

AB 2188 Implementation Report

A Review of Ordinances Adopted by Local Jurisdictions in California

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Center for Sustainable Energy

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1 About this Report

This report is funded by the Department of Energy Rooftop Solar Challenge Program. California's Rooftop Solar Challenge program, called the Golden State Solar Impact, supports the goals of the Department of Energy (DOE) Solar Energy Technologies Program and the SunShot Initiative, which seek to make solar electricity cost competitive without subsidies by the end of the decade by seeking to address and lower system costs for photovoltaics (PV). The Energy Policy Initiatives Center (EPIC) supports the Center for Sustainable Energy (CSE) under this program to encourage market transformation through expanding financing options for residential and commercial customers, streamlining permitting processes, and standardizing net metering and interconnection standards across investor-owned and municipally owned utilities in the region. The project supports cross-jurisdictional collaboration and information sharing.

2 Introduction

This report analyzes the implementation of AB 2188, which amended the Solar Rights Act (SRA) to update requirements under Civil Code Section 714 and require each local jurisdiction in California to pass an ordinance streamlining permitting for energy systems no larger than 10 kW AC nameplate photovoltaic (PV) or 30 kW thermal under Government Code Section 658505.5. This assessment includes review of ordinance adoption, compliance with minimum statutory requirements¹ under the SRA, and adopted permit application processes.

Findings about jurisdictions contained in this document are presented in two different ways: (1) all jurisdictions included as a single group; or (2) jurisdictions grouped by counties² and similarly sized cities. All numbers are approximate and subject to change in recognition of continued implementation efforts. Finally, this assessment was limited to review of AB 2188 substantial compliance based on minimum requirements. Assessment of individual application submission, timeframes, or contractor experiences are outside the scope of this document.

Previous work on AB 2188 includes drafting of the [AB 2188: Implementation of the Solar Rights Act at the Local Level](#) document and [AB 2188 Model Ordinance](#) to implement the amendment to the Solar Rights Act and the Governor's [California Solar Permitting Guidebook](#) (Spring 2015 Second Edition) (hereafter referred to as Guidebook).

3 Summary of Findings and Recommendations

Key findings and recommendations from the assessment of AB 2188 implementation include:

¹ Assessment of implementation is based on the principles that govern judicial review of statutory compliance. Courts construe statutes to effectuate the legislative intent that promote rather than defeat the statute's purpose and policy. The statute is given a fair and reasonable interpretation framed by the language used and purpose sought. The statute's plain language controls unless there is an ambiguity. If there is an ambiguity, then a court will avoid interpreting the statute in a way that will lead to a conclusion not contemplated by the legislation, result in injustice, or lead to an absurd consequence.

² Counties are defined for this report in terms of the retained jurisdiction over all unincorporated area within their geographical boundary.

- Documented adoption of AB 2188 ordinances in approximately 386 jurisdictions (cities and counties);
- In terms of implementation, there is no discernable distinction in adoption based on jurisdiction size. Both the smallest and the largest jurisdictions adopted AB 2188 ordinances and streamlined processes;
- All adopted ordinances authorize administrative, nondiscretionary solar energy system review processes;
- Where ordinances are adopted, authorization of electronic submission and electronic signatures is widespread but not fully implemented in all jurisdictions despite the statutory mandate to allow electronic submission;
 - Approximately 18 jurisdictions do not authorize electronic submittal and therefore do not accept electronic signatures in lieu of wet signatures;
 - In 12 jurisdictions, electronic submittal is authorized but electronic signatures are not accepted;
 - Of the jurisdictions that do not allow electronic submission, approximately 10 jurisdictions expressly state the reason for not allowing electronic signatures.
- In terms of document access:
 - Approximately 225 jurisdictions authorize placing documents on their website and actually place documents on their website;
 - Approximately 21 jurisdictions authorize placing documents on their website but do not actually place documents on their website;
 - Approximately 19 jurisdictions place documents on their website but the assessment was either unable to document the existence of an ordinance or the ordinance did not authorize placing documents on a website;
- Approximately 373 jurisdictions authorize streamlining for solar thermal systems, but only approximately 58 jurisdictions provide streamlined documents and processes for solar thermal energy systems;
- Approximately 365 jurisdictions used, modified, or took language from the model ordinance previously developed under the Golden State Solar Impact project; and
- A trend exists to include language in adopted ordinances that expressly shift the health and safety liability with regards to structural requirements from jurisdictions to the applicants by creating a pre-application submission duty on the applicant (See Section 15).

General recommendations can be made from these findings to increase adoption and implement streamlined processes. These include:

- Additional outreach to facilitate ordinance adoption;
- Support to identify and amend ordinances that fail to define system eligibility for streamlining;
- Support to implement streamlined checklists and other documents;
- Support to update general solar energy system permit processes and documents to meet streamlining requirements for small residential rooftop solar energy systems;
- Support to implement electronic submission requirement;
- Support to ensure that documents are available on a publicly accessible website;
- Review of jurisdiction specific electrical and structural requirements to assess substantial conformance to the Guidebook;
- Clarification of guidance around application of Civil Code Section 714 to jurisdictions and associations;

- Support to implement solar thermal streamlining processes; and
- Support to facilitate consolidation of fire and building inspections.

The assessment processes as well as specific findings are summarized in the following sections.

4 Assessment Overview

First, the assessment reviewed adopted ordinances to determine substantial compliance with the minimum requirements of the Solar Rights Act as amended by AB 2188. The assessment also reviewed ordinances for inclusion of other specific language that codified permitting processes under the Solar Rights Act. The reviewed requirements and specific language included whether the jurisdiction:

- Defined small residential energy system expressly or by reference (PV and Solar thermal);
- Authorized streamlined checklists and other applicable documents;
- Modified or authorized the modification of the adopted checklist for climatic, geological, seismological, or topographical reasons;
- Authorized administrative review;
- Included a prohibition of approval from an association (i.e. a home owners association (HOA));
- Authorized written correction notices for incomplete applications;
- Authorized publication of information and/or documents online;
- Authorized electronic submission;
- Authorized electronic signatures or provided an explanation for why electronic signature were not authorized;
- Accounted for fire department inspections or other safety issues (if applicable);
- Included utility director input or review as part of its ordinance or process (if applicable);
- Authorized single building inspection and subsequent inspection if a system fails a first inspection; and
- Authorized historical review.

Best efforts were undertaken to access and review these documents for jurisdictions across the state, subject to availability. This included researching and assessing available municipal codes, county board of advisor agendas and minutes, and city council agendas and minutes.

Second, permitting processes were reviewed to collect information to assess minimum substantial conformance with the Solar Permitting Guidebook pursuant to Government Code Section 65805.5 (g)(2). Importantly, AB 2188 did not define substantial conformance, nor is it defined in a relevant way anywhere else under California code. The assessment consequently focused on minimum requirements and examined whether other recommended processes were included. This assessment excluded actual review and inspection times as well as actual applicant experiences. The assessment examined whether a jurisdiction:

- Adopted and provided a streamlined checklist and other documents for both photovoltaic and solar thermal systems;
- Provided plans, examples of plans, or requirements for plan creation and submission;
- Appeared to accept electronic signatures;
- Appeared to accept electronic submission;
- Included structural requirements;

- Expressly included single inspection and any subsequent inspection for failure;
- Accounted for fire requirements;
- Accounted for electric utility interconnection; and
- Accounted for historical review.

Best efforts were undertaken to understand processes and access applicable documents for jurisdictions across the state, subject to availability. This included researching and reviewing available documents and stated processes.

5 Ordinance Adoption

AB 2188 amended Government Code Section 65850.5 mandating that each local government adopt an ordinance creating a streamlined solar permitting process for small residential rooftop solar energy systems by September 30, 2015. Municipal codes, county board of governor agendas and minutes, and city council agendas and minutes were researched and reviewed to provide information on adoption of ordinances. Ordinance adoption remains a moving target. Several rounds of reviews were conducted to document additional adoptions over the review period. The number of ordinances adopted is summarized by county and city in Table 1.

Table 1 Documented Adopted Ordinances

Jurisdiction Type	Total Number of Jurisdiction in California	Adopted Ordinance	Unable to Document Adoption
Counties	58	38	20
Large Cities ³	12	11	1
Medium Cities ⁴	54	48	6
Small Cities ⁵	416	289	127
Total	540	386	154

In the 540 local jurisdictions in California, approximately 386⁶ jurisdictions passed ordinances as of the publication of this report.⁷ Of these 386 jurisdictions, approximately two counties and 10 cities passed

³ Large Cities include cities with populations greater than 300,000 persons based on 2010 Census Data.

⁴ Medium Cities include cities with populations greater than 100,000 but less than 300,000 persons based on 2010 Census Data.

⁵ Small Cities included cities that were 100,000 people or less based on 2010 Census Data.

⁶ All numbers are approximate based on when review occurred and may not represent the most up to date information.

ordinances as evidenced by agendas or other government documentation but have not updated their code. Ordinances from these 12 jurisdictions were not reviewed because they remain inaccessible as of the date of this report. Of these two counties, one county did not have a streamlined process or documents specific to AB 2188 requirements for at least PV applications. Of the 10 cities, nine jurisdictions lack a streamlined review process for at least small residential rooftop PV applications and all 10 lack a streamlined permitting process for solar thermal applications. Finally, nine cities created streamlined processes without verifiable evidence of an adopted ordinance.

6 Definitions

Multiple statutory code sections define solar energy systems. Inclusion of these definitions determines which systems are eligible for residential rooftop streamlined solar permitting processes. Civil Code Section 801.5(a) generally defines solar energy systems and is referenced in multiple sections of the Solar Rights Act. Government Code Section 65850.5(j)(3) defines small residential rooftop solar energy systems specific to the AB 2188 mandate for streamlining. Review included whether these definitions were contained in an ordinance primarily to determine if a jurisdiction authorized both photovoltaic and solar thermal solar energy systems streamlined application documents and review.

Of the 374 reviewed ordinances (including counties and cities), approximately 373 included definitions expressly or by reference for both small residential rooftop photovoltaic and solar thermal energy systems. Approximately one jurisdiction excluded definitions for both photovoltaic and solar thermal. Approximately two jurisdictions excluded small residential rooftop solar thermal systems from their adopted definition. This means that in 373 jurisdictions, only one jurisdiction did not expressly define eligibility for both PV and solar thermal streamlining and two additional jurisdictions did not define solar thermal energy systems as eligible. This is important when assessing whether a jurisdiction's adopted process complies with its adopted ordinance.

7 Checklist Authorization and Access

As part of the review of substantial compliance to AB 2188 and conformance to the Guidebook, authorization and access of checklists and other documents were assessed. AB 2188 requires posting of documents on a publicly accessible website under Government Code Section 65850.5(g)(1), if one is available. Government Code Section 65850.5(g)(2) allows a jurisdiction to adopt an ordinance that modifies the checklist and standards found in the Guidebook due to unique climatic, geological, seismological, or topographical conditions.

Importantly, many adopted ordinances require documents to be posted on a jurisdiction's publicly available website and most jurisdictions host publicly accessible websites. Table 2 summarizes the number of jurisdictions that authorized access to documents online, adopted checklists, and made checklists and other documents accessible on a public website.

⁷ Verification of ordinance included review of city council or board of governor agendas, actual municipal code, or other verifiable government document.

Table 2 Requirements for Checklist and Online Documents

Jurisdiction	Required by Ordinance and on Website	Required by Ordinance but Not on Website	No Ordinance, Ordinance inaccessible, or Not Expressly Authorized by Ordinance but on Website
County	27	4	2
Large City	9	1	1
Medium City	36	8	2
Small City	153	8	14
Total	225	21	19

Of the reviewed processes, approximately 51 jurisdictions provide solar permitting documents but have yet to create and/or provide streamlined documents pursuant to AB 2188. Finally, 14 jurisdictions authorized a building official to modify the adopted checklist for climatic, geological, seismological, or topographical reasons. In these jurisdictions, checklist did not appear to be modified to account for these specific requirements.

These findings demonstrate a further need to support the use of the Guidebook model tool kit as well as providing additional support to make each jurisdiction's documents easily available. It also demonstrates the need for further ordinance adoption or modification to comply with AB 2188.

8 Administrative Review

Since inception, the Solar Rights Act limited review of solar energy system applications to administrative, nondiscretionary approval that evaluated whether a system met local, state, and federal health and safety requirements pursuant to Government Code Section 65850.5(b). Inclusion of this requirement in a jurisdiction's AB 2188 ordinance ensures that this process is codified and part of its review processes.

Of the jurisdictions where ordinances were reviewed or evidence of passage of an ordinance was verified, all jurisdictions authorized and limited administrative review to public health and safety for small rooftop solar energy system applications pursuant to AB 2188.

9 Prohibition Against Association (i.e. HOA) Approval

An ongoing issue with solar energy system installation stems from a jurisdiction refusing to approval a permit application until an applicant receives approval from an association (i.e. HOA), as defined by Civil Code Section 4080. AB 2188 amended the Solar Rights Act by adding Government Code Section 65850.5(i) to expressly prohibit a jurisdiction from conditioning approval of any solar energy system on

the approval of the solar energy system by an association. This code section applies to all solar energy systems not just small residential rooftop solar energy systems.

Express language that prohibits association approval was assessed to screen for specific violation of the law through omission or contrary language or processes. Overall, reviewed ordinances were more or less evenly split with regards to including prohibition language. In at least one case, the existing ordinance and process provided discretion to a building official as to whether association approval was required. In at least five jurisdictions existing code or processes required association approval. In all but one of these jurisdictions, no streamlined AB 2188 process was documented showing the need to update these processes. A single jurisdiction within this group uses an updated process that does not appear to require association approval for its streamlined AB 2188 process, but does require association approval for all other solar energy system applications. In another jurisdiction, the language of the ordinance stated that no association approval was required unless the association owned the walls or roof. If the association owned the wall or roof, then the jurisdiction required association approval before a permit would be issued, contrary to Government Code Section 65850.5(i). Finally, two jurisdictions included Civil Code Section 714(e)(1)-(2) language pertaining to association approval and approval time frames. It remains unclear whether this ordinance language applies to the jurisdiction or only to an association in these specific jurisdictions. Civil Code Section 714 applies exclusively to associations except for Civil Code Section 714(h) relating to state-sponsored grant or loan programs and the prohibition on exempting residents from the requirements of Civil Code Section 714. In at least one published court case, the court applied Civil Code Section 714(e)(1) to associations only.⁸

10 Written Correction Notice for Incomplete Application

Government Code Section 65850.5(g)(1) requires that upon receipt of an incomplete application, a jurisdiction must issue a written correction notice detailing all deficiencies in the application and any additional information required to meet streamlined, expedited eligibility requirements. Table 3 summarizes the number of jurisdictions that codified written notices of application deficiencies.

Table 3 Reviewed Ordinance Written Deficiency Requirement

Jurisdiction	Codified Written Notice for Deficiencies	No Written Notice of Deficiency
County	32	4
Large City	9	2
Medium City	45	1
Small City	276	7
Total	362	14

⁸ See *Arterberry v. County of San Diego*, (2010) 182 Cal.App.4th1528.

It may also be the case that written corrections are provided as a matter of practice upon review of an application despite jurisdictions not expressly providing for this in their ordinances. Additional review and support may be necessary to ensure that written deficiency notices are issued by jurisdictions.

11 Electronic Submittal and Electronic Signature

Government Code Section 65805.5(g)(2) requires that each local jurisdiction allow electronic submission. Government Code Section 65805.5(j)(2) defines electronic submission to include submission by email, the internet, and facsimile. Additionally, Government Code Section 65805.5(g)(2) requires authorization of electronic signatures on all forms, applications, and other documentation in lieu of a wet signature. If a jurisdiction is unable to accept electronic signatures, Government Code Section 65805.5(g)(2) requires that the reason for the inability to accept an electronic signature be included in the adopted ordinance.

Of the 374 reviewed ordinances, approximately 18 jurisdictions do not authorize electronic submittal and therefore do not accept electronic signatures in lieu of wet signatures. In 12 jurisdictions, electronic submittal is authorized but electronic signatures are not accepted. Of the jurisdictions that do not allow electronic signatures, approximately 10 jurisdictions expressly state the reason for not allowing electronic signatures.

Jurisdictions listed a lack of capability to provide electronic submittal as well as an inability to verify electronic signatures as reasons for not providing electronic submission.

There are several examples of jurisdictions authorizing electronic submittal but not allowing electronic submittal until a software or web portal has been developed, tested, and become operational. This one-size fits all approach to electronic submittal ignores the use of both email and fax as defined means of meeting AB 2188's electronic submittal mandate. There is a need for additional support to meet the legal requirements for electronic signature verification as well as to support electronic submission.

12 Single Inspection and Subsequent Inspection for Failure

Government Code Section 65850.5(h) expressly limits inspection of eligible small rooftop solar energy systems to a single inspection. The inspection must be done in a timely manner and may include a consolidated inspection, if available. The code section authorizes subsequent inspection where a system fails initial inspection.

Approximately 14 jurisdictions did not expressly provide for single inspection or authorize subsequent inspection for streamlined projects. Additionally, jurisdictions provided general information in most cases for inspection requirements with only one county and 19 cities explicitly including this information in their documents or process information. In at least one jurisdiction, single inspection and subsequent inspection requirements for failure were not included in the ordinance but were included in the application documents and other process information.

13 Fire Department Inspection or Other Safety Issue

Government Code Section 65850.5(h) allows for a separate fire authority to conduct a fire safety inspection where consolidation of fire and building inspections do not currently exist. Government Code Section 65850.5(g)(1) requires that each jurisdiction consult with the applicable local fire department or district when adopting its ordinance. Certain jurisdictions account for this by expressly authorizing fire inspections, documenting existing consolidated inspection agreements, or maintaining the authorization for fire safety inspection if an agreement is terminated or other change occurs.

Of the reviewed ordinances, approximately 47 included language that accounted for fire safety inspection or other safety issue. These ordinances use language that ranges from expressly consolidating fire and building inspections, to specific electrical or fire inspection needs, to stating that fire and building officials may or will require separate inspections.

14 Municipal Utility Director Review and Information on Interconnection Requirement

Government Code Section 65850.5(g)(1) requires that jurisdictions consult with utility directors if that jurisdiction operates a municipally owned utility when adopting its streamlined solar permitting ordinance. In California, there are approximately 47 municipally owned electric utilities.

Additionally, many jurisdictions included language that states that building permit and inspection approval do not grant an applicant the right to interconnect to the grid. This language specifies that applicants must apply for interconnection with their local electric utility before energizing and connecting their system to the distribution grid. Table 4 summarizes the number of cities (no counties have municipal electric utilities) that expressly included utility directors or provided information on interconnection processes.

Table 4 Utility Director Inclusion and Interconnection Information

Jurisdiction	Inclusion of Municipal Utility Director In Ordinance	Inclusion of Interconnection Information
Large Cities	5	6
Medium Cities	4	14
Small Cities	3	54
Total	12	74

15 Structural Requirements

Processes were assessed to determine whether jurisdictions included structural requirements as part of the checklist or overall streamlined process. Structural requirements were not specifically compared to the Guidebook structural toolkit. Generally, structural evaluations were included on the checklist as a

necessary requirement. Many jurisdictions provided structural evaluation forms to determine whether a proposed system met structural public health and safety requirements.

Of the reviewed jurisdictions with enacted ordinances, approximately 241 required some form of structural requirement for either an AB 2188 streamlined process or a general solar permitting process. Of the jurisdictions where an AB 2188 compliant ordinance could not be verified, approximately 15 jurisdictions with streamlined processes required structural requirements.

Further review of individual processes followed with support to correct any process that is not in substantial conformance with the Guidebook should be undertaken to determine if these structural requirements substantially conform to the Guidebook and substantially comply with Government Code Section 65850.5 (f).

Additionally, a number of jurisdictions adopted ordinance language that expressly places the duty of determining load and electrical safety on the applicant. The assessment did not track the use of these clauses by jurisdictions because these clauses are not a minimum requirement for substantial compliance. However, these clauses create an affirmative duty prior to an application's submission that, in effect, shifts liability directly to an applicant as opposed to a jurisdiction with regards to public health and safety. An example of such a clause can be found below:

In order to help ensure that residential rooftop solar systems do not have adverse impacts upon the public health or safety, and to help expedite city inspection and approval of proposed residential solar systems, prior to submitting an application, the applicant shall:

- A. Verify to applicant's reasonable satisfaction through the use of standard engineering techniques that the support structure for the small residential rooftop solar system is stable and adequate to transfer all wind, seismic, and dead and live loads associated with the system to the building foundation; and
- B. At the applicant's cost, verify to the applicant's reasonable satisfaction using standard electrical inspection techniques that the existing residential electrical system including line, load, ground and bonding conductors as well as the main panel and any subpanels are adequately sized, based on the electrical system's current use, to carry all new photovoltaic electrical loads.⁹

These clauses appear to be a legal response to mitigate perceived risk resulting from the adoption of standardized applicant review processes and health and safety requirements for small residential rooftop systems.

16 Solar Thermal Residential Solar Energy Systems

The assessment reviewed ordinances, processes, and documents to determine whether documents and processes streamlined solar thermal hot water and pool permit applications pursuant to AB 2188. Government Code Section 65850.5(j)(3) expressly includes solar energy systems no larger than 30 kilowatts thermal as small residential rooftop solar energy systems.

⁹ See City of Petaluma Municipal Code Section 17.10.040 (last accessed 5/3/16).

Of the reviewed ordinances, approximately 373 jurisdictions authorized streamlining for solar thermal systems. However, upon review of the checklists and processes authorized, approximately 58 jurisdictions provide streamlined documents and processes for solar thermal.

Additional support is needed to ensure substantial compliance with the Solar Rights Act and substantial conformance to the Guidebook pursuant to the streamlining requirements for solar thermal energy systems.

17 Historical and Landmark Preservation Designation

Certain jurisdictions may require a discretionary review of applications on qualified historic buildings and structures. The State Historical Building Code (Health and Safety Code Sections 18950-18961) grants authority to jurisdictions to designate buildings as qualified historical buildings or structures under the code. Some jurisdictions are preserving their authority under this law to require - at the building official's discretion - a discretionary review process for all repairs, alterations and additions necessary for the preservation, restoration, rehabilitation, moving or continued used of qualified historical buildings or structures in their AB 2188 ordinances.

Approximately 11 jurisdictions authorized or accounted for historical review in their ordinances as part of their streamlined process. Of these jurisdictions, eight included historical review requirements or information on their permit applications.

18 Model Ordinance

The assessment reviewed whether jurisdictions used the model ordinance developed as part of the Golden State Solar Impact project. Many jurisdictions adopted the model ordinance in whole or in part. Additionally, other jurisdictions modified or took language from the model ordinance for use in their adopted ordinance. Of the 374 reviewed ordinances, approximately 365 used, modified, or took language from the model ordinance.

19 Conclusion

This report assessed the implementation of AB 2188, which amended the Solar Rights Act (SRA) to update requirements under Civil Code Section 714 and require each local jurisdiction to pass an ordinance streamlining permitting for energy systems no larger than 10 kW AC nameplate photovoltaic (PV) or 30 kW thermal under Government Code Section 658505.5. This assessment reviewed statewide ordinance adoption and streamlined processes. Many jurisdictions adopted ordinances that meet minimum statutory substantial compliance requirements as well as implemented processes that substantially conform to the Guidebook. Many jurisdictions have not taken any action to either adopt an ordinance or streamline permitting processes. More work is required to fully implement AB 2188.



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