ELECTRICAL POWER DISTRIBUTION

CERTIFICATE OF COMPLIANCE

This document is used to demonstrate compliance with mandatory requirements in §130.5 for electrical systems in newly constructed nonresidential and hotel/motel occupancies in low-rise multifamily mixed-use buildings and §160.6 and §160.9 for electrical systems in newly constructed low-rise multifamily occupancies. Additions and alterations to electrical service systems in nonresidential & hotel/motel occupancies in low-rise multifamily mixed-use buildings will also use this document to demonstrate compliance per §141.0(a) or §141.0(b)2P for alterations. For low-rise multifamily addition or alterations compliance will be documented per §180.1(a) or §180.2(b)4Bvii.

The document, along with the electric ready requirements of Section 160.9, applies to the entire building.

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

A. GENERAL INFORMATION

01	Project Location (city)					02	Climate Zone				
						03	Occupancy Types Within Project:				
☐	Office	☐	Retail	☐	Warehouse	☐	Hotel/ Motel	☐	School	☐	Support Areas
☐	Low-Rise Residential Multifamily/ MF Mixed-use < 4 stories (new construction)	☐	Low-Rise Residential Multifamily/ MF Mixed-use < 4 stories (Addition or Alteration)	☐	Healthcare Facilities	☐	Parking Garage				
				☐	Relocatable	☐	All Others	☐	Theater	☐	Sports Arena
☐	Auditorium	☐	Commercial/ Industrial	☐	Grocery Store	☐	Religious Facility	☐	Data Center	☐	Convention Center
☐	Classroom	☐	Library	☐	Gymnasium	☐	Restaurant/ Commercial Kitchen	☐	Financial Institution	☐	Medical Clinic

B. PROJECT SCOPE

This table includes electrical service systems that are within the scope of the permit application.

01	02	03	04	05	06	07
Electrical Service Designation/ Description	Scope of Work[1]	Rating[2] (kVA)	Utility Provided Metering System Exception to §130.5(a)/§160.6(a)[3]	System subject to CA Elec Code Article 517 Exception to §130.5(a)&(b)	Demand Response Controls Where required, demand response controls must be specified which are capable of receiving and automatically responding to at least one standard based messaging protocol which enables demand response after receiving a demand response signal. Sections §120.2/§160.3, §130.1/§160.5 and §130.3/§160.5 and mechanical, indoor lighting, and sign lighting Certificate of Compliance documents will indicate when demand response controls are required.	Provides power to dwelling units/common living areas only in multifamily occupancy
			☐	☐		☐

[1]FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c)/160.6(c), no other requirements from 130.5/160.6 are required.

[2] If common use areas in a multifamily occupancy are submetered, rating is for submeter size serving common use areas.

[3] Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through J.

Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see the applicable Table referenced below.

01		02		03		04		05	06
Service Electrical Metering §130.5(a)/ §160.6(a)	AND	Separation for Monitoring §130.5(b)/ §160.6(b)	AND	Voltage Drop §130.5(c)/ §160.6(c)	AND	Controlled Receptacles §130.5(d)/ §160.6(d)	AND	Electric Ready §160.9	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)	
Yes/No	AND	Yes/No	AND	Yes/No	AND	Yes/No	AND	Yes/No	**COMPLIES, DOES NOT COMPLY, Or COMPLIES with Exceptional Conditions**

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. SERVICE ELECTRICAL METERING

This table includes new or replacement electrical service systems OR equipment to demonstrate compliance with §130.5(a)/§160.6(a). For multifamily occupancies, submetered systems that provide power to common use areas must meet the following metering requirements. Submetered systems providing power to dwelling units do not.

01	02	03				04	05	
Electrical Service Designation/ Description	Rating[1] (kVA)	Required Metering Capabilities per Table 130.5-A				Location of Requirements in Construction Documents	Field Inspector	
		Instantaneous Demand (kW)	Historical Peak Demand (kW)	Tracking kWh for user-defined period	kWh per rate period		Pass	Fail
		☐	☐	☐	☐		☐	☐
		☐	☐	☐	☐		☐	☐

[1]*FOOTNOTES: If common use areas in a multifamily occupancy are submetered, rating is for submeter size serving common use areas.*

G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with §130.5(b)/§160.6(b). Any load types that are not included in the service do not need to be shown. For multifamily occupancies, submetered systems that provide power to dwelling units do not need to meet these separation requirements and therefore load types on those submetered systems also do not need to be shown.

Electrical Service Designation/ Description:						
01	02	03	04	05		
Load Type per Table 130.5-B[1]	Minimum Required Separation of Load per Table 130.5-B	Compliance Method[2]	Location of Requirements in Construction Documents	Field Inspector		
				Pass	Fail	
				☐	☐	

**NOTES If "Other*" is selected under Compliance Method above, please indicate how compliance has been achieved in the space provided below.*

FOOTNOTES: For each separate load type, up to 10% of the connected load may be of any type.

[2] Method 1: Switchboards/ motor control centers/ panelboard loads disaggregated for each load type

Method 2: Switchboards/ motor control centers/ panelboard supply other distribution equipment with loads disaggregated for each load type

Method 3: Branch circuits serve load types individually & provisions for adding future branch circuit monitoring

Method 4: Complete metering system measures and reports loads by type
See Chapter 8 of the Nonresidential Compliance Manual for more detail on Compliance Methods.

H. VOLTAGE DROP

This table includes entirely new or complete replacement electrical power distribution systems, or alterations that add, modify or replace both feeders and branch circuits to demonstrate compliance with §130.5(c)/§160.6(c). For alterations, only the altered circuits must demonstrate compliance per §141.0(b)2Piii/§180.2(b) 4Bviic.

01	02		03	04	05	
Electrical Service Designation/ Description	Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method		Location of Voltage Drop Calculations[1]	Sheet Number for Voltage Drop Calculations in Construction Documents	Field Inspector	
					Pass	Fail
	☐ Voltage drop ≤ 5%	☐ Permitted by CA Elec Code (Exception to §130.5(c))*			☐	☐

**NOTES If "Permitted by CA Elec Code*" is selected under Compliance Method above, please indicate where the exception applies in the space provided below.*

[1] FOOTNOTES: Voltage drop calculations may be attached to the permit application outside the construction documents if allowed by the Authority Having Jurisdiction. Select "attached" if applicable. If calculations will be the responsibility of the installing contractor, select "Contractor Responsible".

I. CIRCUIT CONTROLS FOR 120-VOLT RECEPTACLES AND CONTROLLED RECEPTACLES

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with §130.5(d)/§160.6(d). Both controlled and uncontrolled receptacles must be provided in office areas, lobbies, conference rooms, kitchen areas in office spaces, copy rooms and hotel/motel guest rooms.

01	02	03	04	05	06	07	
Room Name or Description	Location/ Type of Controlled Receptacles[1, 2]	Shut-Off Controls	Demand Responsive Controls	Permanent Marking Will be Used	Location of Requirements in Construction Documents	Field Inspector	
						Pass	Fail
				☐		☐	☐

**NOTES: If "Other*" is selected under Shut-Off Controls above, please indicate how compliance has been achieved in the space provided below.*

[1] FOOTNOTES: Receptacles dedicated to refrigerators and water dispensers in kitchens, located a minimum of 6ft above the floor specifically for clocks, network copiers, fax machines, A/V and data equipment other than personal computers in copy rooms, circuits rated more than 20 Amps, or connected to a UPS that are intended to be in continuous use and are marked to differentiate them from other receptacles or circuits are excepted from the requirements.

[2] Plug-in strips and other plug-in devices shall not be used to comply with the requirements of section 130.5(d)

J. ELECTRIC READY BUILDINGS

This table includes electrical system requirements that must be met when using gas or propane heating, cooking or clothes drying in multifamily occupancies to demonstrate compliance with §160.9.

01	Systems serving multifamily occupancy that use gas or propane include:	☐ Furnaces serving individual dwelling units	☐ Cooktops serving individual dwelling units	☐ Clothes dryers serving individual dwelling units	☐ Clothes dryers in common areas	☐ Gas/propane water heater serving individual dwelling units	☐ Gas/propane water heater serving multiple dwelling units	☐ None of these

Gas/ Propane Furnaces Serving Individual Dwelling Units (Heat Pump Space Heater Ready)

	Yes	Requirement
02	☐	A dedicated 240 volt branch circuit shall be installed within 3 feet from the furnace and accessible to the furnace with no obstructions. The branch circuit shall be rated at 30 amps minimum. The blank cover shall be identified as “240V ready”. All electrical components shall be installed in accordance with the California Electrical Code.
03	☐	The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future heat pump space heater installation. The reserved space shall be permanently marked as “For Future 240V use”.

Gas/ Propane Cooktops Serving Individual Dwelling Units

	Yes	Requirement
04	☐	A dedicated 240 volt branch circuit shall be installed within 3 feet from the cooktop and accessible to the cooktop with no obstructions. The branch circuit shall be rated at 50 amps minimum. The blank cover shall be identified as “240V ready”. All electrical components shall be installed in accordance with the California Electrical Code.
05	☐	The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future electric cooktop installation. The reserved space shall be permanently marked as “For Future 240V use”.

Gas/ Propane Clothes Dryers Serving Individual Dwelling Units

	Yes	Requirement
06	☐	A dedicated 240 volt branch circuit shall be installed within 3 feet from the clothes dryer and accessible to the clothes dryer with no obstructions. The branch circuit shall be rated at 30 amps minimum. The blank cover shall be identified as “240V ready”. All electrical components shall be installed in accordance with the California Electrical Code.
07	☐	The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future electric clothes dryer installation. The reserved space shall be permanently marked as “For Future 240V use”.

Gas/ Propane Clothes Dryers In Common Areas

	Yes	Requirement
08	☐	Conductors or raceway shall be installed with termination points at the main electrical panel, via subpanels panels if applicable, to a location no more than 3 feet from each gas outlet or a designated location of future electric replacement equipment. Both ends of the conductors or raceway shall be labelled "Future 240V Use." Capacity shall be one of the following: - 24 amps at 208/240 volts per clothes dryer; - 2.6 kVA for each 10,000 Btu per hour of rated gas input or gas pipe capacity; or - The electrical power required to provide equivalent functionality of the gas-powered equipment as calculated by the responsible person.

Gas/Propane Water Heaters Serving Individual Dwelling Units

	Yes	Requirement
09	☐	A dedicated 125 volt, 20 amp electrical receptacle that is connected to the electric panel with a 120/240 volt 3 conductor branch circuit rated to 30 amps minimum, within 3 feet from the water heater and accessible to the water heater with no obstructions. In addition, all the following: - Both ends of the unused conductor shall be labeled with the word "spare" and be electrically isolated; and - A reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit in A above and labeled with the words "Future 240V Use"
	☐	A condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance
	☐	The construction drawings shall designate a space at least 39 inches by 39 inches and 96 inches tall for the future location of heat pump water heater
	☐	A ventilation method meeting one of the following: - The designated space for the future heat pump water heater shall have a minimum volume of 700 cubic feet; or - The designated space for the future heat pump water heater shall vent to a communicating space in the same pressure boundary via permanent openings with a minimum total NFA of 250 square inches., so that the total combined volume connected via permanent openings is 700 cubic feet or larger. The permanent openings shall be: - Fully louvered doors with fixed louvers; or - Two permanent fixed openings located within 12 inches from the enclosure top and bottom; - The designated space for the future heat pump water heater shall include two 8 inches capped ducts, venting to the building exterior: - All ducts, connections, and building penetrations shall be sealed. - Exhaust air ducts and all ducts which cross pressure boundaries shall be insulated to a minimum insulation level of R-6. - Airflow from termination points shall be diverted away from each other.

Gas/Propane Water Heaters Serving Multiple Dwelling Units

	Yes	Requirement
10	☐	Space shall be reserved for a Heat Pump. The minimum space reserved shall include space for service clearances and air flow clearances and shall meet one of the following: - The space reserved shall be the space required for a heat pump water heater system that meets the total building hot water demand as calculated and documented by the responsible person associated with the project; or - The space reserved shall meet the requirements specified in Joint Appendix JA15.2.1.
	☐	Space shall be reserved for Tanks. The minimum space reserved shall include space for service clearances and shall meet one of the following: - The space reserved shall be the space required for a heat pump water heater system that meets the total building hot water demand as calculated and documented by the responsible person associated with the project; or - The space reserved shall meet the requirements specified in Joint Appendix JA15.2.2.
	☐	Ventilation shall be provided by meeting one of the following: - Physical space reserved for the heat pump shall be located outside; or - A pathway shall be reserved for future routing of supply and exhaust air via ductwork from the reserved heat pump location to a suitable outdoor location. Penetrations through the building envelope for louvers and ducts shall be planned and identified for future use. The reserved pathway and penetrations through the building envelope shall be sized to meet one of the following: - The reserved pathway and penetrations shall be sized to serve a heat pump water heater system that meets the total building hot water demand as calculated and documented by the responsible person associated with the project. - The reserved pathway and penetrations shall be sized to meet the requirements specified in Joint Appendix JA15.2.3.
	☐	Condensate drainage piping. An approved receptacle that is sized per the California Plumbing Code for condensate drainage shall be installed within 3 feet of the reserved heat pump location, or piping shall be installed from within 3 feet of the reserved heat pump location to an approved discharge location that is sized in accordance with the California Plumbing Code, and meet one of the following: - Condensate drainage shall be sized to serve a heat pump water heater system that meets the total building hot water demand as calculated and documented by the responsible person associated with the project. - Condensate drainage piping shall be sized to meet the requirements specified in Joint Appendix JA15.2.4.
	☐	Physical space shall be reserved on the bus system of the main switchboard or on the bus system of a distribution board to serve the future heat pump water heater system including the heat pump and temperature maintenance tanks. In addition, the physical space reserved shall be capable of providing adequate power to the future heat pump water heater in accordance with the following: - Heat Pump. Meet one of the following: - The electrical power required to power a heat pump water heater system heat pump that meets the total building hot water demand as calculated and documented by the responsible person associated with the project. - The electrical power required that meets the requirements specified for the heat pump in Joint Appendix JA15.2.5. - Temperature Maintenance Tank. Meet one of the following: - The electrical power required to power a heat pump water heater system temperature maintenance tank that meets the total building hot water demand as calculated and documented by the responsible person associated with the project. - The electrical power required that meets the requirements specified for the temperature maintenance tank in Joint Appendix JA15.2.5.

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online.

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
❍	❍	NRCI-ELC-01-E - Must be submitted for all buildings.	☐	☐

L. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to electrical power distribution requirements.

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
Company:	Signature Date:
Address:	CEA/AEA/ECC 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 understand that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building and shall be made available to the enforcement agency for all applicable inspections. I will take the necessary steps to fulfill this requirement.
6. 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. I will take the necessary steps to fulfill this requirement.

Responsible Designer Name:	Responsible Designer Signature:
Company :	Date Signed:
Responsible Person Scope:	
Address:	License:
City/State/Zip:	Phone:

A. General Information

1. Enter the City the project is located in.
2. Climate Zone: Select from dropdown.
3. Select the applicable Occupancy Types within the Project.

B. Project Scope

1. Enter the Electrical Service Designation/Description.
2. Scope of Work: Select from dropdown.
3. Enter the kVA Rating.
4. Check if the Utility Provided Metering System meets Exception to §130.5(a)/§160.6(a)3.
5. Check if the System is subject to CA Elec Code Article 517 Exception to §130.5(a)&(b).
6. Demand Response Controls static text.
7. Check if power is provided to dwelling units/common living areas only in a multifamily occupancy.

C. Compliance Results

1. Results in this table are automatically calculated from data input and calculations in Tables F through J.

D. Exceptional Conditions

1. This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. Additional Remarks

1. Enter any notes or comments for the AHJ.

F. Service Electrical Metering

1. This field is filled out automatically.
2. This field is filled out automatically
3. Instantaneous Demand checkbox is always checked
   Historical Peak Demand checkbox is checked automatically.
   Tracking kWh for user-defined period checkbox is always checked.
   kWh per rate period is checked automatically.
4. Enter the Location of Requirements in Construction Documents.
5. This is a Pass or Fail checkbox for the field inspector.

G. Separation of Electrical Circuits for Energy Monitoring

1. Load Type per Table 130.5-B: Select from dropdown.
2. This field is filled out automatically.
3. Compliance Method: Select from dropdown.
4. Enter the Location of Requirements in the Construction Documents
5. This is a Pass or Fail checkbox for the field inspector.

H. Voltage Drop

1. This field is filled out automatically.
2. Select the Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method.
3. Location of Voltage Drop Calculation: Select from dropdown.
4. Enter the Sheet Number for Voltage Drop Calculation in Construction Documents.
5. This is a Pass or Fail checkbox for the field inspector.

I. Circuit Controls for 120-Volt Receptacles and Controlled Receptacles

1. Enter the Room Name or Description.
2. Location/Type of Controlled Receptacles: Select from dropdown.
3. Shut-Off Controls: Select from dropdown.
4. Demand Responsive Controls: Select from dropdown.
5. Check if a Permanent Durable Marking Will be Used
6. Enter the Location of Requirements in the Construction Documents
7. This is a Pass or Fail checkbox for the field inspector.

J. Electric Ready Buildings

1. Select the applicable systems serving multifamily occupancy that use gas or propane.

2-8. Check Yes to verify your project meets the requirements.

K. Declaration of Required Certificates of Installation

1. Selections have been automatically made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks.

L. Declaration of Required Certificates of Acceptance

1. Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks.

Documentation Declaration Statements

1. The person who prepared the NRCC will sign and complete the fields for their name, company (if applicable), address, phone number, certification information (if applicable), date and signature.
2. The person who is assuming responsibility for the project being built to comply with Title 24, Part 6, will complete the fields for their name, company (if applicable), address, phone number, license number (if applicable), date and signature.