label and what information must be displayed.

Necessity: The proposed language is necessary to provide manufacturers clear direction on how to develop the label and ensures the consumer is the only party that may remove the label. Labels are a key component to appliance energy efficiency standards. They help inform the consumer of the energy performance of various appliances. Each requirement in the label is necessary to ensure consistency between labels, allowing a consumer to quickly and easily compare spas, and to ensure that the spa model they choose is sold with the cover that yielded the efficiency results.

The label design and specifications are derived from section 7 of ANSI/APSP/ICC-14 2014. The label requirement and design is the result of a collaborative effort with the Codes and Standards Enhancement Team, representing the California Investor Owned Utilities, and the standard writing committee for ANSI/APSP/ICC-14 2014. The Energy Commission modified the wording of the label to provide consumers with all the necessary information to estimate the annual energy consumption of a spa, to inform consumers the spa cover used during certification testing is sold with the unit in accordance with section 1608(a)(3) of the California Code of Regulations, to allow consumers to quickly and easily compare spas, and to ensure the label is only removed by the consumer. Thus, modifications to the instructions are necessary. The specifications regarding font, font size, and formatting requirements were chosen to ensure the label is easy to read and compare across products.

II. DOCUMENTS AND REPORTS RELIED UPON - Government Code §11346.2(b)(3)

The Energy Commission has relied upon the following technical, theoretical, or empirical studies, reports, or similar documents in drafting the proposed regulations:

Lopez, Jessica. 2018. *Analysis of Efficiency Standards and Marking for Spas*. California Energy Commission. CEC-400-2018-002.

Lopez, Jessica and Steffensen, Sean. 2017. *Second Revised Analysis of Efficiency Standards for Pool Pumps and Motors, and Spas*. California Energy Commission. CEC-400-2016-002-SD3.

Fischel, Ben and Steffensen, Sean. 2016. *Revised Analysis of Efficiency Standards for Pool Pumps and Motors, and Spas*. California Energy Commission. CEC-400-2016-002-SD2.

Fischel, Ben and Steffensen, Sean. 2016. *Analysis of Efficiency Standards for Pool Pumps and Motors, and Spas*. California Energy Commission. CEC-400-2016-002-SD.

III. CONSIDERATION OF REASONABLE ALTERNATIVES, INCLUDING THOSE THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS - Government Code §11346.2(b)(4)

During the public participation that led up to this rulemaking, the Energy Commission received many comments suggesting modifications to the proposed standards and worked closely with stakeholders to accommodate concerns, all of which resulted in changes to what was originally proposed in the draft staff report. These changes were intended to improve the effectiveness of the standards and decrease the burden on the affected industry.

No reasonable alternatives to the proposed regulations have been proposed that would lessen any adverse impact on small business or that would be less burdensome and equally effective in achieving the purposes of the regulation in a manner that achieves the purposes of the statute being implemented.

As part of forming its rule, staff considered proposals from stakeholders and combined suggestions to create a regulation that would minimize the burden on industry while maximizing the energy savings to consumers and the state. Staff considered making no changes to the current standard, a more stringent standard for portable electric spas that would exclude inflatable spas, and exempting inflatable spas. There are no benefits to maintaining the status quo, but the costs are the lost energy savings (as well as unquantifiable changes in greenhouse gas reductions that will not be avoided through the regulation). Establishing a more stringent energy consumption standard for all portable electric spas would treat all spas equally, providing no relief for smaller spas, would dramatically increase the incremental costs, and would eliminate inflatable spas from the market. Larger spas have more energy-saving opportunities and higher related costs than smaller spas through the design, controls, and insulation. This alternative may not be cost effective and consumers may accumulate fewer benefits through energy savings due to the higher cost to comply. Exempting inflatable spas from an efficiency standard would introduce an inefficient appliance to the market and in doing so increase energy consumption statewide.

A detailed discussion of these stakeholder proposals, and the reasons for accepting or rejecting pieces of those proposals, is provided at pages 33-38 in Lopez, Jessica. 2018. *Analysis of Efficiency Standards and Marking for Spas*. California Energy Commission. CEC-400-2018-002. Each proposal as a whole was rejected because it would not be more effective, or as effective and less burdensome, or more cost-effective and equally effective at reducing energy consumption through energy efficiency as required under Public Resources Code, section 25402(c)(1).

IV. SPECIFIC TECHNOLOGIES OR EQUIPMENT– Government Code §§11340.1(a), 11346.2(b)(1), and 11346.2(b)(4)(A)

The proposed regulations do not mandate a specific technology, and instead establish performance and design standards related to portable electric spas that can be met with multiple types of equipment or technology. As discussed above, the proposed regulations do not change standards for battery chargers.

V. DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS— Government Code §11346.2(b)(6)

These proposed regulations do not duplicate or conflict with any federal regulations contained in the Code of Federal Regulations. The Energy Commission has reviewed the applicable federal statutes and regulations and confirmed that there are no federal energy efficiency standards for portable electric spas.

There are federal energy efficiency standards that take effect June 13, 2018 for battery chargers that are federally regulated consumer products, 10 C.F.R. § 430.32(z). The proposed regulations do not duplicate or conflict with these federal regulations, and in fact would better harmonize with the federal regulations by eliminating the need for additional marking for federally regulated products sold or offered for sale in California.

VI. SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESS – Government Code §11346.2(b)(5)(A)

The Energy Commission has determined that the proposed regulation will not have a significant adverse economic impact on business.

The Energy Commission's proposed standard for portable electric spas will not significantly increase costs to manufacturers. It is estimated that the proposed efficiency standards could lead manufacturers to improve the spa cover, the insulation, and design, possibly adding \$100 of estimated incremental cost for standard spas. Exercise spas and combination spas, which are generally more expensive, may see an incremental increase to improve the efficiency of the unit of up to \$230 per unit. Inflatable spas may see an incremental cost to improve the unit's efficiency of \$100 per unit. Compliance of the labeling requirement is expected to cost a minimal amount to comply with, estimated to be \$0.34 per unit for standard and exercise spas, \$0.83 for inflatable spas, and \$1.51 for combination spas. Overall, the lifecycle cost per unit for standard spas is estimated to be \$100.34, with a lifecycle benefit to the consumer from improved energy efficiency of \$569. The lifecycle cost for exercise spas is estimated to be \$230.35 with a lifecycle benefit of \$2,645. The lifecycle cost for combination spas is estimated to be \$231.51 with a lifecycle benefit of \$3,047. Lastly, the lifecycle cost for inflatable spas is estimated to be \$100.83 with a lifecycle benefit of \$657. Because the costs are exceeded by the benefits, the Commission does not anticipate any significant adverse economic impact on businesses as a result of the proposed regulations.

The Energy Commission's proposed regulations for battery chargers are not anticipated to increase the cost or result in any energy savings. There are no costs or savings associated specifically with the "BC" mark for battery chargers. As a result, there will be no significant adverse economic impacts on businesses as a result of compliance with the regulations.

VI. ECONOMIC IMPACT ASSESSMENT (Government Code §11346.3(b))

Creation or elimination of jobs within the state. No new jobs will be created and no existing jobs will be eliminated by the proposed regulations. The incremental cost to improve spas, at approximately \$100 for standard and inflatable spas, or \$230 for combination and exercise spas, is small compared to the total cost of a spa (\$5,000-\$10,000 for a standard spa; \$10,000-\$30,000 for an exercise or combination spa) and therefore would not result in a decrease in the number of sales of spas. In addition, the incremental costs to improve spas would be passed on to the consumer, who would receive the energy savings from the efficiency improvements through their utility bill. The proposed regulations for portable electric spas may increase the total shipment or sales of portable electric spas by including inflatable spas for sale in California. However, inflatable spa manufacturers and retailers currently sell other inflatable product and pool products in other states and in California and it is expected that shipments of inflatable spas would be included with other manufactured products in existing stores. Because spa shipments and sales are not expected to change significantly as a result of the regulations, no new jobs would be created nor would existing jobs be eliminated as a result of the regulations.

The battery charger regulations do not have any incremental costs or benefits, and therefore are not expected to create or eliminate any jobs in the state.

Creation of new businesses or elimination of existing businesses within the state. No new businesses will be created and no existing businesses will be eliminated by the proposed regulations. The incremental cost to improve spas, at approximately \$100 for standard and inflatable spas, or \$230 for combination and exercise spas, is small compared to the total cost of a spa (\$5,000-\$10,000 for a standard spa; \$10,000-\$30,000 for an exercise or combination spa) and therefore would not result in a decrease in the number of sales of spas. In addition, the incremental costs to improve spas would be passed on to the consumer, who would also receive the energy savings from the efficiency improvements through their utility bill.

The proposed regulations for portable electric spas may increase the total shipment or sales of portable electric spas by including inflatable spas for sale in California. The total expected increase in shipments is about 6,000 inflatable spas a year, or roughly six spas per retailer or wholesaler. Inflatable spa manufacturers and retailers currently sell other inflatable product and pool products, based on sales in other states, and it is expected that shipments of inflatable spas would be included with other manufactured products in existing stores, resulting in no new businesses being created or existing businesses being eliminated in California.

Because spa shipments and sales are not expected to change significantly as a result of the regulations, no new businesses would be created and no existing businesses would be eliminated as a result of the regulations.

The battery charger regulations do not have any incremental costs or benefits, and therefore are not expected to create or eliminate any businesses in the state.

Expansion of businesses currently doing business within the state. The proposed regulations may result in a slight expansion of business for inflatable spa manufacturers currently doing business in the state. The proposed regulations for portable electric spas would allow the sale of inflatable spas

in California. Inflatable spa sales are expected to be approximately 6,000 units annually statewide, and would likely be shipped with other products from several spa manufacturers currently doing business in California. These changes may result in a slight expansion of existing businesses. In addition, the regulations would redirect utility bill costs to disposable income for consumers who purchase a portable electric spa. This increased disposable income will generally lead to expansion of the overall California economy. These changes would not change the total shipment or sales of battery chargers in California and therefore would not result in the expansion of any existing battery charger businesses.

Benefits of the regulation to the health and welfare of California residents, worker safety, and the state's environment. The proposed regulations for portable electric spas will benefit California residents by allowing them to purchase more efficient portable electric spas, thereby saving on the cost to operate such appliances. California residents will also benefit from the reduction in energy production needed to support inefficient portable electric spas. The proposed regulations for battery chargers will benefit California residents by allowing manufacturers of federally regulated battery chargers to provide the same product in California as in the other 49 states, presumably reducing the manufacturer's cost of compliance which would otherwise be passed through to the consumer.