

Domestic Water Heating System

NRCC-PLB-E (Created 11/19)

CALIFORNIA ENERGY COMMISSION



CERTIFICATE OF COMPLIANCE	NRCC-PLB-E
Project Name: NRCC-PLB-E New Nonresidential DHW System	Report Page: Page 2 of 5
Project Address: 1234 Any Pl	Date Prepared: 2020-08-21

D. EXCEPTIONAL CONDITIONS
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.
 No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS
 This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.
 Include any project comments about the form for the Building Official or installer here.

F. DOMESTIC HOT WATER EQUIPMENT
 Table Instructions: Complete the following table to demonstrate compliance with mandatory equipment requirements in §110.1 and §110.3. For high-rise residential and hotel/motel occupancies, compliance with prescriptive requirements in §150.1(c)8 must also be demonstrated and with §150.2 for addition and alteration scopes.

Equipment Schedule: Individual Systems					
01	02	03	04	05	06
Name or Item Tag	Equipment Type	Volume (gal)	Max GPM/ First Hour Rating (FHR)	Rated Uniform Energy Factor (UEF)	Minimum Required Uniform Energy Factor (UEF) ¹
DHW1	Gas-Fired Storage (≤ 75,000 BTUH)	40-49	51 ≤ FHR < 75	0.61	0.58

Look for section links to view the code requirements.

Individual systems have different requirements than central systems. The correct Equipment Schedule table on this form will open depending on system types selected in Table B column 02.

The tag/name should match what is on the equipment schedule so it is easy for the Building Official to find on the plan set.

¹ FOOTNOTE: Compliant equipment may be found in the Modernized Appliance Efficiency Database System (MAEDBS) on the Energy Commission website: <https://accertappliances.energy.ca.gov/Pages/Search/AdvancedSearch.aspx>

Select "Yes" if these requirements apply based on the requirement description, or select "NA" if not applicable.

The Rated UEF in column 05 for the specified equipment must be larger than the Minimum required in column 06 to comply.

Water Heating Equipment All Occupancies		Requirement	
Yes	No	Not Applicable	
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Unfired storage tank insulation shall have Internal + External ≥ R-16 OR External ≥ R-12. Label required per §110.3(c)3
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	New state buildings 60% of energy for service water heating from site solar energy or recovered energy per §110.3(c)5
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Isolation valves for instantaneous water heater with input rating > 6.8 kBTUH or 2 kW has been specified per §110.3(c)6

Check back in Table C to see if Table F complies!

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM
 Table Instructions: Complete the following table to demonstrate compliance for nonresidential occupancies with distribution requirements in §120.3 and §140.5. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements in §110.3(c), §120.3, §150.0, §150.1.

Table Continued

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Table Continued

Mandatory Pipe Insulation All Occupancies			
12	<input checked="" type="checkbox"/>	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per §120.3 : - Recirculating system piping, including supply and return piping of the water heater - The first 8 ft of hot and cold outlet piping for a nonrecirculating storage system - Pipes that are externally heated	
13	<input checked="" type="checkbox"/>	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per §120.3(b) and §150.0(j)3	
TABLE 120.3-A PIPE INSULATION THICKNESS			
Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft ² per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)
			Minimum Insulation Required
105-140	0.22-0.28	100	1.0 in or R-7.7 1.5 in or R-12.5 1.5 in or R-11

Check off to show compliance with the Mandatory pipe insulation requirements & confirm the requirements are reflected in the construction documents.

H. DOMESTIC HOT WATER SYSTEM CONTROLS

Table Instructions: Complete the following table to demonstrate compliance with controls requirements in [§110.3](#) for all occupancies. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements in [§150.1\(c\)8](#).

	Yes	No	Not Applicable	Requirement
01	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Requirement that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per §110.3(a)
02	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per §110.3(c)1 unless covered by California Plumbing Code Section 613.0.
03	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless system serves healthcare facility.
04	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	For recirculation systems serving multiple dwelling units, design includes automatic pump controls per §150.1(c)8Bii , or §150.2 for additions or alterations
05	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA 4.4.9 per §150.1(c)8 .
06	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	For replacement single heat pump water heaters serving individual dwelling units in climate zones 1-15, design includes communication interface that meets demand responsive control requirements of §110.12(a) per §150.2(b)1Hiii .

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I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCV-PLB-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-PLB-02-E - Must be submitted for high-rise residential and hotel/ motel central hot water distribution systems to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-PLB-03-E - Must be submitted for high-rise residential and hotel/ motel single dwelling unit hot water distribution systems to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to service water heating requirements

Review the NRCV forms that have been selected as applicable to the project scope. The NRCV forms are completed during construction by a HERS Rater. If there are any that are in "Yes" that are not applicable, move them to "No" and explain why they are not applicable in Table E.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-PLB-21-H High-rise Residential Central Hot Water Distribution HERS Verification	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCV-PLB-22-H High-rise Residential Individual Dwelling Unit Hot Water Distribution HERS Verification	<input type="checkbox"/>	<input type="checkbox"/>

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Project Address: 1234 Any Pl

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2020-08-21

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete

Documentation Author Name:

Documentation Author Signature:

Company:

Signature Date:

Address:

CEA/ HERS Certification Identification (if applicable):

City/State/Zip:

Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:

Responsible Designer Signature:

Company :

Date Signed:

Address:

License:

City/State/Zip:

Phone:

For training on the NRCC forms, visit Energy Code Ace:

2019 Dynamic Form Introduction Video Series: [youtube.com/watch?v=PLVH9EjkDaO5IMvxvVJg2oDwq2B3wjTQ1](https://www.youtube.com/watch?v=PLVH9EjkDaO5IMvxvVJg2oDwq2B3wjTQ1)**Decoding NRCC: Let's Talk 2019 Nonresidential Dynamic Forms Handout and Recording:** energycodeace.com/content/training-ace/courseid=35705