

California Solar Permitting Guidebook

Improving Permit Review and Approval for Small Solar Systems



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PREFACE

California is a world leader in renewable energy generation. Solar and wind power, as well as emerging technologies such as biomass and fuel cells, are transforming California. Renewable energy is helping to power the state's economy, reducing our state's reliance on imported energy sources and decreasing air pollution.

California's state and local governments have set aggressive goals to expand renewable energy. In 2011, California adopted a Renewable Portfolio Standard (RPS) requiring that at least one-third of the state's electricity come from clean energy sources by 2020. California's RPS began in 2002 as a 20 percent requirement by 2017 and increasingly became more aggressive with requirements for 20 percent by 2010 (set in 2006) and 33 percent by 2020 (set in 2011), and 50 percent by 2030 (set in 2015). The Clean Energy and Pollution Reduction Act of 2015 (De León, Chapter 547, Statutes of 2015) (Senate Bill 350) put into law a requirement to serve 50 percent of California's electricity use with renewable resources by 2030. Many local governments also have their own targets for renewable energy. Additionally, Governor Edmund G. Brown Jr. has set a specific goal of developing 12,000 megawatts of small-scale, localized renewable electrical power (often called "distributed generation") in California by 2020. California is a clean energy leader with an aggressive Renewables Portfolio Standard (RPS).

Small-scale renewable energy benefits California communities. It increases energy reliability for residents and businesses by generating electricity near where it is consumed. This type of energy can also provide stable electricity prices for consumers and creates thousands of jobs across California.

In order to expand small-scale renewable energy across California, Governor Brown instructed the Governor's Office of Planning and Research (OPR) to help remove barriers to its development. One such barrier is the patchwork of permitting requirements for small solar installations throughout the state. Solar energy systems have been installed in California for decades, and their technology, as well as the methods to install and maintain them, is well established. As a result, permitting for these small and simple solar projects should be as simple and standardized as possible.

The first California Solar Guidebook was published in 2012, the result of a collective effort of stakeholders from local government, the building industry, professional associations, solar companies, utility providers and state regulatory agencies. Many local permitting agencies adopted practices and standard documents outlined in the Guidebook. These practices made installing solar less expensive and increased expansion of this technology in California.



Despite these improvements, however, costs to permit solar are still higher than necessary. Increased solar adoption has inundated many jurisdictions with permit applications and inspection requests. Solar technologies have changed, new laws have been passed and codes have been revised. This second edition of the Guidebook addresses those changes, improves upon the recommended process for expedited permitting of solar PV systems, and adds information about solar water heating systems.

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Steel Framing Industry Association
Mar Structural Design
City of Los Angeles
Optony
City of Concord
National Electrical Contractors Association
New Day Solar
Sullivan Solar
International Code Council
County of San Diego
County of Butte
City of Palo Alto

PURPOSE AND USE OF THIS GUIDE

This Guidebook is designed to help local governments and their permitting agencies improve permitting of small solar energy systems. It is also designed to help building owners and solar installers navigate permitting as efficiently as possible. Practices recommended in this Guidebook apply to permitting agencies of all sizes. The Guidebook is also written for permit applicants with all levels of expertise.

The Guidebook is organized into five main sections.

- Part 1** **CURRENT LAWS, REGULATIONS AND CODES:** This section explains current legal requirements for solar installations in California.
- Part 2** **THE PROJECT APPROVAL PROCESS:** This section describes important aspects of permit review and project inspection.
- Part 3** **RECOMMENDATIONS FOR EXPEDITED LOCAL SOLAR PERMITTING:** These sections recommend a streamlined local permitting process for small, simple solar PV and solar water heating installations (including both solar domestic water heating [SDWH] and solar pool heating [SPH]) and provide standard forms that can be used to streamline permitting.
- Part 4**
- Part 5** **RESOURCES AND INFORMATION:** This section provides informational materials that can help local governments clarify current state requirements for all solar installations.

The Guidebook concludes with a glossary of terms and a list of helpful information sources for local governments and permit applicants.

This Guidebook focuses on the permit review and approval to install a rooftop solar system. It does not address zoning, land use approvals or environmental review that may be required for larger solar projects.

This Guidebook addresses both solar photovoltaic (PV) and solar water heating (SWH) technologies. These technologies have many fundamental similarities, as well as several important differences. Where requirements are discussed that apply to only one of these technologies, the text will note this.

In the course of the Guidebook, several types of solar installation are discussed, including systems on residential and commercial building rooftops, in parking lots and on parking structures and mounted on the ground. It is important to note that each installation type has a certain set of installation requirements. In addition, rooftop installations have some differing requirements depending on whether they are installed on a commercial or residential building.

The toolkit sections of this Guidebook recommend an expedited permitting process for simple PV systems 10 kilowatts (kW) or less and a process for SWH systems 30 kilowatts thermal (kWth) or less. An expedited permitting process refers to streamlining the permit process for simple, typical solar installations so that permits can be issued in an “over-the-counter” or similar manner.

This Guidebook uses the terms expedited and streamlined synonymously. These thresholds capture approximately 90% of the solar systems that are currently being installed. Above this size threshold, a system's design considerations become more complex.

Assembly Bill 2188 (2014, Muratsuchi) requires jurisdictions to adopt an expedited permitting process that “substantially conforms” with that laid out in Parts 3 and 4 of this Guidebook. Jurisdictions may modify these documents as specified and should review these sections of the Guidebook for a more detailed discussion of this process.

An electronic version of this Guidebook that includes clickable links to Internet resources can be found on the websites of several California entities: [The Governor's Office of Planning and Research](#), [California Building Standards Commission](#), [Office of the State Fire Marshal](#), [California Department of Housing and Community Development](#) and [Center for Sustainable Energy](#).