



INFORMATION SHEET

No. M-06

DATE : October 18, 2019

SUBJECT : Mechanical

TITLE : **Compliance with Title-24 Installation, Verification, and Acceptance Requirements and SFGBC AB-093 Attachment E Requirements**

PURPOSE : The purpose of this Information Sheet is to explain compliance requirements for the Title-24 installation, verification, and acceptance energy certificates and San Francisco Green Building Code (SFGBC) AB-093 Attachment E requirements.

REFERENCE : 2016 California Energy Code Title 24, Part 1 and Part 6
2016 San Francisco Green Building Code AB-093
Information Sheets G-01, GB-01, M-02, M-03, M-04, and M-05

DISCUSSION : The 2016 California Energy Code (CEC) takes effect on January 1, 2016. The SFGBC AB-093 Attachment E form is required for new construction and major alteration permits that have a final certificate of occupancy after January 1, 2019. Appropriate *Certificates of Installation, Acceptance, and Verification and the SFGBC AB-093 Attachment E form* are to be completed by the responsible parties and documentation of compliance shall be submitted to Department of Building Inspection (DBI).

Required Certificates:

Applicable *Title-24 Energy/Green Inspection Requirements* forms are prepared as per Information Sheets M-03 and/or M-04 and affixed to the plans for permit submittal. The appropriate *Certificates of Installation, Acceptance, and Verification* forms that are to be completed prior to final inspection are indicated on the applicable *Title-24 Energy Inspection Requirements* form by the design professional, **energy consultant or other responsible party as allowed under Information Sheet G-01.

Note: For alterations to existing residential buildings for which Home Energy Rating System (HERS) field verification is not required; such as, water heater and window replacements; for additions to existing residential buildings that are less than 300 square feet for which HERS field verification is not required; the Certificate of Installation (forms listed on M-03 and M-04) documentation is not required.

The *Certificate of Installation, Acceptance, and Verification* forms can be found on the California Energy Commission website at <http://energy.ca.gov/title24/2016standards/>. Questions in regard to the certificates may be addressed by the California Energy Commission's Energy Standard hotline at (800) 772-3300.

The San Francisco Green Building Code AB-093 Attachment E form is completed by the Design Professional of Record (Option 1)/Green Building Compliance Professional of Record (Option 2) for new construction and major alterations. The Attachment E form can be found on the SFDBI website at <https://sfdbi.org/sites/default/files/AB-093.pdf>.

Title-24 Energy Final Compliance Letter: (Affidavit)

It is the responsibility of the contractors, acceptance testers, and HERS raters to provide all the appropriate completed and signed certificates to the design professional, **energy consultant or other responsible party as allowed under Information Sheet G-01.

An Owner/Builder may submit the final affidavit for R3 occupancies provided the building permit was obtained by the Owner. The design professional, **Energy Consultant or other responsible party as allowed under Information Sheet G-01 shall email a compliance letter to the DBI Energy Inspection staff at dbi.energyinspections@sfgov.org. For HERS items, the affidavit must be submitted by a certified HERS Rater. The compliance letter shall include the following:

- Letterhead of Engineer, Architect, **Energy Consultant, or other responsible party.
Note: DBI may accept the Final Compliance Letter from a Mechanical, Electrical, or Plumbing contractor on mechanical, electrical or plumbing work, respectively.
- Project Data – Project address, scope of work, Building Permit Application number, and if applicable, Mechanical, Electrical, or Plumbing permit numbers
- A list of the required certificates as per the Energy Inspection forms - This shall include the forms code at the end of each item specified [i.e. NRCI-LTI-01-E Certification of Installation-Indoor Lighting (IE6), NRCA-LTI-02 Lighting Controls (AE1)]
- A statement indicating all required certificates have been completed and signed together with license information
- Name (first and last), signature, and contact information of the design professional. This includes Engineers, Architects, Contractors, Owner/Builders (for Group R3 occupancy only), **Energy Consultants, Certified Acceptance Test Technicians, or other responsible parties as allowed under Information Sheet G-01 (please specify which one in the letter).

We recommend you use the sample letter attached.

Upon request all forms shall be available for review by DBI.

The completed and signed Certificates of Installation, Acceptance, and Verification forms shall be provided and maintained by the building owner.

Once the letter is received by DBI staff, the form codes will be checked off against those listed in DBI's Permit Tracking System database. The final Certificate of Occupancy will not be issued until all required Title-24 energy installation/acceptance/verification items are cleared.

**Examples of Energy Consultants include:

Certified Energy Plans Examiner (CEPE): as issued by the California Association of Building Energy Consultants (CABEC) <http://www.cabec.org/>

Certified Energy Analyst (CEA): as issued by the California Association of Building Energy Consultants (CABEC) <http://www.cabec.org/>

Home Energy Rating System (HERS): as issued by the CalCERTS <https://www.calcerts.com/>

Acceptance Test Technician (ATT) certified by a California Energy Commission Acceptance Test Technician Certification Provider (ATTCHP)

San Francisco Green Building Compliance:

For new construction and major alterations, as defined in SFGBC AB-093, it is the responsibility of the Design Professional of Record (for Option 1) or Green Building Compliance Professional of Record (for Option 2) to complete the SFGBC AB-093 Attachment E form.

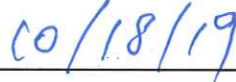
Once the completed Attachment E form is received by DBI staff, the form code will be checked off against those listed in DBI's Permit Tracking System database. The final Certificate of Occupancy will not be issued until the SFGBC AB-093 Attachment E form is cleared.


Effective date of the provisions of this Information Sheet:

The provisions of the Title-24 energy inspection forms become effective for building permit applications submitted on or after January 1, 2017. The provisions of the SFGBC AB-093 Attachment E form is required for new construction and major alteration permits that have a final certificate of occupancy after January 1, 2019. For AB-093 Attachment E, the 2016 Energy/Green Inspection forms may be used for all previous code cycles.

Notes:

1. Refer to GB-01, Attachment H for projects required to exceed energy standards per San Francisco Green Building Code.
2. When the letter is submitted to DBI, State License number for Engineer, Architect or Contractor and Certificate number for Testers/Consultants and HERS Testers shall be provided in the letter.



 Tom C. Hui, S.E., C.B.O., Director
Department of Building Inspection

Date

Attachments:

1. Sample Compliance Letter (Affidavit)
2. Requirements for Submittals of Title 24 Compliance Letters (Table)
3. Sample Certificate Pg. 1
4. Sample Certificate Pg. 2
5. SFGBC AB-093 Attachment E

This Information Sheet is subject to modification at any time. For the most current version, visit our website at <http://www.sfdbi.org>

TITLE 24 ENERGY INSPECTION – FINAL COMPLIANCE LETTER SUBMITTAL PROCESS ONLY

- Use letterhead with address and contact information
- Email the final compliance letter only to dbi.energyinspections@sfgov.org
- Allow 10 business days for review
- After 10 days, check online (www.sfdbi.org). If approved, there's a date in "Completed Date" column with initials of the inspector in "Inspected By" column

ATTACHMENT 1

SAMPLE COMPLIANCE LETTER (AFFIDAVIT)

Date _____

Title 24 Coordinator
Department of Building Inspection
1660 Mission Street
San Francisco, CA 94103

This is to confirm that the required Certificate of Installation, Acceptance and Verification for the project below has been **completed and signed** by the appropriate parties and is on file with the building owner. A copy will be available for Department review upon request.

Project Address: _____

Permit Application #: _____
 (Include mechanical, electrical and plumbing permits, if any)

Below is a list of all the required certificates for this project (see example):

1. (AEI NRCA-LTI-02 LIGHTING CONTROLS) _____
2. _____
3. _____
4. _____

Sincerely,

(Name and Signature)_____
(Date)

Title *[Engineer, Architect, Contractor, Energy Consultant, Owner Builder (for Group R3 occupancy only), Certified Acceptance Test Technician (ATT), etc. If ATT, include ATT number and expiration date]*

License/Certificate No. _____

Address & Phone Number _____

NOTE: If not cleared after 10 business days, do not resubmit. Call 1(415)558-6132 and leave message explaining reason, permit application number and date of compliance letter. Special Inspections will return your call within 72 hours.

ATTACHMENT 2**Information Required for Submittal of
Compliance Letters**

PREPARER	LICENSE/INFORMATION REQUIRED
Architect	License No. _____
Engineer	License No. _____
Contractor	License No. _____
Energy Consultants*	License No. & _____ Expiration Date _____
Home Owners**	Contact Information _____ _____

* For HERS items, the Affidavit must be submitted by a licensed HERS rater

** For R3 occupancies ONLY

STATE OF CALIFORNIA
HERS VERIFIED MULTIFAMILY CENTRAL HOT WATER SYSTEM DISTRIBUTION
 CEC-CF2R-PLB-21-H (Revised 03/15)

CERTIFICATE OF INSTALLATION

HERS Verified Multifamily Central Hot Water System Distribution

Sample Certificate Page 1

Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City:	Zip Code:

A. Design HERS Verified Central Water Heating Systems Information

This table reports the water heating system features that were specified on the registered CF1R compliance document for this project.

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Water Heating System ID or Name	Water Heating System Type	Water Heater Type	# of Water Heaters in system	Water Heater Storage Volume (gal)	Fuel Type	Rated Input Type	Rated Input Value	Heating Efficiency Type	Heating Efficiency Value	Standby Loss (%)	Exterior Insul. R-Value	Central DHW System Distribution Type	Dwelling Unit DHW System Distribution Type

B. Installed HERS Verified Central Water Heating Systems Information

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Water Heating System ID or Name	Water Heating System Type	Water Heater Type	# of Water Heaters in system	Water Heater Storage Volume (gal)	Fuel Type	Rated Input Type	Rated Input Value	Heating Efficiency Type	Heating Efficiency Value	Standby Loss (%)	Exterior Insul. R-Value	Central DHW System Distribution Type	Dwelling Unit DHW System Distribution Type

C. Installed Water Heater Manufacturer Information

01	02	03
Water Heating System ID or Name	Manufacturer	Model Number

Registration Number: CA Building Energy Efficiency Standards - 2013 Residential Compliance
 Registration Date/Time: _____ HERS Provider: _____
 March 2015

STATE OF CALIFORNIA
HERS VERIFIED MULTIFAMILY CENTRAL HOT WATER SYSTEM DISTRIBUTION
 CEC-072-R-PLB-21-H (REVISED 03/15)

ATTACHMENT 4
 CALIFORNIA ENERGY COMMISSION



CERTIFICATE OF INSTALLATION

HERS Verified Multifamily Central Hot Water System Distribution

CF21R-PLB-21-H
Sample Certificate Page 2

Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City:	Zip Code:

D. HERS Verification Requirements for all Central Domestic Hot Water Systems

01	Or systems that have a total capacity greater than 167,000 Btu/hr, outlets that require higher than service water temperatures as listed in the ASHRAE Handbook have separate remote heaters, heat exchangers, or boosters to supply the outlet with the higher temperature. (Section 110.3 (c1))
02	Systems with circulating pumps or with electrical heat trace systems shall be capable of automatically turning off the system. (Section 110.3(c)2)
03	For public lavatories, the control system shall limit the outlet temperature to 110 degrees Fahrenheit. (Section 110.3(c)3)
04	Unfired storage tanks are insulated with an external R-12 or combination of R-16 internal and external insulation. Alternatively, the heat loss of the tank surface based on an 80 degrees Fahrenheit water-air temperature difference shall be less than 6.5 Btu per hour per square foot. (Section 110.3(c)4)
05	<p>All sections of the recirculation loop, and the first five feet of all branches off the loop are insulated, to the thicknesses required by Table 120.3A, except for the following: (RA4.4.1)</p> <ul style="list-style-type: none"> • Piping installed in interior or exterior walls that is surrounded on all sides by at least 1 inch of insulation. • Piping installed in attics with a minimum of 4 inches (10 cm) of attic insulation on top • Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Metal piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall butt securely against all framing members. • Insulation is not required on the cold water line when it is used as the return <p>Hot water pipes that are buried below grade are installed in a water proof and non-crushable casing or sleeve that allows for installation, removal, and replacement of the enclosed pipe and insulation. (RA4.4.1)</p>
06	Insulation outside conditioned space is protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. (RA4.4.1)
07	Pipe insulation fits tightly to the pipe. (RA4.4.1)
08	On insulated sections of pipe, no piping is visible due to insulation voids, and all elbows and tees are fully insulated. (RA4.4.1)
09	The recirculation pump is mounted on a vertical section of the return line. CR an automatic air release valve is installed on a riser at least 12 inches in length, on the inlet side of the recirculation pump, no more than 4 feet from the pump. (Section 110.3(c)5A)
10	A check valve is located between the recirculation pump and the water heater. (Section 110.3(c)5B)
11	A hose bibb is installed between the pump and the water heating equipment with an isolation valve between the hose bibb and the water heating equipment. (Section 110.3(c)5C)
12	Isolation valves are installed on both sides of the pump. One of the isolation valves may be the same isolation valve as in item 12 above. (Section 110.3(c)5D)
13	The cold water supply piping and the recirculation loop piping is not connected to the hot water storage tank drain port. (Section 110.3(c)5E)
14	A check valve is installed on the cold water supply line between the hot water system and the next closest tee on the cold water supply. (Section 110.3(c)5F)
15	The hot water distribution system piping from the water heater(s) to the fixtures and appliances takes the most direct path. (RA 4.4.7.1)
16	Installation and operation instructions that provide details of the operation of the pump and controls are available at the jobsite for inspection. (RA 4.4.7.1)
17	More than one circulation loop may be installed. Each loop shall have its own pump and controls. (RA4.4.8, RA 4.4.9, RA 4.4.10)
18	The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.

Registration Number:
 CA Building Energy Standards - 2013 Residential Compliance

Registration Date/Time:

HERS Provider:

March 2015



Green Building: Final Compliance Verification

This form is required prior to issuance of a final Certificate of Completion.

Address: _____

Permit Application Numbers: _____

Verification that the above referenced project has been constructed to comply with the requirements of the San Francisco Green Building Code is based upon one of the following:

- ☐ **Option 1:** This project has submitted for certification under LEED or GreenPoint Rated ("Option 1" on the green building submittal), but is not yet certified. As the Design Professional of Record, I verify that, to the best of my knowledge, the project has been constructed to substantially comply with the green building requirements of San Francisco's building codes.

Signed: _____ Date: _____

Affix professional stamp:

Mandatory follow-up for Option 1: Evidence of LEED or GreenPoint Rated certification.

Staff Use Only: Proof of LEED or GreenPoint Rated certification received:

Sign & Date: _____

- ☐ **Option 2:** This project will not utilize LEED or GreenPoint Rated certification to demonstrate compliance with the San Francisco Green Building Code. As the Green Building Compliance Professional of Record for this project, I verify that to the best of my knowledge the above referenced project has been constructed to substantially comply with the green building requirements of San Francisco's building codes. **[Affix stamp below.]**

Signed: _____ Date: _____

Affix professional stamp: