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California Energy Commission

STAFF PAPER

Proposed Test Procedure and Labeling Requirements for Portable Electric Spas

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PREFACE

On April 11, 2018, the California Energy Commission (CEC) adopted changes to Appliance Efficiency Regulations (California Code of Regulations, Title 20, Sections 1601 through Section 1609) amending the existing appliance efficiency regulations for portable electric spas. The amended regulations for portable electric spas included scope clarifications; more stringent efficiency standards for standard, exercise, and combination spas; a separate efficiency standard for inflatable spas to encourage the design and development of more efficient inflatable spas; test procedure modifications to accommodate exercise spas and combination spas; additional test lab report requirements to verify compliance; and a labeling requirement to help consumers make informed choices. The test procedure and label design requirements are derived from ANSI/APSP/ICC-14 (APSP-14), American National Standard for Portable Electric Spa Energy Efficiency, Version 2014.

On November 19, 2019, the American National Standard Institute published the revised APSP-14, Version 2019. The revised APSP-14 aligns with California's efficiency standards, labeling requirements, and test procedure requirements for portable electric spas adopted in 2018. Other changes adopted in the revised APSP-14, include modifications to simplify test lab qualification and label application clarifications.

On August 12, 2020, the CEC issued an order instituting rulemaking to consider modifying the existing regulations found in the Appliance Efficiency Regulations. The goal of the rulemaking is to update the test procedure and labeling requirements for portable electric spas with the latest industry standard. Additional changes to the Appliance Efficiency Regulations may also be considered as necessary.

The CEC reviewed all the information received. This paper contains the proposed regulations for portable electric spas based on comments received during the meetings mentioned above and in writing in the CEC's docket for this rulemaking.

ABSTRACT

This paper discusses proposed updates to the portable electric spa regulations in the Appliance Efficiency Regulations (California Code of Regulations, Title 20, Sections 1601 to 1609). These proposed updates are part of the 2020 Appliance Efficiency Rulemaking (Docket #2020-AAER-04). The proposed updates include, but are not limited to, test procedure and labeling requirements with the latest industry standard.

The proposed updates for portable electric spas are proposed to take effect on filing with the California Secretary of State.

Existing efficiency standards and the scope of coverage for portable electric spas will not be affected. Therefore, statewide energy use and savings, and related environmental impacts and benefits, will not be affected.

Keywords: Appliance efficiency regulations, appliance regulations, portable electric spas, test procedures, labeling, compliance

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EXECUTIVE SUMMARY

This paper presents the California Energy Commission staff analysis of proposed test procedure and labeling requirement updates for portable electric spas.

Staff proposes to update the test procedure reference and update the labeling design requirements for portable electric spas. The scope of coverage will remain the same and continue to cover all types of portable electric spas, such as standard spas, exercise/swim spas, combination spas, and inflatable/collapsible spas. The existing minimum performance efficiency standards for portable electric spas will not be affected. The proposal also includes changes to simplify the structure of existing regulations for portable electric spas. The proposal staff is recommending derives from a recent update to the industry standard for determining the efficiency of portable electric spas, ANSI/APSP/ICC-14, Version 2019.

CHAPTER 1:
Regulatory Approaches

California Appliance Efficiency Standards

In 2004, the California Energy Commission (CEC) adopted the first set of standards for portable electric spas, which took effect in 2006. The standards included setting the scope, test procedure requirements, test lab report requirements, and a performance standard requiring that the standby power of a spa must not exceed a sliding scale of wattage as a function of the volume of a spa: [5 x Volume$^{2/3}$].[1] The test procedure and performance standard were based on a collaborative effort that included major spa manufacturers, the CEC, and the California Investor Owned Utilities (IOUs) Codes and Standards Enhancement (CASE) Team.[2]

On April 11, 2018, the CEC adopted changes to Title 20, Sections 1602-1607 amending the existing appliance efficiency regulations for portable electric spas. The industry-approved standard ANSI/APSP/ICC-14 (APSP-14), *American National Standard for Portable Electric Spa Energy Efficiency*, Version 2014 was the basis for the updated amendments to the regulations for portable electric spas. The amended regulations are in effect for portable electric spas manufactured on or after June 1, 2019. The amended regulations for portable electric spas include:

- Scope clarifications – specifying the inclusion of inflatable spas, exercise spas, and combinations spas.
- A more stringent standby power limit of [3.75 x Volume2/3 +40] for standard, exercise, and combination spas.
- A separate efficiency standard for inflatable spas to encourage the design and development of more efficient inflatable spas.
- Updating the test procedure to ANSI/APSP/ICC-14, Version 2014 with modifications to accommodate exercise spas and combination spas.
- Additional test lab report requirements to verify compliance.

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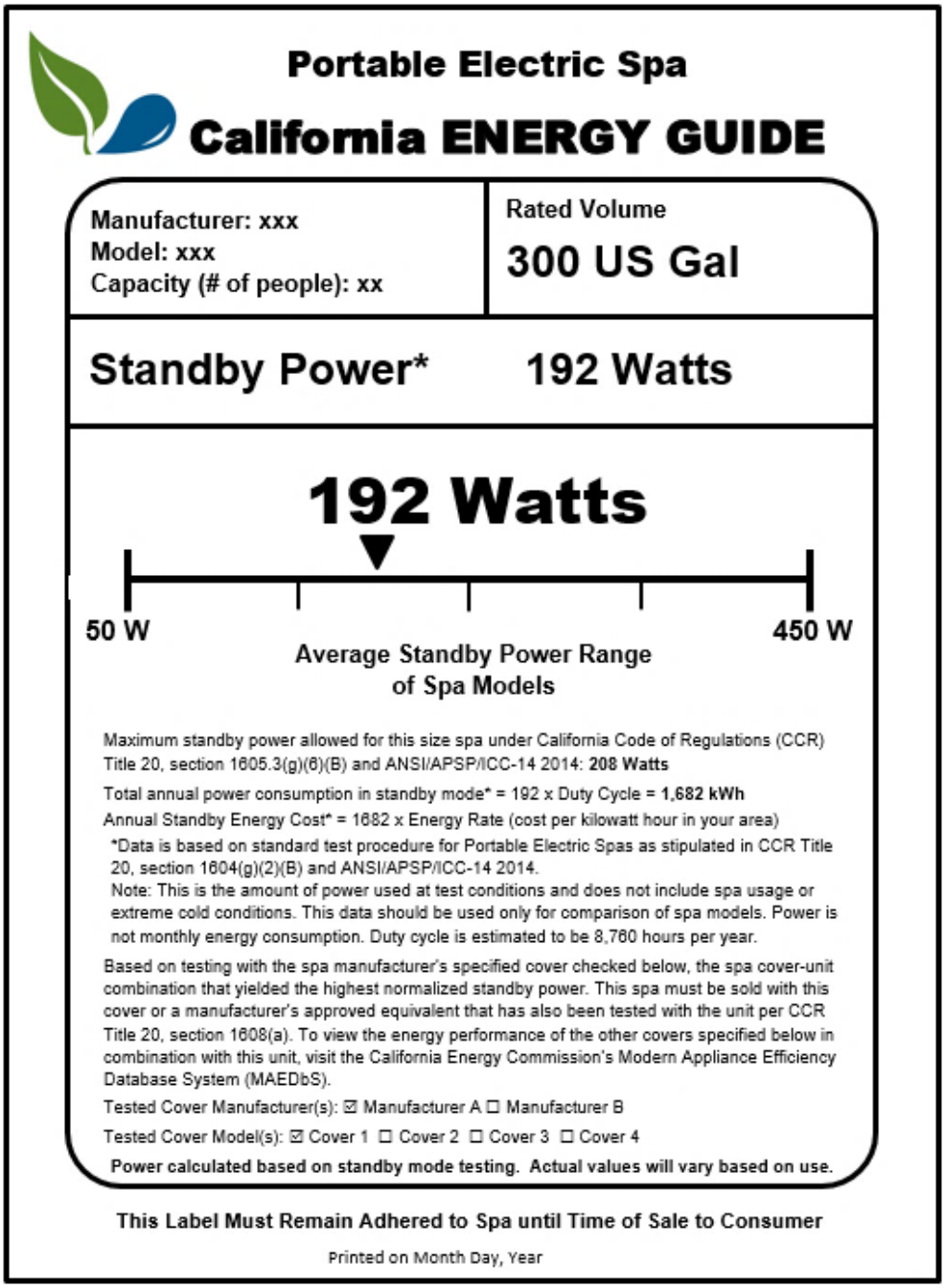
1 Lopez, Jessica. *Final Staff Report: Analysis of Efficiency Standards and Marking for Spas.* CEC-400-2018-002. Sacramento: California Energy Commission, 2018. Docket Number: 2018-AAER-02

2 Davis Energy Group, Energy Solutions. (2004). *Codes and Standards Enhancement Initiative for PY2004: Title 20 Standards Development - Analysis of Standards Options for Portable Electic Spas.* Pacific Gas and Electric.

- Test lab qualification requirements to ensure proper testing.
- Additional listing requirements to the appliance efficiency database.
- A labeling requirement, based on the label design in ANSI/APSP/ICC-14, Version 2014, to help consumers make informed choices, as shown in **Figure 1-1.**

Figure 1-1: Sample of California's Labeling Requirement for Spas



Note: Leaf color equivalent to Pantone 363 green; Water drop color equivalent to Pantone 7691 blue.

Source: California Energy Commission

Several modifications were made to APSP-14, Version 2014, in this update, and subsequently the label design in APSP-14, Version 2014, had to be modified to be reflective of those modifications. Therefore, to differentiate between the label design in APSP-14, Version 2014, and the modified label design that meets California's requirements, "California" was added to the title in the label. A detailed discussion of these amendments is provided in the 2018 *Final Staff Report: Analysis of Efficiency Standards and Marking for Spas* [3] and in the Final Statement of Reasons.[4]

Federal Approaches

There is no federal standard and no ENERGY STAR® specification for portable electric spas.

Industry Standards

ANSI/APSP/ICC-14

The ANSI/APSP/ICC-14, *American National Standard for Portable Electric Spa Energy Efficiency*, is a voluntary standard approved by the American National Standard Institute (ANSI), published in partnership with the International Code Council (ICC), and prepared by the Pool & Hot Tub Alliance (PHTA) writing committee, formerly the Association of Pool and Spa Professionals (APSP), to provide guidelines for testing and measuring the energy efficiency of portable electric spas. The standard is based on the 2004 adoption of California's appliance efficiency regulations for portable electric spas.

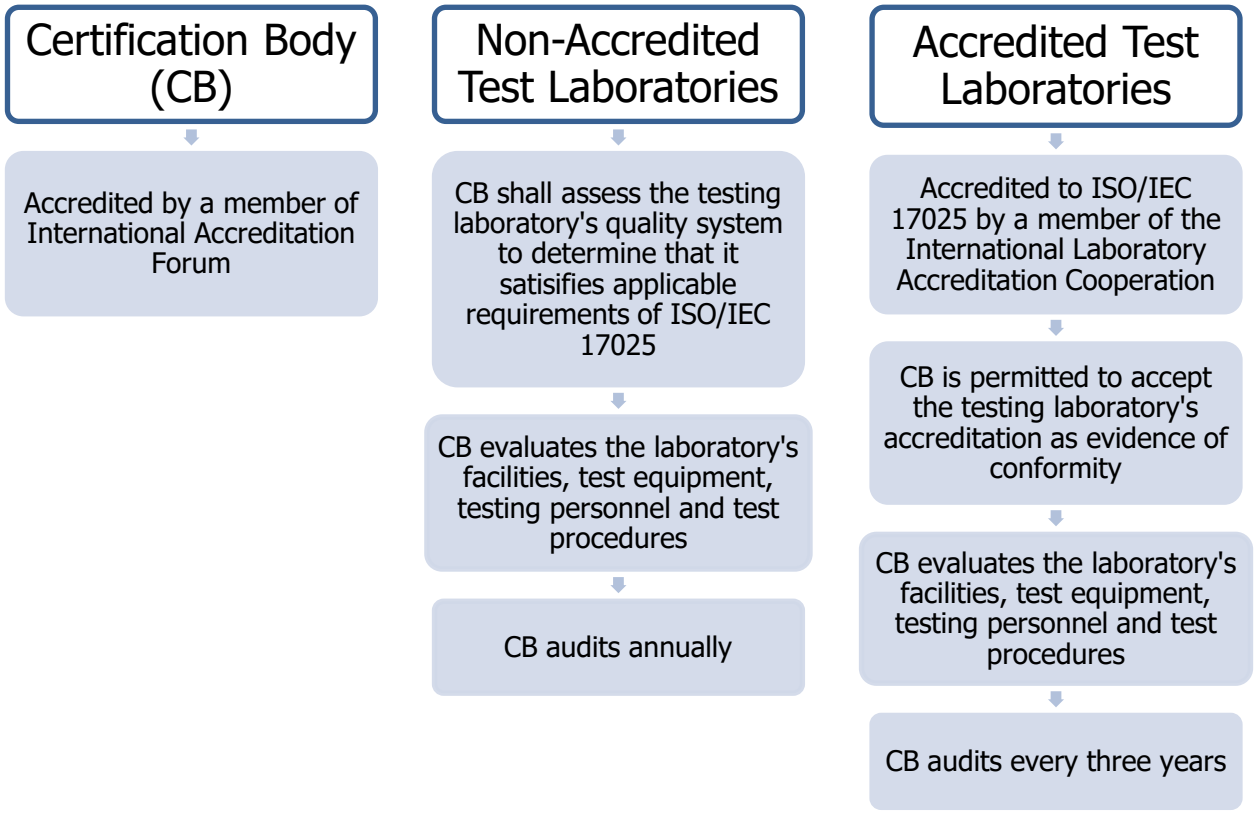
The first iteration of the industry standard ANSI/APSP/ICC-14 (APSP-14) was published on January 4, 2011. The maximum standby power limit for spas matched the performance standards in California, [5 x Volume$^{2/3}$]. The 2011 version expanded on California's appliance efficiency regulations for portable electric spas by improving the test method with additional details to ensure reliability and repeatability. The standard deviated from California's standards by incorporating a test lab qualification requirement, guidelines for minimum chamber requirements, and a labeling requirement displaying energy performance information. The test lab qualification required testing laboratories to demonstrate the ability to perform the tests in APSP-14 by a third-party certification body. The certification body was required to be accredited by a member of the International Accreditation Forum using ISO/IEC Guide 17065,

3 Lopez, Jessica. *Final Staff Report: Analysis of Efficiency Standards and Marking for Spas*. CEC-400-2018-002. Sacramento: California Energy Commission, 2018. Docket Number: 2018-AAER-02.

4 California Energy Commission. (2018, July 23). Final Statement of Reasons for Portable Electric Spas and Battery Charger Systems. Docket # 18-AAER-02, TN#224256.

General Requirements for Bodies Operating Product Certification Systems.[5] Testing laboratories, whether they are accredited to ISO/IEC 17025 or not, were required to be assessed by a third-party certification body, as summarized in **Figure 1-2** below.[6] The labeling requirement required manufacturers to include the measured standby power consumption near the product's label.[7]

Figure 1-2: Qualification Summary for Test Laboratories and Certification Bodies



Source: ANSI/APSP/ICC-14, Version 2011 and Version 2014.

The second revision of the standard was approved by ANSI on September 12, 2014. The standard required a more stringent standby power limit of [3.75 x Volume$^{2/3}$ +40] for traditional sized portable electric spas and a standby power limit of [5 x Volume$^{2/3}$] for exercise

5 Previously, ISO/IEC 65 *General Requirements for Bodies Operating Product Certification Systems* in the 2011 and 2014 versions of ANSI/APSP/ICC-14.

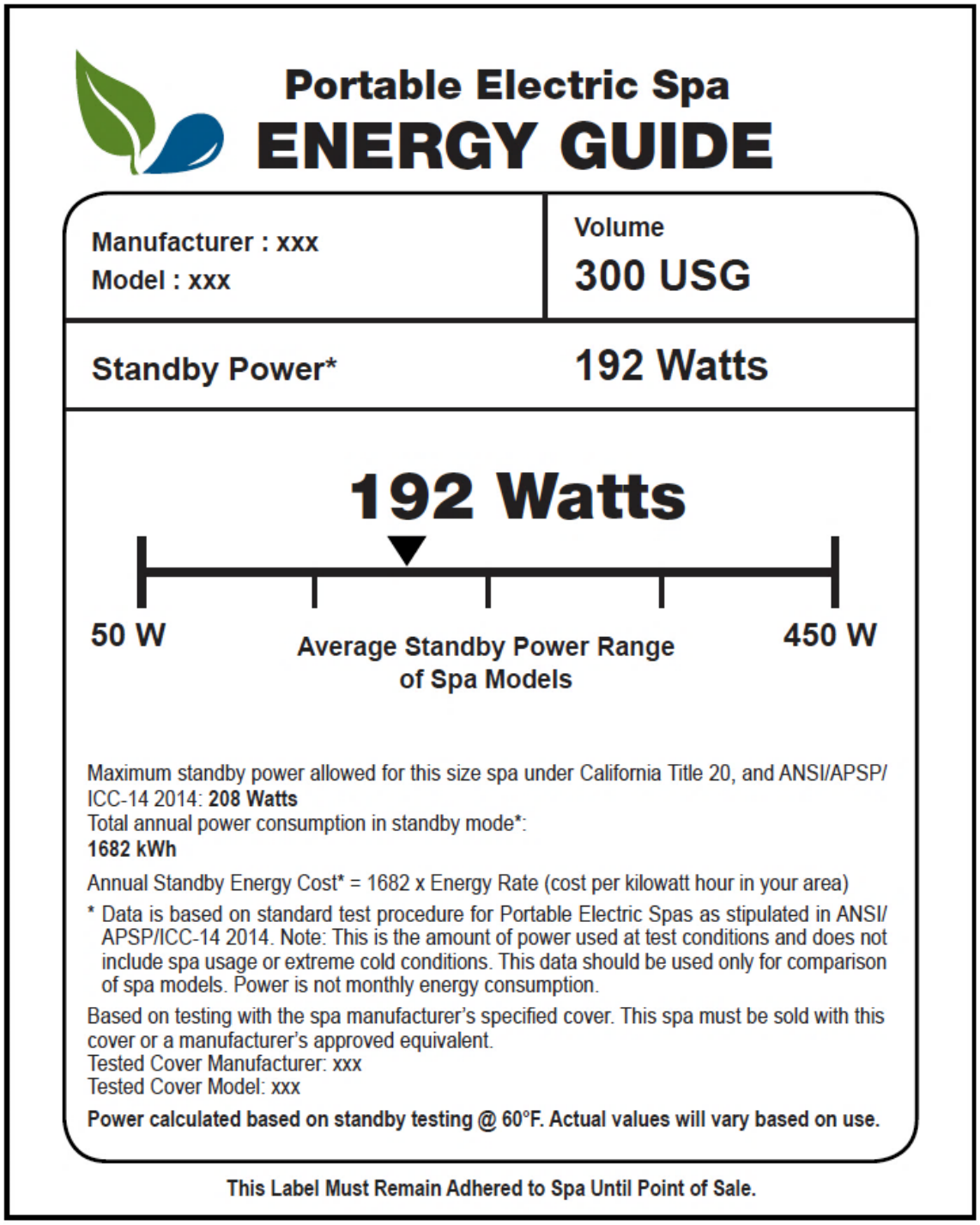
6 ISO/IEC 10725 – *General Requirements for the Competence of Testing and Calibration Laboratories*.

7 The Association of Pool & Spa Professionals. (2011, January 4). American National Standard for Portable Hot Tub Energy Efficiency. Alexandria, Virginia: The Association of Pool & Spa Professionals.

portable electric spas. The standard provided specific testing conditions for exercise spas and combination spas. In addition, the standard required labels on all spas to include information on spa volume, standby power, the maximum standby power allowed, total annual consumption in standby mode, annual standby energy cost, specified cover manufacturer, specified cover model number, spa manufacturer, and spa model number, as shown in **Figure 1-3**. The label was required to be printed on a removable adhesive-backed label and remain adhered to the spa until point of sale to the consumer. Lastly, the standard still required all testing laboratories to be qualified by an accredited certification body to ensure the testing facility, testing equipment, and personnel can perform the tests in the standard, as described in **Figure 1-2**.[8]

8 The Association of Pool & Spa Professionals. (2014, September 12). American National Standard for Portable Electric Spa Energy Efficiency. Alexandria, Virginia: The Association of Pool & Spa Professionals.

Figure 1-3: Sample of Label Requirement per APSP-14, Version 2014



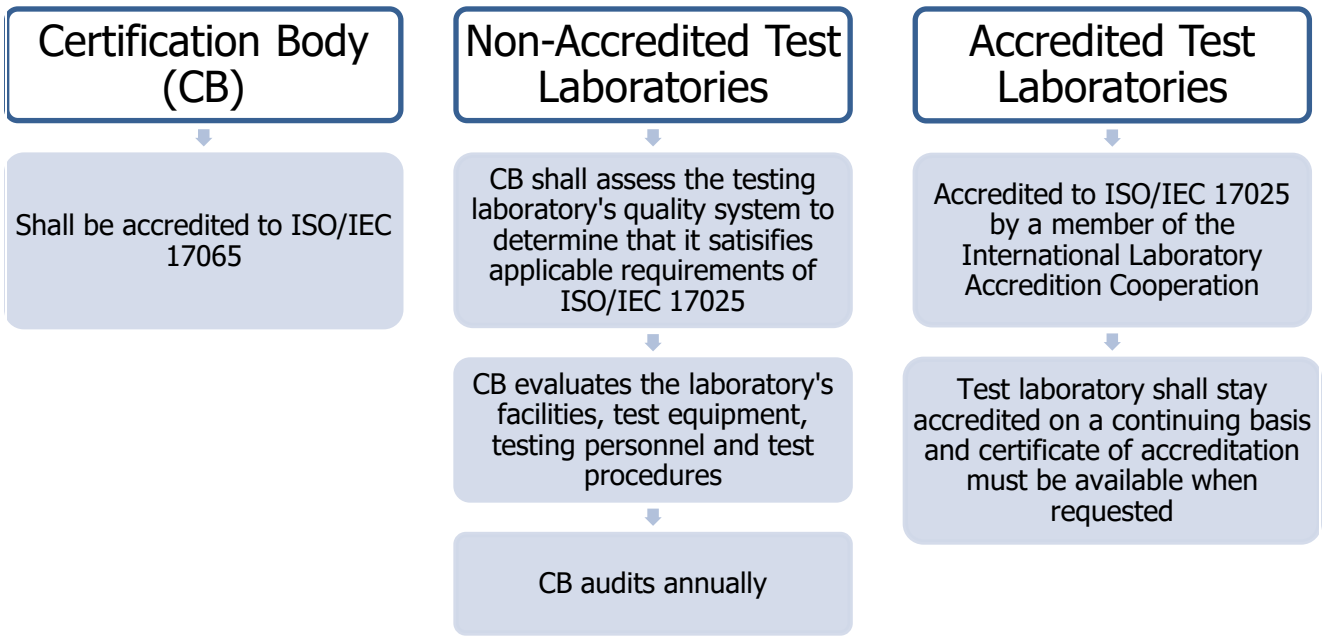
Note: Leaf color equivalent to Pantone 363 green; Water drop color equivalent to Pantone 7691 blue.

Source: ANSI/APSP/ICC-14, Version 2014

The latest revision of APSP-14 was approved by ANSI on November 19, 2019. As noted previously, California's appliance efficiency regulations for portable electric spas, adopted in April 2018, include several modifications to APSP-14, Version 2014. Those modifications were

incorporated into the recently revised, APSP-14, Version 2019. Those incorporated updates include adding inflatable spas into the scope; a more stringent standby power limit of [3.75 x Volume$^{2/3}$ +40] for standard, exercise, and combination spas; a separate efficiency standard of [7 x Volume$^{2/3}$] for inflatable spas; and test procedure clarifications to support the updated scope and performance standards. Other notable changes include updates to the test lab qualification requirements and label design requirements. Test laboratories accredited to ISO/IEC 17025, no longer must be evaluated and approved by an additional third-party certification body to prove conformity to APSP-14. Only non-accredited test laboratories shall be evaluated by a certification body to demonstrate competency to APSP-14, as summarized in **Figure 1-4**.

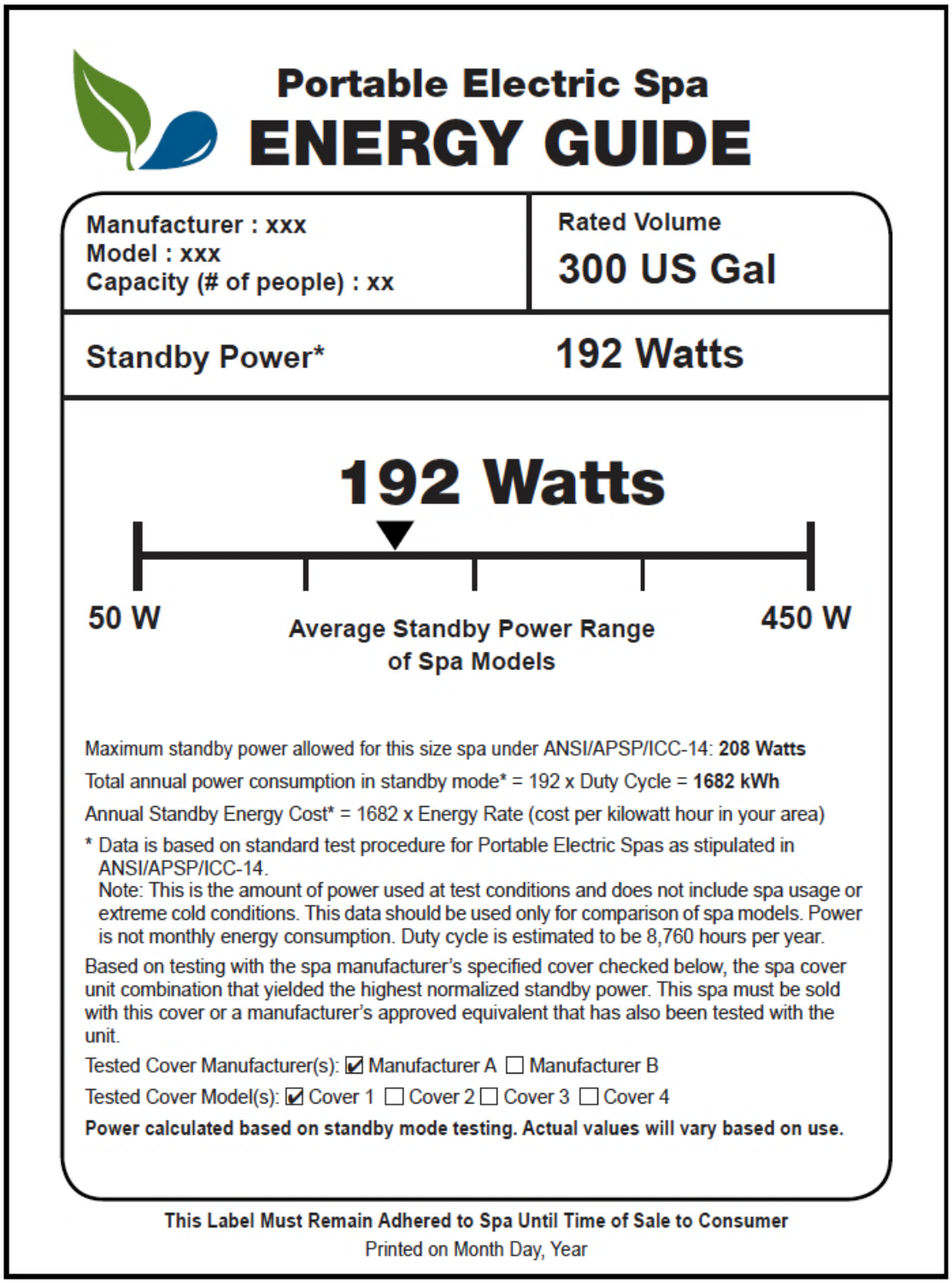
Figure 1-4: Qualification Summary for Test Laboratories and Certification Bodies per APSP-14, Version 2019



Source: ANSI/APSP/ICC-14, Version 2019

In addition, the label design was updated to include the capacity of the spa, rate volume, print date, listing of spa cover model number(s) and manufacturer(s), and details ensuring that only tested spa covers may be sold with the spa, as shown in **Figure 1-5**. Lastly, the standard now includes instructions for labeling combination spas and inflatable spas.

Figure 1-5: Sample of Label Requirement per APSP-14, Version 2019



Portable Electric Spa

ENERGY GUIDE

Manufacturer : xxx Model : xxx Capacity (# of people) : xx	Rated Volume 300 US Gal
Standby Power*	192 Watts

192 Watts

50 W — Average Standby Power Range of Spa Models — 450 W

Maximum standby power allowed for this size spa under ANSI/APSP/ICC-14: **208 Watts**

Total annual power consumption in standby mode* = 192 x Duty Cycle = **1682 kWh**

Annual Standby Energy Cost* = 1682 x Energy Rate (cost per kilowatt hour in your area)

* Data is based on standard test procedure for Portable Electric Spas as stipulated in ANSI/APSP/ICC-14.
Note: This is the amount of power used at test conditions and does not include spa usage or extreme cold conditions. This data should be used only for comparison of spa models. Power is not monthly energy consumption. Duty cycle is estimated to be 8,760 hours per year.

Based on testing with the spa manufacturer's specified cover checked below, the spa cover unit combination that yielded the highest normalized standby power. This spa must be sold with this cover or a manufacturer's approved equivalent that has also been tested with the unit.

Tested Cover Manufacturer(s): ☑ Manufacturer A ☐ Manufacturer B

Tested Cover Model(s): ☑ Cover 1 ☐ Cover 2 ☐ Cover 3 ☐ Cover 4

Power calculated based on standby mode testing. Actual values will vary based on use.

This Label Must Remain Adhered to Spa Until Time of Sale to Consumer

Printed on Month Day, Year

Note: Leaf color equivalent to Pantone 363 green; Water drop color equivalent to Pantone 7691 blue.

Source: ANSI/APSP/ICC-14 version 2019

International Code Council

The 2012 and 2015 International Swimming Pool and Spa Code (ISPSC) and the 2015 International Energy Conservation Code (IECC) developed by the ICC adopted the energy consumption requirements of ANSI/APSP/ICC-14, Version 2011. The 2018 ISPSC, the 2018 IECC, and the 2018 International Residential Code (IRC) reference ANSI/APSP/ICC-14, Version 2014. The upcoming 2021 cycles of these I-codes are expected to be updated to reference the 2019 version of ANSI/APSP/ICC-14.[9]

As of February 2021, the ISPSC is in use or has been adopted by local governments and/or statewide in 26 states, the District of Columbia, and U.S Virgin Islands (**Figure 1-6**). The IECC is in use or adopted in all states (except California and Indiana), the District of Columbia, Puerto Rico, and the U.S Virgin Islands. The IRC is in use or adopted in all states (except Wisconsin), the District of Columbia, Puerto Rico, and the U.S. Virgin Islands.[10]

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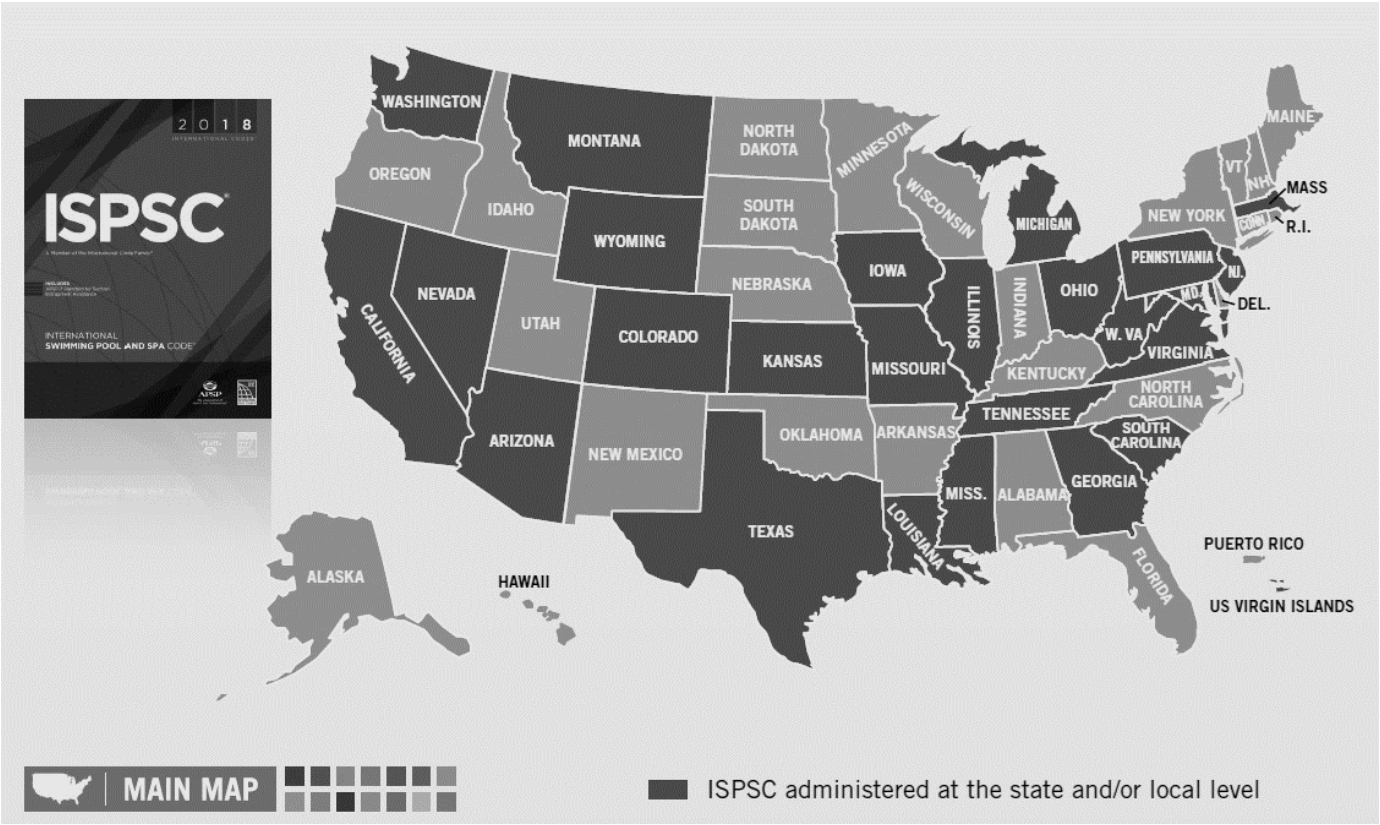
9 I-codes developed by the International Code Council available at http://shop.iccsafe.org/codes.html.

10 International Codes Adoption by State list available at http://www.iccsafe.org/international-code-adoptions/ as of October 19, 2020.

Figure 1-6: International Swimming Pool and Spa Code Adoption Map



Source: International Code Council (October 19, 2020).

Other State Approaches

Arizona, Oregon, and Connecticut currently have a maximum standby power limit of [5 x Volume$^{2/3}$] for portable electric spas, matching California's performance standards established in 2004.[11,12,13] Several states have also begun to issue proposals to add or amend their appliance efficiency regulations to adopt APSP-14, Version 2014 or Version 2019, see **Table 1-1**. The inclusion of APSP-14, Version 2019 is also in the latest Appliance Standards Awareness Project (ASAP) Model Bill.[14]

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11 Arizona State Legislature. Title 44, Chapter 9, Article 19, 1375.02.

12 Oregon State Statues. Chapter 469. Section 469.233.

13 Connecticut General Assembly. Chapter 298, Title 16, Section 16a-48.

14 Appliance Standards Awareness Project. (2020). States. Retrieved from Appliance Standards Awareness Project: https://appliance-standards.org/states

Table 1-1: Recently Adopted or Pending Standards for Portable Electric Spas

State	Referenced Standard	Effective Date
Colorado[15]	APSP-14 (2014)	January 1, 2021
Connecticut[16]	APSP-14 (2019)	January 1, 2022*
Hawaii[17]	APSP-14 (2019)	January 1, 2022*
Illinois[18]	APSP-14 (n/a)	January 1, 2021*
Massachusetts[19]	APSP-14 (2019)	January 1, 2022*
Oregon[20]	APSP-14 (2019)	January 1, 2022
Pennsylvania[21]	APSP-14 (2019)	January 1, 2022*
Rhode Island[22]	APSP-14 (n/a)	January 1, 2022*
Vermont[23]	APSP-14 (2014)	July 1, 2020
Washington[24]	APSP-14 (2014)	January 1, 2020
Washington D.C.[25]	APSP-14 (n/a)	2021/2022*

Notes: *Pending adoptions; (n/a) – version is not specified; assumption is the latest version will be required.

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15 Colorado Revised Statues. Title6. Article 7.5.

16 Connecticut General Assembly – Raised Senate Bill 178, Session Year 2020. Retrieved from https://www.cga.ct.gov/asp/CGABillStatus/cgabillstatus.asp?selBillType=Bill&bill_num=SB178.

17 Hawaii State Legislature – Senate Bill 3024, Session Year 2020. Retrieved from https://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=SB&billnumber=3024&year=2020.

18 Illinois General Assembly – House Bill 3658, Session Year 2019. Retrieved from https://www.ilga.gov/legislation/BillStatus.asp?DocNum=3658&GAID=15&DocTypeID=HB&LegId=120377&SessionID=108&GA=101.

19 Commonwealth of Massachusetts – Bill S.2478, Session Year 2020. Retrieved from https://malegislature.gov/Bills/191/S2478.

20 Oregon Department of Energy, Chapter 330, Division 92. Retrieved from https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=1103.

21 Pennsylvania General Assembly. House Bill 2136, Session 2019-2020. Retrieved from https://www.legis.state.pa.us/cfdocs/billInfo/BillInfo.cfm?syear=2019&sind=0&body=H&type=B&bn=2136.

22 Rhode Island State Legislature. Senate Bill 2043, Session Year 2020. Retrieved from http://webserver.rilin.state.ri.us/BillText20/SenateText20/S2043.pdf.

23 Vermont Statues. Title 9. Chapter 74. Section 2791-2798.

24 Revised Code of Washington. Title 19. Chapter 19.260. Section 19.260.040. Adopted on January 06, 2020.

25 Council of the District of Columbia. Bill 23-204, Session Year 2020. Retrieved from https://lims.dccouncil.us/Legislation/B23-0204?FromSearchResults=true.

CHAPTER 2:
Proposed Regulations for Portable Electric Spas

The proposed updates would maintain the existing scope, covering all types of portable electric spas such as standard spas, exercise spas, combination spas, and inflatable spas. The existing minimum performance efficiency standards for portable electric spas will not be affected. The proposed changes are based on updating all references of ANSI/APSP/ICC-14 (APSP-14), Version 2014 to the 2019 version. As discussed in Chapter 1, existing regulations for portable electric spas in California are incorporated in APSP-14, Version 2019 except where noted in the following paragraphs. The proposed updates for portable electric spas are proposed to take effect on filing with the California Secretary of State.

Scope

There are no proposed changes to the scope for portable electric spas set forth in the California Code of Regulations (CCR), Title 20, Section 1601.

Definitions

The proposed change to the definitions supporting the regulations for portable electric spas set forth in CCR, Title 20, Section 1602, is in the definition for "fill volume," which includes the removal of a reference to the test method description that is being supplanted by APSP-14, Version 2019. The change is minor and does not affect the meaning of the term or its definition.

Test Procedure

Staff recommends all portable electric spas be tested in accordance with APSP-14, Version 2019, with no modifications. In April 2018, the CEC adopted the test procedure APSP-14, Version 2014, with modifications for portable electric spas to reflect the energy use of combination spas and exercise spas. These modifications have now been included in the recently revised APSP-14, Version 2019. Therefore, the testing conditions and testing method for determining the standby power consumption remain the same. Differences between California's existing appliance efficiency regulations for portable electric spas and APSP-14, Version 2019, are updates to the test lab qualification requirements. Existing test lab certification requirements in APSP-14, Version 2014, specify that test labs must be qualified by a third-party certifier to verify competency, whether the test lab is accredited to ISO/IEC 17025 or not. APSP-14, Version 2019, requires an unaccredited test lab to be qualified by a third-party certifier.

In addition, staff is proposing to remove expired test procedure requirements that applied to portable electric spas manufactured prior to June 1, 2019, which are no longer applicable.

Test Lab Report Requirements

Staff is continuing to recommend test lab report requirements for portable electric spas. This includes reporting data required per CCR, Title 20, Section 1606, Table X, Appendix D of APSP-14, Version 2019, and other requirements such as listing temperature control accessories for inflatables spas, and data plot figures of the water temperature, ambient air temperature, voltage, and current. Many of the test lab report requirements remain the same except for the name of the test technician, test location, picture of tested spa in chamber, and picture of data plate of tested spa, all of which are included in Appendix D of APSP-14, Version 2019.

Changes proposed in CCR, Title 20, Section 1604 update the referenced test procedure and consolidates existing test lab report requirements that are incorporated in APSP-14, Version 2019.

Efficiency Standards

The proposed changes to the efficiency standards for portable electric spas set forth in CCR, Title 20, Section 1605.3, are changes to clarify the regulatory language and efficiency standards of portable electric spas that are no longer applicable. However, CEC staff is not proposing to change the minimum level of operating efficiency of portable electric spas.

The changes proposed eliminate references to APSP-14, Version 2014, for calculating the normalized standby power. Staff is proposing to replace the references of Section 6.1 through 6.3 of APSP-14, Version 2014, with equations used to calculate the normalized standby power. These equations are the same as those referenced in APSP-14, Version 2014 and Version 2019, and do not change the existing efficiency standard.

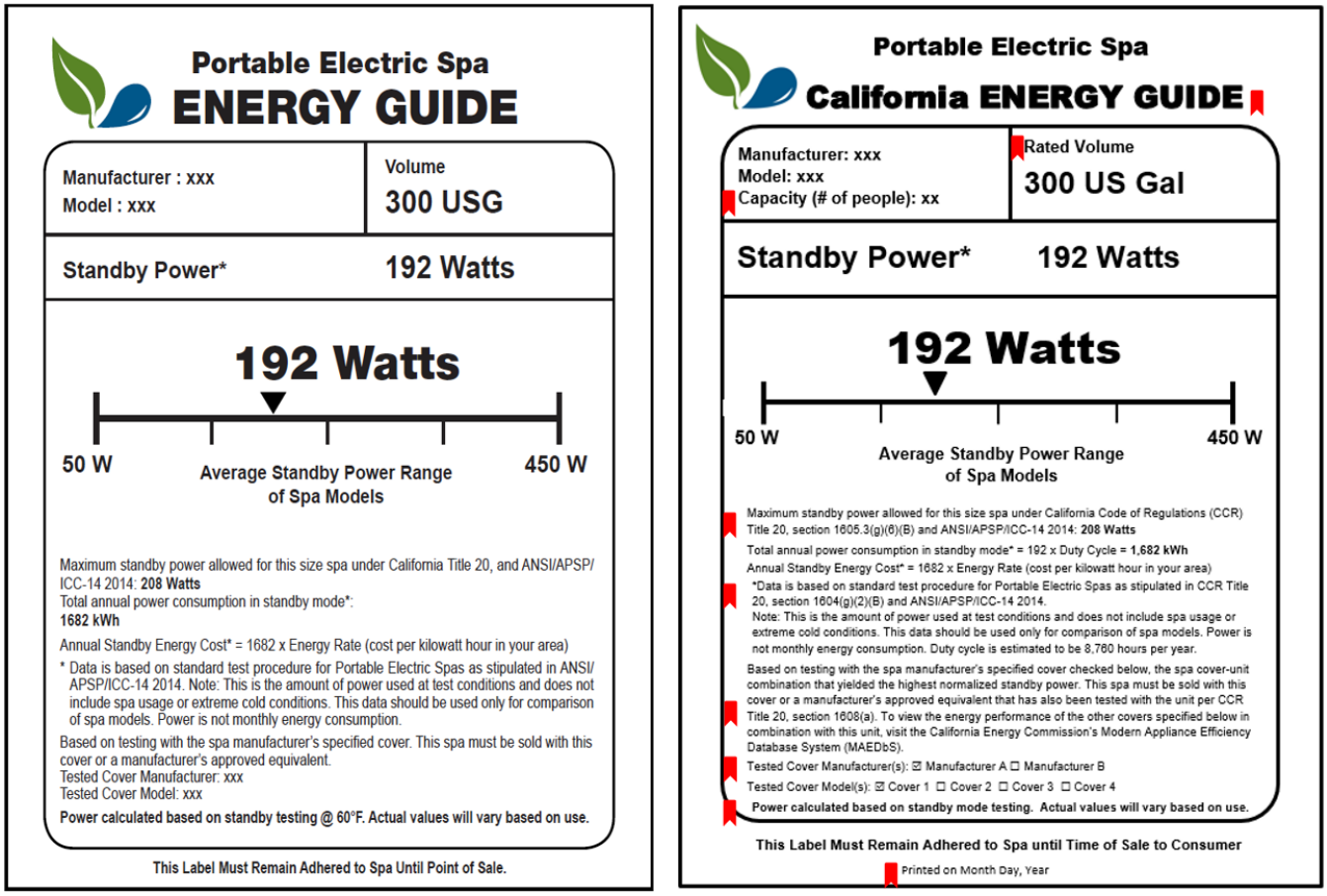
Reporting Requirements

The proposed changes to the reporting requirements set forth in the CCR, Title 20, Section 1606 Table X, involve removing the outdated qualifier "(applies to models manufactured on or after June 1, 2019 only)" to simplify the regulatory language, since that date has passed and the requirements apply to models currently being manufactured and tested.

Labeling Requirements

Staff continues to recommend labeling requirements for portable electric spas. The current label design requirement derives from APSP-14, Version 2014. The language on the label from APSP-14, Version 2014, was amended in the Appliance Efficiency Regulations to be representative of the modifications made to the test procedure, for the standardization of the label to verify compliance, and several other modifications for consumers to easily compare between spas. For example, the California-specific label requires manufacturers to display performance data of the least efficient spa cover-unit combination, which encourages the customer to purchase a more efficient choice, encourages retailers to present efficient options, and encourages manufacturers to use more efficient spa covers. However, the APSP-14, Version 2014, label requirement allows the manufacturer to display the performance data of any spa cover-unit combination preventing label standardization. Hence the inclusion of "California" in the title and several references to CCR, Title 20.

Figure 2-1: Label Design Comparison Between APSP-14, Version 2014 and CCR Title 20

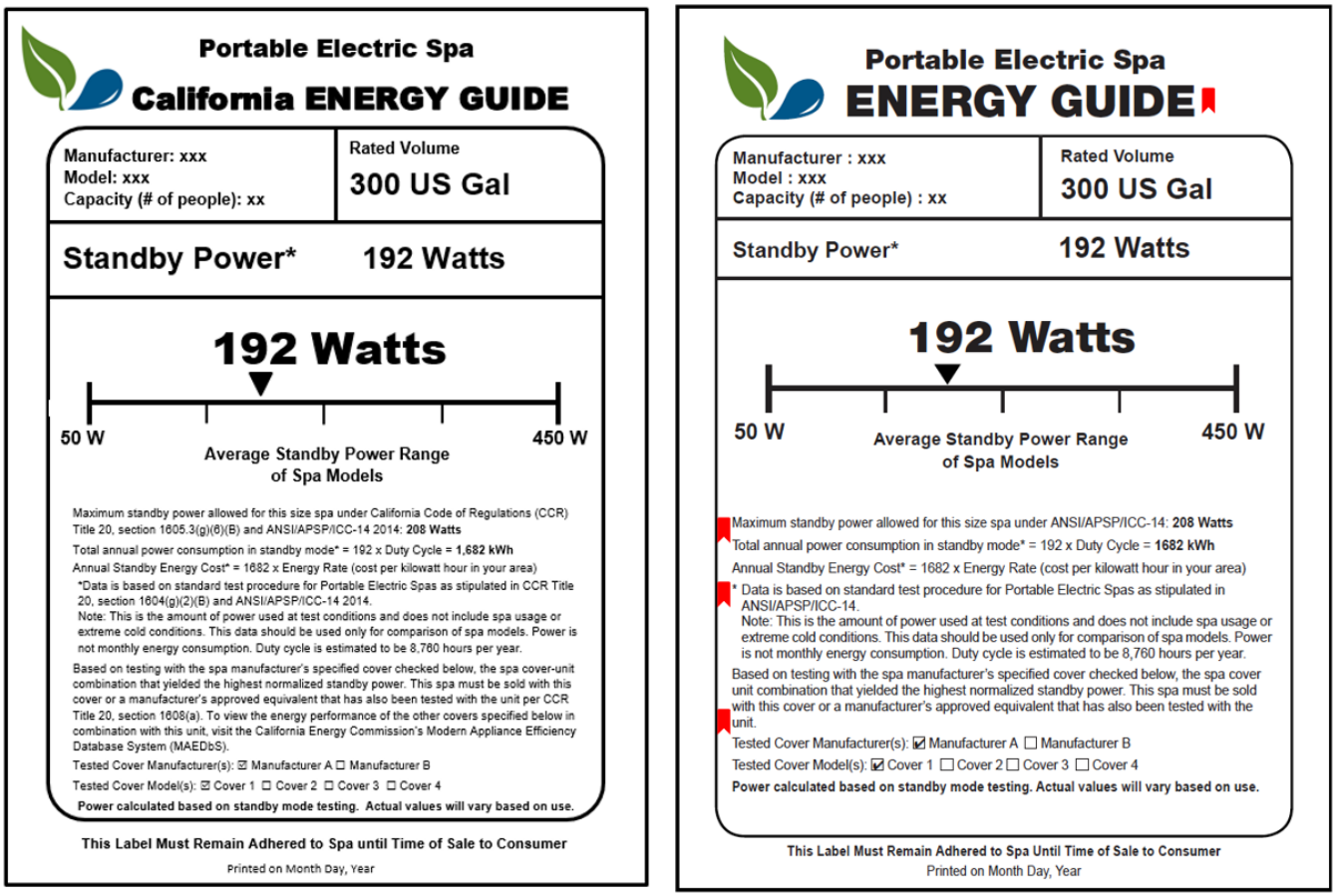


(Left) APSP-14, Version 2014 (Right) California specific label design. Note: Leaf color equivalent to Pantone 363 green; water drop color equivalent to Pantone 7691 blue. Red tags indicate a change from the APSP-14, Version 2014 label design.

Source: California Energy Commission and APSP-14, Version 2014

Staff proposes label requirements that meet the design specifications of APSP-14, Version 2019, with no modifications. The requirements of the data displayed in the California specific label and the label in the revised APSP-14, Version 2019, are the same. Proposed changes include removing all references to CCR, Title 20, see **Figure 2-2**. The APSP-14, Version 2019, label language references "ANSI/APSP/ICC-14" without indicating the version year. Therefore, to assist in compliance verification, staff is proposing an optional reference to state "2019" following "ANSI/APSP/ICC-14." Although there are discernable differences between the California version, the 2014 version, and the 2019 version label designs, these differences are not apparent to those without knowledge of APSP-14. Other changes include clarifications for labeling combination spas and changing the label height from 6.25 inches to 6.75 inches.

Figure 2-2: Label Design Comparison Between CCR Title 20 and APSP-14, Version 2019



(Left) California specific label design (Right) APSP-14, Version 2019, label design. Note: Leaf color equivalent to Pantone 363 green; water drop color equivalent to Pantone 7691 blue. Red tags indicate a change from the California specific label design.

Source: California Energy Commission and APSP-14, Version 2019

CHAPTER 3:
Savings and Cost Analysis

The proposed updates will not affect existing efficiency standards and the scope of coverage for portable electric spas. Therefore, statewide energy use and savings and environmental impacts and benefits related to efficiency standards will also not be affected. In addition, the proposed updates are cost-effective and technically feasible, as explained in this chapter.

Incremental Costs

The cost of changes to the labeling design requirements are negligible since it is only necessary to update the template label design in the labeling software. The printing costs, which include material costs, ranges from $0.22 to $0.44 per unit.[26] Changing the minimum labeling height from 6.25 inches to 6.75 inches is proportional to a size increase of 8 percent. The material cost to increase the minimum labeling height ranges from less than $0.01 to $0.02 per unit.[27] Therefore, the material costs to increase the minimum labeling height is also negligible. There are no changes to the number of labels being applied or label application.

There are no incremental costs associated to updating the test procedure reference. The test method for determining the efficiency of portable electric spas remains the same.

Statewide Savings

The test lab qualification requirements being proposed differ from existing requirements. Existing test lab certification requirements in APSP-14, Version 2014, specify test labs must be qualified by a third-party certifier to verify competency, whether the test lab is accredited to ISO/IEC 17025 or not. APSP-14, Version 2019, requires only an unaccredited test lab to be qualified by a third-party certifier. Accreditation to ISO/IEC 17025 can be a demanding and costly process, suited for major testing facilities testing several types of appliances and testing characteristics other than efficiency. Requiring an additional third-party certifier to verify accreditation is redundant and an unnecessary cost for manufacturers. The estimated savings of manufacturers using accredited test labs is approximately $1,667 per year, details of this estimate are shown in the table below.

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26 Lopez, Jessica (2018). Final Staff Report: Analysis of Efficiency Standards and Marking for Spas. Sacramento: California Energy Commission. Retrieved from https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=18-AAER-02

27 Staff assumes material costs are 50 percent of the printing costs.

Table 3-1: Estimated Test Lab Savings for Manufacturers

Description	Value	Units
Test Lab Qualification by a Third-Party Certifier	$5,000	Per Test Lab
Number of Portable Electric Spa Test Labs as of 2020	24	Test Labs
Number of Accredited Portable Electric Spa Test Labs as of 2020	11	Test Labs
Qualification Renewal Rate for Accredited Test Labs per APSP-14, Version 2014	3	Years
Total Savings per Accredited Test Lab	$1,667	Per Year
Total Statewide Savings	$18,333	Per Year

Source: California Energy Commission and Energy Commission's Modern Appliance Efficiency Database System

Impacts to Small Businesses

Staff estimates that 1,000 retailers, installers, manufacturers, and wholesalers that manufacture, install, or sell portable electric spas will be impacted by the proposed regulations. There are approximately 50 manufacturers and private brand packagers of portable electric spas selling within California, and the remaining share of businesses are retailers or wholesalers of portable electric spas. This estimate is based on the CEC's Modern Appliance Efficiency Database (MAEDbS), which yields the number of manufacturers, and its estimate of the number of businesses in California that sell portable electric spas to consumers. Staff estimates that of the businesses impacted, approximately 10 percent are small businesses. Small businesses in the portable electric spa industry include retailers, and some small manufacturers or private brand packagers.

The proposed recommendation to align with APSP-14, Version 19 labeling requirements – changing the minimum labeling height from 6.25 inches to 6.75 inches – results in a material cost ranging from less than $0.01 to $0.02 per unit, as discussed in the **Incremental Costs** section in this chapter. There are no incremental costs associated to updating the test procedure reference. Therefore, staff assumed there were no or negligible costs associated with updating the test procedure reference and the labeling design requirements. Manufacturers accrue savings of $1,667 per year per manufacturer through a reduction in test lab qualification fees as discussed in section **Statewide Savings** in this chapter. The cost-effectiveness ensures that the proposed standards will result in a net financial benefit for small businesses. For these reasons staff does not expect any businesses, including small businesses, to be impacted negatively by the proposed regulations for portable electric spas.

CHAPTER 4: Environmental Impacts

The proposed regulations will update the test procedure reference and update the labeling design requirements for portable electric spas. The scope coverage will remain the same and continue to cover all types of portable electric spas, such as standard spas, exercise/swim spas, combination spas, and inflatable/collapsible spas. The existing performance standards will not be affected. The proposal also includes editorial changes to simplify the structure of existing regulations for portable electric spas. Therefore, staff has not identified any adverse or beneficial environmental impacts from the proposed regulations.

Energy Impacts

The proposed regulations will not affect existing performance standards yielding no energy savings nor a reduction in energy savings, translating to neither an increase or a reduction in greenhouse gas and criteria pollutant emissions.

Environmental Impacts

Updating the test procedure reference does not affect the existing testing method for generating the energy efficiency value of the unit. Therefore, the proposal does not change the energy or the process of manufacturing this appliance type.

Updating the label requirement to increase the minimum height from 6.25 inches to 6.75 inches does not alter the existing process of labeling this appliance type. Existing labeling requirements instruct manufacturers to use a removable adhesive-backed white polymer label or an equivalent. The paper stock and adhesive may vary from manufacturer to manufacturer. Most manufacturers already include labels on their spas to provide the consumer with safety instructions, connection instructions, or basic product information. Thus, an increase in label size will not change industry practice, or the material composition of the label. In addition, the non-hazardous materials in the label do not pose any harm to the user and would not cause a significant environmental impact.

The proposed regulations are not expected to have any environmental impacts, as they do not increase or decrease energy consumption, change the materials used to comply with the regulations, change the design life, or change the total sales or shipments of these products into the state.

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Glossary

Term	Definition
Certification Body	An independent third-party that operates a product, process, or service certification system.
Combination Spa	A portable electric spa with two separate distinct reservoirs, where (1) one reservoir is an exercise spa; (2) the second reservoir is a standard spa; and (3) each reservoir has an independent water temperature setting control.
Exercise Spa	A portable electric spa that includes specific features and equipment to produce water flow for water physical therapy or physical fitness activity, including, but not limited to, swimming in place.
Inflatable Spa	A portable electric spa where the structure is collapsible and is designed to be filled with air to form the body of the spa.
MAEDbS	The Modernized Appliance Efficiency Database System established pursuant to section 1606(c) of this Article and maintained by the CEC.
Manufacturer	Any person engaged in the original production or assembly of an appliance or commercial and industrial equipment or any person that assumes the complete legal responsibility for the original production or assembly of an appliance, which includes, but is not limited to, the responsibility normally held by the manufacturer for product liability, warranty, and compliance with state and federal law. "Manufacturer" also means a private brand packager or reassembler.
Portable Electric Spa	A factory-built electric spa or hot tub, supplied with equipment for heating and circulating water at the time of sale or sold separately for subsequent attachment.

Term	**Definition**
Standard Spa	A portable electric spa that is not an inflatable spa, an exercise spa, or the exercise spa portion of a combination spa.
Testing Laboratory	A facility where the actual testing of the spa is conducted.
Test Lab Qualification	A process that requires testing laboratories to demonstrate the ability to perform the tests in ANSI/APSP/ICC-14 by a third-party certification body.

APPENDIX A:
Acronyms

Acronym	Description
ANSI	American National Standards Institute
APSP	The Association of Pool & Spa Professionals
CASE	Codes and Standards Enhancement Team
CCR	California Code of Regulations
CEC	California Energy Commission
CFR	Code of Federal Regulations
ICC	International Code Council
IECC	International Energy Conservation Code
IOU	California Investor Owned Utilities
IRC	International Residential Code
ISPSC	International Swimming Pool & Spa Code
MAEDbS	Modernized Appliance Efficiency Database System
PHTA	The Pool & Hot Tub Alliance
WCAG	Web Content Accessibility Guidelines