

**TCAC Regulatory Sustainable Building Method Requirements
Software and Documentation for Development Phases Application through Placed-In-Service**

		Application Phase		
		Analysis Software	Submission Documents	Document Descriptions
New Construction	Low-rise	Residential T-24 compliance***	CF-1R: Certificate of Compliance-Residential	The CF-1R summarizes the minimum energy performance specifications needed for compliance, including the results of the heating and cooling load calculations. The Standards require that a certificate of compliance be included on the plans (CEC approved performance ACM software automatically generates CF-1R forms, which vary in some respects from the prescriptive CF-1R forms).
			MF-1R: Mandatory Measures Checklist	List of Mandatory Measures required for compliance.
			Project Plans	Documentation showing project title, address, developer, and building plans. Building plans should have unit and floor plans, elevation views, dimensions and window callouts.
			Equipment Specifications	Equipment specifications verifying mechanical/HVAC efficiencies (SEER, EER, AFUE, and/or HSPF), duct insulation, window specifications (U-factor and SHGC), and water heater properties (size in gallons, fuel type, and energy factor), if above Title 24 minimums.
New Construction	High-Rise	Residential T-24 compliance***	Project Plans	Documentation showing project title, address, developer, and building plans. Building plans should have unit and floor plans, elevation views, dimensions and window callouts.
			Equipment Specifications	Equipment specifications verifying mechanical/HVAC efficiencies (SEER, EER, AFUE, and/or HSPF), duct insulation, window specifications (U-factor and SHGC), and water heater properties (size in gallons, fuel type, and energy factor), if above Title 24 minimums.
			Perf-1	The Perf-1 summarizes the minimum energy performance specifications needed for compliance, including the results of the heating and cooling load calculations. The Standards require that a certificate of compliance be included on the plans (CEC approved performance ACM software automatically generates Perf-1 forms).
			Other applicable compliance forms	Other compliance forms may be required. Please refer to the Nonresidential Compliance Manual, Appendix A (http://www.energy.ca.gov/2008publications/CEC-400-2008-017/rev1_appendices/NRCM_Appendix_A.pdf)
Rehabs	Low-Rise	Energy Pro/HERS II module	Project Plans	Documentation showing project title, address, developer, and building plans. Building plans should have unit and floor plans, elevation views, dimensions and window callouts.
			Equipment Specifications	Equipment specifications verifying mechanical/HVAC efficiencies (SEER, EER, AFUE, and/or HSPF), duct insulation, window specifications (U-factor and SHGC), and water heater properties (size in gallons, fuel type, and energy factor), if above Title 24 minimums.
			2 CF-1R (Test-in and Proposed), or	CF-1Rs submitted for building in existing state and for proposed improvements.
			CF-1R (Test-in) and ECON-2	Alternatively, a CF-1R for the existing building and ECON-2 showing measure upgrades and improvements can be submitted.
			MF-1R: Mandatory Measures Checklist	List of Mandatory Measures required for compliance.
CalRatePro Report (Audit Report)	Audit report showing existing/test-in and proposed improvement HERS scores obtained through CalCerts.			
Rehabs	High-Rise	Energy Pro (Non-Res Performance) or Energy Pro/GPR HRMF module	Project Plans	Documentation showing project title, address, developer, and building plans. Building plans should have unit and floor plans, elevation views, dimensions and window callouts.
			Equipment Specifications	Equipment specifications verifying mechanical/HVAC efficiencies (SEER, EER, AFUE, and/or HSPF), duct insulation, window specifications (U-factor and SHGC), and water heater properties (size in gallons, fuel type, and energy factor), if above Title 24 minimums.
			2 Perf-1 (Test-in and Proposed), or	Perf-1s submitted for building in existing state and for proposed improvements.
			Perf-1 (Test-in) and ECON-2, or	Alternatively, a Perf-1 for the existing building and ECON-2 showing measure upgrades and improvements can be submitted.
			GreenPoint Rating High-Rise Multifamily Report, or	Obtained through GreenPoint Rated module in EnergyPro that produces an energy point score used to show compliance with the GreenPoint Rated scoring system. The GPR-1 compliance certificate will also be produced.
			Audit Report (HERCC Protocols)	Audit report showing estimated energy consumptions with existing measures and proposed improvements.

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		As-Built/Placed-in-Service Phase		
		Analysis Software	Submission Documents	Document Descriptions
New Construction	Low-rise	Residential T-24 compliance***	CF-1R: Certificate of Compliance-Residential	The CF-1R summarizes the minimum energy performance specifications needed for compliance, including the results of the heating and cooling load calculations. The Standards require that a certificate of compliance be included on the plans. CEC-approved performance ACM software automatically generates CF-1R forms. CF-1R forms should reflect test-out conditions.
			MF-1R: Mandatory Measures Checklist	List of Mandatory Measures required for compliance.
			CF-4R: Certificate of Field Verification and Diagnostic Testing (-ENV, -MECH)	These documents are completed by the HERS rater when field verification and/or diagnostic testing is required. These documents include information about the measurements and tests that were performed. The HERS rater verifies on these forms, that the requirements for compliance credit have been met.
			CF-6R: Installation Certificate (-ENV, -ENV-HERS, -LTG, -MECH, -MECH-HERS)	This is a set of documents completed by different contractors responsible for installing the water heating equipment, windows, ducts, HVAC equipment, measures that affect the building envelope tightness, the lighting system, and the insulation.
			Project Plans	Documentation showing project title, address, developer, and building plans. Building plans should have unit and floor plans, elevation views, dimensions and window callouts. Plan set should also include, Mechanical, Electrical, Plumbing, and Structural plans.
			Equipment Specifications	Equipment specifications verifying mechanical/HVAC efficiencies (SEER, EER, AFUE, and/or HSPF), duct insulation, window specifications (U-factor and SHGC), and water heater properties (size in gallons, fuel type, and energy factor), if above Title 24 minimums.
			Bills of lading for the appliances	Delivery verification of appliances to the project address. Invoices specifying the appliances and the project are also acceptable.
New Construction	High-Rise	Residential T-24 compliance***	Project Plans	Documentation showing project title, address, developer, and building plans. Building plans should have unit and floor plans, elevation views, dimensions and window callouts. Plan set should also include, Mechanical, Electrical, Plumbing, and Structural plans.
			Equipment Specifications	Equipment specifications verifying mechanical/HVAC efficiencies (SEER, EER, AFUE, and/or HSPF), duct insulation, window specifications (U-factor and SHGC), and water heater properties (size in gallons, fuel type, and energy factor), if above Title 24 minimums.
			Perf-1 (Test-out)	The Perf-1 summarizes the minimum energy performance specifications needed for compliance, including the results of the heating and cooling load calculations. The Standards require that a certificate of compliance be included on the plans. CEC approved performance ACM software automatically generates Perf-1 forms.
			Other applicable compliance forms	Depending upon the measures relied upon, other compliance forms may be required. Please refer to the Nonresidential Compliance Manual, Appendix A (http://www.energy.ca.gov/2008publications/CEC-400-2008-017/rev1_appendices/NRCM_Appendix_A.pdf)
			Field verification forms	Utility Program Certificate demonstrating on-site verification of installation or HERS Installation Verification forms ENV-INST (Envelope), MECH-INST (Mechanical), LGT-INST (Lighting), and OTLG-INST (Outdoor Lighting).
			Bills of lading for the appliances	Delivery verification of appliances to the address of the project. Invoices specifying the appliances and the project are also acceptable.
Rehabs	Low-Rise	Energy Pro/HERS II module	Project Plans	Documentation showing project title, address, developer, and building plans. Building plans should have unit and floor plans, elevation views, dimensions and window callouts. Plan set should also include, Mechanical, Electrical, Plumbing, and Structural plans.
			Equipment Specifications	Equipment specifications verifying mechanical/HVAC efficiencies (SEER, EER, AFUE, and/or HSPF), duct insulation, window specifications (U-factor and SHGC), and water heater properties (size in gallons, fuel type, and energy factor), if above Title 24 minimums.
			CF-1R (Test-out)	CF-1Rs submitted for building in test-out condition.
			MF-1R: Mandatory Measures Checklist	List of Mandatory Measures required for compliance.
			CalRatePro Report (Audit Report)	Audit report showing the Test-out HERS score and energy usage obtained through CalCerts.
			CF-4R: Certificate of Field Verification and Diagnostic Testing (-ENV, -MECH)	These documents are completed by the HERS rater when field verification and/or diagnostic testing is required. These documents include information about the measurements and tests that were performed. The HERS rater verifies that the requirements for compliance credit have been met.
			CF-6R: Installation Certificate (-ENV, -ENV-HERS, -LTG, -MECH, -MECH-HERS)	This is a set of documents completed by different contractors responsible for installing the water heating equipment, windows, ducts, HVAC equipment, the measures that affect the building envelope tightness, the lighting system, and the insulation.
Bills of lading for the appliances	Delivery verification of appliances to the address of the project. Invoices specifying the appliances and the project are also acceptable.			

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			Equipment Specifications	Equipment specifications verifying mechanical/HVAC efficiencies (SEER, EER, AFUE, and/or HSPF), duct insulation, window specifications (U-value and SHGC), and water heater properties (size in gallons, fuel type, and energy factor), if above Title 24 minimums.
			Perf-1 (Test-out)	Perf-1s submitted for building in test-out condition.
			Field verification forms	Utility Program Certificate demonstrating on-site verification of installation or HERS Installation Verification forms ENV-INST (Envelope), MECH-INST (Mechanical), LGT-INST (Lighting), and OTLG-INST (Outdoor Lighting).
			GreenPoint Rating High-Rise Multifamily Report, or	Obtained through GreenPoint Rated module in EnergyPro that produces an energy point score used to show compliance with the GreenPoint Rated scoring system. The GPR-1 compliance certificate will also be produced.
			Audit Report (HERCC Protocols)	Audit report showing estimated energy consumption with test-out measures.
		Bills of lading for the appliances	Delivery verification of appliances to the address of the project. Invoices specifying the appliances and the project are also acceptable.	

* Assuming that: Application = Design phase & Placed in Service = Construction /Verification phase

** For Professional Qualification Requirements see separate tab

*** For a list of software approved to perform Code Compliance see: http://www.energy.ca.gov/title24/2008standards/2008_computer_prog_list.html Calculations

**** HERS II software report does not mean a certified HERS II Asset Rating ; HERS Providers cannot generate the HERS Certificate for MF buildings

***** Audit report shall be per MF HERCC protocol or official whole-building performance based program including Utility, Weatherization Assistance Program, Local Government or GreenPoint Rated Existing Home Multifamily

***** For demonstrating compliance with competitive scoring or minimum construction standards at the Application Phase, "bld" or "mp8" files are not needed

Table 2-1 – Certificate of Compliance Forms

Envelope	Mechanical	Lighting	Outdoor Lighting	Sign Lighting
ENV-1C Certificate of Compliance and Field Inspection Checklist	MECH-1C Certificate of Compliance and Field Inspection Checklist	LTG-1C Certificate of Compliance and Field Inspection Checklist	OLTG-1C Certificate of Compliance and Field Inspection Checklist	SLTG-1C Certificate of Compliance (Sign Lighting)
ENV-2C Envelope Component Approach	MECH-2C Air, Water Side Systems, Service Hot Water & Pool Requirements	LTG-2C Lighting Controls Credit Worksheet	OLTG-2C Outdoor Lighting Worksheet	
ENV-3C Overall Envelope TDV Energy Approach	MECH-3C Mechanical Ventilation and Reheat	LTG-3C Indoor Lighting Power Allowance		
ENV-4C Skylight Area Support Worksheet	MECH-4C Fan Power Consumption	LTG-4C Tailored Method Worksheet		
		LTG-5C Line Voltage Track Lighting Worksheet		