CITY OF DIXON
600 EAST A ST.
DIXON, CA 95620-3697
PHONE (707) 678-7000
Building Info Building@cityofdixonca.gov

Non-Residential PV Submittal Checklist

DESIGN CRITERIA:

- Seismic Zone D or provide analysis and calculation from California Registered Engineer
- Basic velocity 110 mph, 3 second gust, exposure C or provide wind speed calculations from California Registered Engineer
- Based on the 2025 California Electrical Code (CEC) Article 690
- Climate Zone 12

DRAWING CRITERIA:

- Drawing sizes shall be a minimum of 24" x 36" inches and all pages shall be the same size. Plans must be clear and legible; non-legible plans **will not be accepted**. Scale shall be ¼" inch per foot for structural and architectural; 1" inch = 20 feet for site plans.
- To submit please create an account or enter your log-in at the **Dixon Civic Access Portal** webpage located here. City of Dixon, CA
- Here you will be required to enter **the Location, Permit Type-Photovoltaic (Non-Residential), Work Cass-New, Additional Info, Contacts and Required Files.**
- **Plans must be wet-signed by the preparer on each page. Architects/Engineers must affix their seal and wet-sign (cover sheet of supporting documents to be wet-signed).**
- Two complete stapled plan sets unless submitted through Dixon Civic Access Portal. DCAP

PLANS PREPARED BY:

- California Registered Architect, California Registered Engineer, Owner, Licensed General, Electrical, Solar Contractor
- Electrical sheets must be designed and stamped by **California Licensed Electrical Engineer**
- Structural Plans Included – Stamped and Signed (original) by a California Registered Engineer

CONTENTS OF PACKET:

- Photovoltaic Checklist (2 pages - **complete and submit with permit**) **Note: all forms must be signed or initialed (as indicated) by the appropriately authorized party.**
- Sample One-Line Diagram for PV System including derating load calculations
- Sample Site Diagram (**All roof dimensions**) CFC 1205.2.1
- Solar Panel Dead Weight Loading Calculation (**complete and submit with permit**)
- City of Dixon Electrical Load Worksheet (**complete and submit with permit**)
- Verification of Wire Size for PV System Calculation form (**complete and submit with permit**)
- CEC Table 310.16 included for reference
- PV Roof Clearance drawing

If you have any questions regarding your PV system permit, please call the building department at (707) 678-7005 opt 2 or email Building Division buildingdivision@cityofdixonca.gov

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Non-Residential Photovoltaic Checklist

Based on the 2025 California Building Code (CBC) Chapter 15, 2025 California Electrical Code (CEC) Article 690 and 2025 California Fire Code Section 1205

Non-residential PV system shall be installed in accordance with the current adopted edition of the CEC Article 690, CFC 1205, CBC Chapter 15 and other applicable articles or codes adopted by this jurisdiction.

☐ **Simple plot plan showing:**

* Lot lines
* Structure locations
* Main service panel location
* PV module array configuration shown on a roof layout (or lot if ground mounted system)
* Percentage (%) of coverage of roof area (Review by the fire department is required)
* Distance from ridge to array(s) - (Subject to Fire Code Official)
* Distance from valley/ hip to array(s) - (Subject to Fire Code Official)
* PV equipment locations, Solar arrays, DC combiner boxes, conduit and conductor location,
* Inverter, AC combiner box, AC disconnect
* Plan & Elevation View Diagrams

☐ **Roof Information (for roof mounted systems):**

* Type of roof structure and slope. If rafters, provide size and spacing of existing roof framing members.
* Existing roofing material

☐ **PV Equipment Manufacturer's Specifications:** Provide cut sheets on all components including but not limited to those shown below; including make, model, listing, size, weight, etc. *Highlight project specific information on the cut sheets.*

* PV modules UL 1703 listed (R324.3.1)
* Inverter with GFCI & AFCI protection
* Mounting System (if using substitution parts to any listed/certified system, or mixing components of different mounting systems, additional engineering shall be required addressing the withdrawal and lateral capacities).
* Disconnects
* Combiner Box (if used) AC and DC Combiner boxes.

☐ **Inverter:**

* Model number
* Integrated disconnect – Equipped with rapid shutdown.
* A visible external A/C disconnect within 5' of the main service panel.

☐ **Mounting System for Panel Installation:** *Highlight project specific information on the cut sheets*

* Indicate the style, diameter, length of embedment of bolts into framing members and location of attachments.
* Indicate number of bolts per panel.
* Provide mounting details and certified engineering or listed mounting installation.
* Complete "Solar Panel Dead Weight Loading Calculation" form.
* If ground mounted, provide details for the foundation.

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☐ Photovoltaic Modules:

* Open-circuit voltage (Voc) from listed cut sheet
* Maximum system voltage from listed cut sheet
* Short-circuit current (Isc) from listed cut sheet
* Maximum fuse rating from listed cut sheet
* Maximum power- panel wattage from listed cut sheet

☐ Electrical Schematic:

* System inter-tie with utility company or stand alone
* Indicate the system KW rating
* Indicate if the system has battery backup
* Single line drawing of electrical installation which includes:
* Array - detailed
* PV power source short circuit rating
* Conductor size and type
* Conductor locations and runs
* Equipment bonding points and sizes – Per *CEC 250.122
* Inverter location
* AC & DC disconnect locations – Per *CEC 690.13
* Batteries; number, size and locations (if applicable)
* Point of connect to existing main electrical service panel
* Size and number of electrical service meters – Per *CEC 705.12 (B)(3)(2)
* Location of required signage
* Complete attached 'verification of wire sizes' sheet
* Provide Rapid Shutdown of PV per 690.12

☐ Proper Signage and Labeling: Signage

☐ Indicate system type below and show location of each required sign on one line diagram (see electrical):

- ☐ **SINGLE PV ARRAY SYSTEM**
- ☐ **PV ARRAY SYSTEM W/ BATTERY BACKUP**
- ☐ **MULTIPLE PV ARRAY SYSTEMS**

***CEC 690.13(E) – Type of Disconnect.** The PV system disconnecting shall simultaneously disconnect the PV system conductors that are not solidly grounded from all conductors of other wiring system. The PV system disconnecting means or its remote operating device or the enclosure providing access to the disconnecting means shall be capable of being locked in accordance with 110.25. The PV system disconnecting means shall be on of the followingl:

(1) A manually operable switch or circuit breaker
(2) A connector meeting the requirements of 690.33(D)(1) or (D)(3)
(3) A Pull-out switch with the required interrupting rating
(4) A remote-controlled switch or circuit breaker that is aoperable locally and opens automatically when control power is interrupted
(5) A device listed or approved for the intended application

***CEC 250.122 – Size of Equipment Grounding Conductors**. Copper, aluminum, or copper-clad aluminum equipment grounding conductors of the wire type shall not be smaller than shown in Table 250.122 but shall not be required to be larger than the circuit conductors supplying the equipment.

***CEC 690.46 – Grounding for AC/DC Systems.** #6, in conduit or protected from damage

***CEC 690.13 (E) – Grouping.** The photovoltaic system disconnecting means shall be grouped with other disconnecting means for the system to comply with 690.14(C)(4). A Photovoltaic disconnecting means shall not be required at the photovoltaic module or array location.