TOWN OF FAIRFAX
STAFF REPORT

To: **Planning Commission**

From: **Jim Moore, Director of Planning & Building Services**

Date: **July 16, 2015**

Subject: **Consideration of an Ordinance to Streamline Review and Approval of Small Residential Rooftop Solar Energy Systems, as Required by AB 2188**

BACKGROUND

The state of California has long encouraged the installation and use of solar energy systems by both home and business owners. At local levels, however, these systems have sometimes been met with more resistance, as aesthetic concerns, slow permitting processes, protracted inspection requirements, and nonplussed homeowners associations have slowed the approval rate for such projects in certain communities. The state has responded to these countervailing forces by enacting a series of laws to diminish the barriers faced by solar applicants. In 2014, the latest such effort, Assembly Bill 2188, was signed into law, imposing a new requirement on towns and cities to adopt a solar energy permitting ordinance designed to streamline the approval of small, residential rooftop solar energy systems. The draft ordinance before you tonight represents Fairfax's proposed fulfillment of that requirement, which must be met by the end of Sept. 2015.

DISCUSSION

As with many environmental issues, California has been at the forefront of solar energy production since the concept first took hold. As early as 1978, the California Legislature was passing laws creating a legal structure for solar access and creating newly-recognized rights of homeowners to install and maintain their continued use of solar energy systems.

Not everyone was as enamored of this technology, however. In some towns and cities, community concerns over the unsightliness of certain solar equipment made approval of such systems highly unpopular. Governmental barriers to solar approval have been noted in many California municipalities, in the form of long permitting processes for relatively simple project proposals, extensive inspection requirements, and high permitting fees, among other things. In addition, some homeowners associations have discouraged or at times even prohibited the installation of solar energy systems in their covenants, conditions, and restrictions (CC&Rs), so that even where the permitting authority was not hostile to the idea, realization of solar use was not available.

The state has pushed back on local resistance to solar by passing, over the last forty years, a series of laws facilitating solar energy system installation. Assembly Bill 2188 (Muratsuchi) was introduced in an effort to make it even easier for homeowners to gain

AGENDA ITEM # 7

approval of small, residential rooftop solar energy systems. Under AB 2188, Fairfax and all other towns, cities, and counties in the state must:

- Adopt an ordinance that creates an expedited, streamlined permitting process for small residential rooftop solar energy systems per Government Code Section 65850.5(a) on or before September 30, 2015;
- Adopt a checklist of all requirements with which an applicant must comply for a small residential rooftop solar energy system to be eligible for expedited review; and
- Create an expedited, streamlined permitting process and checklist that substantially conform to the recommendations for expedited permitting, including the checklist and standard plan contained in the most current version of the California Solar Permitting Guidebook adopted by the Governor's Office of Planning and Research (OPR)

For the purposes of fulfilling the requirements of the statute, a 'small residential rooftop solar energy system' is one that is all of the following:

- A solar energy system that is no larger than 10 kilowatts alternating current nameplate rating or 30 kilowatts thermal;
- A solar energy system that conforms to all applicable state fire, structural, electrical, and other building codes as adopted or amended by the Town and Civil Code § 714(c)(3);
- A solar energy system that is installed on a single or duplex family dwelling; and
- A solar panel or module array that does not exceed the maximum legal building height set by the Town.

The draft ordinance accompanying this staff report (**Attachment 1 to Exhibit A**) meets these requirements, and also sets forth a review and approval process for solar energy systems that do not meet the narrow definition of 'small residential rooftop solar energy system.' The Town currently waives solar energy system building permit fees; and this ordinance does not affect that policy decision.

RECOMMENDATION

1) Conduct the public hearing
2) Adopt a resolution recommending that the Town Council adopt Ordinance No. 15-XX

FISCAL IMPACTS

N/A

ATTACHMENTS

Attachment 1 - Resolution No. 15-24
Attachment 2 - Draft Ordinance No. 15-XX
    Exhibit A - Sample handout
    Exhibit B - Sample checklist
    Exhibit C - Sample standard plans

RESOLUTION NO. 15-24

A RESOLUTION OF THE PLANNING COMMISSION OF THE TOWN OF FAIRFAX RECOMMENDING THE TOWN COUNCIL ADOPT ARTICLE II TO CHAPTER 17.138 OF THE TOWN MUNICIPAL CODE ('SOLAR AND RENEWABLE ENERGY SYSTEMS') TO PROVIDE A PERMITTING PROCESS FOR SOLAR ENERGY SYSTEMS

WHEREAS, on September 21, 2014, Governor Brown signed Assembly Bill 2188, which, among other things, requires by no later than September 30, 2015, that towns and cities adopt local ordinances creating expedited, streamlined permitting processes for the review of applications for small, residential rooftop solar energy systems; and

WHEREAS, independent of state requirements, the Town of Fairfax has a long-standing commitment to the implementation of alternative energy systems; to wit, the Town General Plan includes Conservation Element Objective CON-1.2 ("[r]educe consumption of non-renewable energy resources and reduce GHG emissions by the residents and Town of Fairfax") and Recommended Action EN-10 of the Town's Climate Action Plan likewise suggests that the Town "adopt policies and incentives to encourage residents and businesses to install solar and renewable energy systems, including solar panels to generate electricity and solar water heating systems, and to construct solar ready buildings"; and

WHEREAS, City staff has prepared, and the Planning Commission has reviewed, a draft ordinance to implement AB 2188 and provide a permitting process for solar energy systems generally (a true and correct copy of said ordinance is attached hereto and incorporated herein as **Attachment 1**).

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of the Town of Fairfax as follows:

SECTION 1. The recitals set forth above are adopted as further findings of the Planning Commission.

SECTION 2. The Planning Commission has reviewed the draft ordinance attached hereto as **Attachment 1** and finds that it is consistent with the Town General Plan, specifically, with Conservation Element Objective CON-1.2, as required by Government Code Section 65860(a).

SECTION 3. The Planning Commission hereby recommends that the Town Council adopt **Attachment 1** hereto as a new Article II to Chapter 17.138 of the Town Municipal Code ('Solar and Renewable Energy Systems') in order to provide a permitting process for solar energy systems and comply with AB 2188 (2014).

The forgoing Resolution was duly passed and adopted at a regular meeting of the Planning Commission of the Town of Fairfax held in said Town on the 16th day of July 2015 by the following vote, to wit:

AYES:
NOES:

ATTACHMENT 1

ABSENT:
ABSTAIN:

_____
Philip Green, Chair

Attest:

_____
Jim Moore, Secretary

ORDINANCE NO. ___

AN ORDINANCE OF THE TOWN OF FAIRFAX ADDING ARTICLE II TO CHAPTER 17.138 OF THE TOWN MUNICIPAL CODE ('SOLAR AND RENEWABLE ENERGY SYSTEMS') TO PROVIDE A PERMITTING PROCESS FOR SOLAR ENERGY SYSTEMS

WHEREAS, the Town Council of the Town of Fairfax seeks to implement AB 2188 (Chapter 521, Statutes 2014), which requires, by no later than September 30, 2015, that towns and cities adopt local ordinances creating an expedited, streamlined permitting process for review of applications for small residential rooftop solar energy systems; and

WHEREAS, the Town Council wishes to advance the use of solar energy by its citizens, businesses and industries; and

WHEREAS, the Town Council seeks to support the climate action goals set by the State; and

WHEREAS, the Town Council wishes to implement certain climate action policies set by the Town General Plan, including Conservation Element Objective CON-1.2 ("[r]educe consumption of non-renewable energy resources and reduce GHG emissions by the residents and Town of Fairfax") and the Town's Climate Action Plan, Recommended Action EN-10 of which recommends that the Town "adopt policies and incentives to encourage residents and businesses to install solar and renewable energy systems, including solar panels to generate electricity and solar water heating systems, and to construct solar ready buildings"; and

WHEREAS, solar energy creates local jobs and economic opportunity; and

WHEREAS, the Town Council recognizes that rooftop solar energy provides reliable energy and pricing for its residents and businesses.

NOW, THEREFORE, the Town Council of the Town of Fairfax does ordain as follows:

SECTION 1: Fairfax Town Code, Title 17 ('Zoning'), Chapter 17.138 ('Regulations Applying in Multiple Districts') is hereby amended to add a new Article II ('Solar and Renewable Energy Systems') to read as follows:

"ARTICLE II. SOLAR AND RENEWABLE ENERGY SYSTEMS

§ 17.138.200 PURPOSE

The purpose of this article is to codify the procedures for reviewing applications for solar and renewable energy systems in compliance with California state law and the Town's governing documents.

§ 17.138.210 DEFINITIONS

ATTACHMENT 2

For the purpose of this article, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

DIRECTOR. The Town's Director of Planning and Building Services.

ELECTRONIC SUBMITTAL. The submission of materials via electronic mail.

SMALL RESIDENTIAL ROOFTOP SOLAR ENERGY SYSTEM. In accordance with California Government Code § 65850.5, a "small residential rooftop solar energy system" is a solar energy system that meets all of the following:

(1) Is no larger than 10 kilowatts alternating current nameplate rating or 30 kilowatts thermal;
(2) Conforms to all applicable state fire, structural, electrical, and other building codes as adopted or amended by the Town, and all state and Town health and safety standards;
(3) Conforms to all applicable safety and performance standards established by the California Electrical Code, the Institute of Electrical and Electronics Engineers, and accredited testing laboratories such as Underwriters Laboratories and, where applicable, rules of the Public Utilities Commission regarding safety and reliability;
(4) Is installed on a single or duplex family dwelling; and
(5) The panel or module array does not exceed the maximum legal building height as defined by the Town.

SOLAR ENERGY SYSTEM. As defined in paragraphs (1) and (2) of subdivision (a) of Section 801.5 of the Civil Code, as such section or subdivision may be amended, renumbered, or redesignated from time to time.

SPECIFIC, ADVERSE IMPACT. A significant, quantifiable, direct, and unavoidable impact, based on objective, identified, and written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete.

§ 17.138.220 SOLAR ENERGY SYSTEMS

(A) *Applicability and Purpose.* This Section applies to the permitting of solar energy systems in the Town, except those that qualify as small residential rooftop solar energy systems, which shall be governed by Section 17.138.230. The purpose of this Section is to codify the review and permitting of solar energy systems in conformance with California Government Code § 65850.5, as it may be amended from time to time.

(B) *Review Process.* A building permit is required for the installation of any solar energy system within the Town. A use permit may be required in some circumstances, as set forth in Section 17.138.220(D) below.

(C) *Application Review.* The Town shall administratively review applications for solar energy systems. Review shall be limited to whether the proposed system meets all health and safety requirements of the Town, the state, and the federal government. The Town requirements shall be limited to those standards and regulations necessary to ensure that the solar energy system

will not have a specific adverse impact upon the public health or safety. However, if the building official makes a finding, based on substantial evidence, that the solar energy system could have a specific, adverse impact upon the public health or safety, the Town may require the applicant to apply for a use permit.

(D) *Use Permit.*

(1) Notwithstanding any other provision of the Fairfax Town Code to the contrary, the Building Official is authorized to issue use permits for solar energy systems. A public hearing on the application for the use permit shall be held and notice of the same shall be provided as set forth in Section 17.032.050 of the Town Code.

(2) If a use permit is required, the Building Official may deny an application for the use permit only if the Building Official makes written findings, based upon substantial evidence in the record, that the proposed installation would have a specific, adverse impact upon public health or safety and there is no feasible method to satisfactorily mitigate or avoid, as defined, the adverse impact. Such findings shall include the basis for the rejection of the potential feasible alternative for preventing the adverse impact. Any such decision may be appealed to the Planning Commission.

(3) Any condition imposed on an application shall be designed to mitigate the specific, adverse impact upon health and safety at the lowest possible cost.

(4) "A feasible method to satisfactorily mitigate or avoid the specific, adverse impact" includes, but is not limited to, any cost-effective method, condition, or mitigation imposed by the Town on another similarly situated application in a prior successful application for a permit. The Town shall use its best efforts to ensure that the selected method, condition, or mitigation does not significantly increase the cost of the system or decrease its efficiency or specified performance in excess of the following:

(a) For solar domestic water heating Systems or solar swimming pool heating systems: an amount exceeding 10 percent of the cost of the system, but in no case more than one thousand dollars ($1,000), or decreasing the efficiency of the solar energy system by an amount exceeding 10 percent, as originally specified and proposed.

(b) For photovoltaic systems: an amount not to exceed one thousand dollars ($1,000) over the system cost as originally specified and proposed, or a decrease in system efficiency of an amount exceeding 10 percent as originally specified and proposed.

§ 17.138.230 SMALL RESIDENTIAL ROOFTOP SOLAR SYSTEMS

(A) *Applicability and Purpose.* This Section applies to the permitting of all small residential rooftop solar energy systems in the Town. The purpose of this Section is to create an expedited, streamlined solar permitting process that complies with the Solar Rights Act, as amended by AB 2188 (Chapter 521, Statutes 2014), to achieve timely and cost-effective installations of small residential rooftop solar energy systems. This Section encourages the use of small residential rooftop solar energy systems by removing unreasonable barriers, minimizing costs to property owners and the Town, and expanding the ability of property owners to install small rooftop solar energy systems. This Section allows the Town to achieve these goals while protecting the public health and safety.

(B) *Small Residential Rooftop Solar System Requirements.* A solar energy system that qualifies as a small residential rooftop solar energy system, as defined in this Article, shall be processed in accordance with the terms of this Section 17.138.230.

(1) A small residential rooftop solar energy system must meet applicable health and safety standards and requirements imposed by the state and the Town, local fire department or district.

(2) The Town shall, prior to September 30, 2015, adopt an administrative, nondiscretionary expedited review process for small residential rooftop solar energy systems, which shall include standard plan(s) and checklist(s). The checklist(s) shall set forth all requirements with which small residential rooftop solar energy systems must comply with to be eligible for expedited review.

(3) The small residential rooftop solar system permit process, standard plan(s), and checklist(s) shall substantially conform to recommendations for expedited permitting, including the checklist and standard plans contained in the most current version of the *California Solar Permitting Guidebook* adopted by the Governor's Office of Planning and Research.

(C) *Applicant Obligations.* Prior to submitting an application, the applicant shall:

(1) Verify, to the applicant's reasonable satisfaction, through the use of standard engineering evaluation techniques that the support structure for the small residential rooftop solar energy system is stable and adequate to transfer all wind, seismic, and dead and live loads associated with the system to the building foundation; and

(2) At the applicant's cost, verify to the applicant's reasonable satisfaction, using standard electrical inspection techniques that the existing electrical system including existing line, load, ground and bonding wiring as well as main panel and subpanel sizes are adequately sized, based on the existing electrical system's current use, to carry all new photovoltaic electrical loads.

(D) *Electronic Processing.*

(1) All documents required for the submission of an expedited small residential rooftop solar energy system application shall be made available on a publicly accessible Town website.

(2) Electronic submittal of the required permit application and documents by electronic means shall be made available to all small residential rooftop solar energy system permit applicants. The Town's website must specify the permitted method of electronic document submission.

(3) An applicant's electronic signature shall be accepted on all forms, applications, and other documents in lieu of a wet signature.

(E) *Application Review.*

(1) An application that Town staff determines satisfies the information requirements contained in the Town's checklist(s) for expedited small residential rooftop solar system processing, including complete supporting documents, shall be deemed complete.

(2) If an application is deemed incomplete, a written correction notice detailing all deficiencies in the application and any additional information or documentation required

to be eligible for expedited permit issuance shall be sent to the applicant for resubmission.

(3) After Town staff deems an application complete, Town staff shall review the application to determine whether the application meets local, state, and federal health and safety requirements.

(4) Unless the Building Official determines a use permit is warranted, Town staff shall issue a building permit or other nondiscretionary permit the same day for over-the-counter applications or within one to three business days for electronic applications after receipt of a complete application that meets the requirements of the approved checklist, standard plan and this Article.

(5) The Building Official may require an applicant to apply for a use permit if the Building Official finds, based on substantial evidence, that the applicant's proposed solar energy system could have a specific, adverse impact upon the public health and safety.

(a) If a use permit is deemed necessary, the process set forth in Section 17.138.220(D) shall apply.

(b) Any determination that a use permit is required because of a specific, adverse impact upon the public health and safety may be appealed to the Planning Commission.

(6) The Town shall not condition approval of an application on the approval of an association, as defined in California Civil Code Section 4080.

(F) *Inspections.*

(1) Only one inspection shall be required and performed by the Building Department for small residential rooftop solar energy systems eligible for expedited review, unless the system fails such inspection.

(2) The inspection shall be done in a timely manner.

(3) If a small residential rooftop solar energy system fails inspection, a subsequent inspection is authorized but need not conform to the requirements of this Article.

SECTION 2: The Town hereby adopts Exhibit "A," which is attached hereto and incorporated herein, and which contains the standard plan(s) and checklist(s) of all requirements with which small residential rooftop solar energy systems shall comply to be eligible for expedited review. The Town Council may amend the standard plan(s) and checklist(s) by resolution.

SECTION 3: Fairfax Town Code, Title 17 ('Zoning'), Chapter 17.060 ("Ridgeline Development"), Section 17.060.050(B)(8)(b) is amended to read as follows:

> "Alternative energy sources, not including solar energy systems, may be approved where their impacts are minimized. Solar energy systems shall be subject to the review and approval procedures set forth in Article II of Chapter 17.138 of this Code. This provision supersedes § 17.044.020 of this title relating to public utilities."

SECTION 4: If any section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of the ordinance. The Town Council hereby declares that it would have passed this Ordinance and each section,

subsection, sentence, clause, and phrase thereof, irrespective of the fact that anyone or more sections, subsections, sentences, clauses, or phrases be declared invalid or unconstitutional.

SECTION 5: This Ordinance is exempt from the requirements of the California Environmental Quality Act (codified at California Public Resources Code §§ 21000, *et seq.*, and as further governed by 14 California Code of Regulations §§ 15000, *et seq.*, collectively, "CEQA") because it is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Here, the adoption of an Ordinance regulating solar energy system review and application procedures has no potential for causing a significant effect on the environment, and the Ordinance is thus not subject to CEQA. In addition, even if the adoption of this Ordinance were subject to CEQA, it would be exempt per 14 C.C.R. § 15308, as it consists of an action taken by the Town, in its capacity as a regulatory agency, as authorized by the state, to assure the maintenance, restoration, enhancement, or protection of the environment and involves procedures for the protection of the environment in the form of facilitating solar energy system review and approval in conformance with state requirements.

SECTION 6: This Ordinance shall be effective 30 days following its adoption by the Town Council. Copies of this Ordinance shall, within fifteen days after its passage and adoption, be posted in three public places in the Town of Fairfax, to wit:

1. Bulletin Board, Town Hall Offices, located at 142 Bolinas Road, Fairfax;
2. Bulletin Board, Fairfax Post Office, located at 773 Center Boulevard, Fairfax; and
3. Bulletin Board, Fairfax Women's Club building, located at 46 Park Road, Fairfax.

The foregoing Ordinance was introduced at a regular meeting of the Town Council on the __th day of _____ 2015, and duly adopted at the next regular meeting of the Town Council on the __ day of _____, 2015, by the following vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Barbara Coler, Mayor

Attest:

_____ _____
Michele Gardner, Town Clerk Date

Submittal Requirements Bulletin — Solar Photovoltaic Installations 10 kW or Less in One- and Two-Family Dwellings

This information bulletin is published to guide applicants through a streamlined permitting process for solar photovoltaic (PV) projects 10 kW in size or smaller. This bulletin provides information about submittal requirements for plan review, required fees and inspections.

1. Approval Requirements

The following permits are required to install a solar PV system with a maximum power output of 10 kW or less:

a) Building permit, and, in some cases, a use permit (see Fairfax Town Code, Chapter 17.138, Article II)

Planning review is not required for solar PV installations of this size.

Fire Department approval [IS NOT] required for solar PV installations of this size.

2. Submittal Requirements

a) Completed permit application form. This permit application form can be downloaded at www.townoffairfax.org.

b) Demonstrate compliance with the eligibility checklist for expedited permitting. These criteria can be downloaded at www.townoffairfax.org.

c) A completed Standard Electrical Plan. The standard plan may be used for proposed solar installations 10 kW in size or smaller and can be downloaded at www.townoffairfax.org.

d) A roof plan showing roof layout, PV panels and the following fire safety items: approximate location of roof access point, location of code-compliant access pathways, PV system fire classification and the locations of all required labels and markings. Examples of clear path access pathways are available in the State Fire Marshal Solar PV Installation Guide. http://osfm.fire.ca.gov/pdf/reports/solarphotovoltaicguideline.pdf.

e) Completed expedited Structural Criteria along with required documentation. Structural Criteria can be downloaded at www.townoffairfax.org.

For non-qualifying systems, provide structural drawings and calculations stamped and signed by a California-licensed Civil or Structural Engineer, along with the following information.

- The type of roof covering and the number of roof coverings installed
- Type of roof framing, size of members and spacing
- Weight of panels, support locations and method of attachment
- Framing plan and details for any work necessary to strengthen the existing roof structure
- Site-specific structural calculations
- Where an approved racking system is used, provide documentation showing manufacturer of the rack system, maximum allowable weight the system can support, attachment method to the roof or ground and product evaluation information or structural design for the rack system

3. Plan Review

EXHIBIT # A

Permit applications can be submitted to the Town Building Official in person at 142 Bolinas Road and electronically through the following website: mlockaby@townoffairfax.org.

Permit applications utilizing standard plan may be approved "over the counter" at 142 Bolinas Road. Permit applications may also be submitted electronically for "over the counter" approval at the following website: mlockaby@townoffairfax.org.

Permits not approved "over the counter" should be reviewed in no more than three days.

4. Fees

[$0.00]

5. Inspections

Once all permits to construct the solar installation have been issued and the system has been installed, it must be inspected before final approval is granted for the solar system. On-site inspections can be scheduled by contacting the Town Department of Planning and Building Services by telephone at (415) 453-1584 or electronically at mlockaby@townoffairfax.org. Inspection requests received within business hours are typically scheduled for the next business day. If next business day is not available, inspection should happen within a five-day window.

Permit holders must be prepared to show conformance with all technical requirements in the field at the time of inspection. The inspector will verify that the installation is in conformance with applicable code requirements and with the approved plans.

The inspection checklist provides an overview of common points of inspection that the applicant should be prepared to show compliance. If not available, common checks include the following.

- Number of PV modules and model number match plans and specification sheets number match plans and specification sheets.
- Array conductors and components are installed in a neat and workman-like manner.
- PV array is properly grounded.
- Electrical boxes are accessible and connections are suitable for environment.
- Array is fastened and sealed according to attachment detail.
- Conductors ratings and sizes match plans.
- Appropriate signs are property constructed, installed and displayed, including the following.
  - Sign identifying PV power source system attributes at DC disconnect
  - Sign identifying AC point of connection
  - Sign identifying switch for alternative power system
- Equipment ratings are consistent with application and installed signs on the installation, including the following.
  - Inverter has a rating as high as max voltage on PV power source sign.
  - DC-side overcurrent circuit protection devices (OCPDs) are DC rated at least as high as max voltage on sign.
  - Switches and OCPDs are installed according to the manufacturer's specifications (i.e., many 600VDC switches require passing through the switch poles twice in a specific way).
  - Inverter is rated for the site AC voltage supplied and shown on the AC point of connection sign.
  - OCPD connected to the AC output of the inverter is rated at least 125% of maximum current on sign and is no larger than the maximum OCPD on the inverter listing label.
  - Sum of the main OCPD and the inverter OCPD is rated for not more than 120% of the bus bar rating.

6. Departmental Contact Information

For additional information regarding this permit process, please consult our departmental website at www.townoffairfax.org or contact Planning and Building Services at (415) 453-1584.

Eligibility Checklist for Expedited Solar Photovoltaic Permitting for One- and Two-Family Dwellings

GENERAL REQUIREMENTS

A.	System size is 10 kW AC CEC rating or less	☐ Y	☐ N
B.	The solar array is roof-mounted on one- or two-family dwelling or accessory structure	☐ Y	☐ N
C.	The solar panel/module arrays will not exceed the maximum legal building height	☐ Y	☐ N
D.	Solar system is utility interactive and without battery storage	☐ Y	☐ N
E.	Permit application is completed and attached	☐ Y	☐ N

ELECTRICAL REQUIREMENTS

A.	No more than four photovoltaic module strings are connected to each Maximum Power Point Tracking (MPPT) input where source circuit fusing is included in the inverter	☐ Y	☐ N
	1) No more than two strings per MPPT input where source circuit fusing is not included	☐ Y	☐ N
	2) Fuses (if needed) are rated to the series fuse rating of the PV module	☐ Y	☐ N
	3) No more than one noninverter-integrated DC combiner is utilized per inverter	☐ Y	☐ N
B.	For central inverter systems: No more than two inverters are utilized	☐ Y	☐ N
C.	The PV system is interconnected to a single-phase AC service panel of nominal 120/220 Vac with a bus bar rating of 225 A or less	☐ Y	☐ N
D.	The PV system is connected to the load side of the utility distribution equipment	☐ Y	☐ N
E.	A Solar PV Standard Plan and supporting documentation is completed and attached	☐ Y	☐ N

STRUCTURAL REQUIREMENTS

A.	A completed Structural Criteria and supporting documentation is attached (if required)	☐ Y	☐ N

FIRE SAFETY REQUIREMENTS

A.	Clear access pathways provided	☐ Y	☐ N
B.	Fire classification solar system is provided	☐ Y	☐ N
C.	All required markings and labels are provided	☐ Y	☐ N
D.	A diagram of the roof layout of all panels, modules, clear access pathways and approximate locations of electrical disconnecting means and roof access points is completed and attached	☐ Y	☐ N

Notes:

1. *These criteria are intended for expedited solar permitting process.*
2. *If any items are checked NO, revise design to fit within Eligibility Checklist, otherwise permit application may go through standard process.*

EXHIBIT # B

Your City logo here

Solar PV Standard Plan — Simplified Central/String Inverter Systems for One- and Two-Family Dwellings

SCOPE: Use this plan ONLY for utility-interactive central/string inverter systems not exceeding a system AC inverter output rating of 10kW on the roof of a one- or two-family dwelling or accessory structure. The photovoltaic system must interconnect to the load side of a single-phase AC service panel of nominal 120/240Vac with a bus bar rating of 225A or less. This plan is not intended for bipolar systems, hybrid systems or systems that utilize storage batteries, charge controllers, trackers, more than two inverters or more than one DC combiner (noninverter-integrated) per inverter. Systems must be in compliance with current California Building Standards Codes and local amendments of the authority having jurisdiction (AHJ). Other Articles of the California Electrical Code (CEC) shall apply as specified in 690.3.

MANUFACTURER'S SPECIFICATION SHEETS MUST BE PROVIDED for proposed inverter, modules, combiner/junction boxes and racking systems. Installation instructions for bonding and grounding equipment shall be provided, and local AHJs may require additional details. Listed and labeled equipment shall be installed and used in accordance with any instructions included in the listing or labeling (CEC 110.3). Equipment intended for use with PV system shall be identified and listed for the application (CEC 690.4[D]).

Job Address: _____ Permit #:_____

Contractor/ Engineer Name: _____ License # and Class:_____

Signature: _____Date: _____ Phone Number:_____

Total # of Inverters installed: _____ (If more than one inverter, complete and attach the "Supplemental Calculation Sheets" and the "Load Center Calculations" if a new load center is to be used.)

Inverter 1 AC Output Power Rating: _____ Watts

Inverter 2 AC Output Power Rating (if applicable): _____ Watts

Combined Inverter Output Power Rating:_____ ≤ 10,000 Watts

Location Ambient Temperatures (Check box next to which lowest expected temperature is used):

1) □ Lowest expected ambient temperature for the location (T_L) = **Between -1 to -5 °C**

□ Lowest expected ambient temperature for the location (T_L) = **Between -6 to -10 °C**

Average ambient high temperature (T_H) = 47 °C

Note: For a lower T_L or a higher T_H, use the Comprehensive Standard Plan

DC Information:

Module Manufacturer:_____ Model:_____	
2) Module V_{oc} (from module nameplate): _____ Volts	3) Module I_{sc} (from module nameplate): _____ Amps
4) Module DC output power under standard test conditions (STC) =_____ Watts (STC)	

EXHIBIT # C

5) DC Module Layout Identify each source circuit (string) for inverter 1 shown on the roof plan with a Tag (e.g. A,B,C,...)	Number of modules per source circuit for inverter 1	Identify, by tag, which source circuits on the roof are to be paralleled (if none, put N/A)
		Combiner 1:
		Combiner 2:
Total number of source circuits for inverter 1:		

6) Are DC/DC Converters used? □ Yes □ No	If No, skip to Step 7. If Yes enter info below.
DC/DC Converter Model #: _____	DC/DC Converter Max DC Input Voltage:_____ Volts
Max DC Output Current:_____Amps	Max DC Output Current:_____ Volts
Max # of DC/DC Converters in an Input Circuit:_____	DC/DC Converter Max DC Input Power:_____Watts

7) Maximum System DC Voltage — Use A1 or A2 for systems without DC/DC converters, and B1 or B2 with DC/DC Converters.

□ A1 Module V_{OC} (STEP 2) = _____x # in series (STEP 5)_____x 1.12 (If $-1 \le T_L \le -5°C$, STEP 1) = _____V

□ A2 Module V_{OC} (STEP 2) = _____x # in series (STEP 5)_____x 1.14 (If $-6 \le T_L \le -10°C$, STEP 1) = _____V

Max. Rated Module V_{OC} (*1.12) (Volts)	29.76	31.51	33.48	35.71	38.27	41.21	44.64	48.70	53.57	59.52	66.96	76.53	89.29
Max. Rated Module V_{OC} (*1.14) (Volts)	29.24	30.96	32.89	35.09	37.59	40.49	43.86	47.85	52.63	58.48	65.79	75.19	87.72
Max # of Modules for 600 Vdc	18	17	16	15	14	13	12	11	10	9	8	7	6

Use for DC/DC converters. The value calculated below must be less than DC/DC converter max DC input voltage (STEP 6).

□ B1 Module V_{OC} (STEP 2) = _____ x # of modules per converter (STEP 6) _____ x 1.12 (If $-1 \le T_L \le -5°C$, STEP 1) = _____ V

□ B2 Module V_{OC} (STEP 2) = _____ x # of modules per converter (STEP 6) _____ x 1.14 (If $-6 \le T_L \le -10°C$, STEP 1) = _____ V

Max. Rated Module V_{OC} (*1.12) (Volts)	30.4	33.0	35.7	38.4	41.1	43.8	46.4	49.1	51.8	54.5	57.1	59.8	62.5	65.2	67.9	70.5
Max. Rated Module V_{OC} (*1.14) (Volts)	29.8	32.5	35.1	37.7	40.4	43.0	45.6	48.2	50.9	53.5	56.1	58.8	61.4	64.0	66.7	69.3
DC/DC Converter Max DC Input (Step #6) (Volts)	34	37	40	43	46	49	52	55	58	61	64	67	70	73	76	79

8) Maximum System DC Voltage from DC/DC Converters to Inverter — Only required if Yes in Step 6
Maximum System DC Voltage = Volts

9) Maximum Source Circuit Current
Is Module I_{SC} below 9.6 Amps (Step 3)? □ Yes □ No (If No, use Comprehensive Standard Plan)

10) Sizing Source Circuit Conductors
Source Circuit Conductor Size = Min. #10 AWG copper conductor, 90°C wet (USE-2, PV Wire, XHHW-2, THWN-2, RHW-2)
For up to 8 conductors in roof-mounted conduit exposed to sunlight at least $^1/_2$' from the roof covering (CEC 310) Note: For over 8 conductors in the conduit or mounting height of lower than $^1/_2$' from the roof, use Comprehensive Plan.

11) Are PV source circuits combined prior to the inverter? □ Yes □ No
If No, use Single Line Diagram 1 and proceed to Step 13.
If Yes, use Single Line Diagram 2 with Single Line Diagram 4 and proceed to Step 12.
Is source circuit OCPD required? □ Yes □ No
Source circuit OCPD size (if needed): 15 Amps

12) Sizing PV Output Circuit Conductors — If a combiner box will NOT be used (Step 11),
Output Circuit Conductor Size = Min. #6 AWG copper conductor

13) Inverter DC Disconnect
Does the inverter have an integrated DC disconnect? □ Yes □ No If Yes, proceed to step 14.
If No, the external DC disconnect to be installed is rated for _____ Amps (DC) and _____ Volts (DC)

14) Inverter Information
Manufacturer:_____Model:_____
Max. Continuous AC Output Current Rating: _____ Amps
Integrated DC Arc-Fault Circuit Protection? □ Yes □ No (If No is selected, Comprehensive Standard Plan)
Grounded or Ungrounded System? □ Grounded □ Ungrounded

AC Information:

Sizing Inverter Output Circuit Conductors and OCPD
Inverter Output OCPD rating = _____ Amps (Table 3)
Inverter Output Circuit Conductor Size = _____ AWG (Table 3)

Table 3. Minimum Inverter Output OCPD and Circuit Conductor Size									
Inverter Continuous Output Current Rating (Amps) (Step 14)	12	16	20	24	28	32	36	40	48
Minumum OCPD Size (Amps)	15	20	25	30	35	40	45	50	60
Minimum Conductor Size (AWG, 75°C, Copper)	14	12	10	10	8	8	6	6	6

Integrated DC Arc-Fault Circuit Protection? □ Yes □ No (If No is selected, Comprehensive Standard Plan)
Grounded or Undergrounded System? □ Grounded □ Undergrounded