
SENATE COMMITTEE ON GOVERNANCE AND FINANCE

Senator Mike McGuire, Chair
2021 - 2022 Regular

Bill No: SB 617
Author: Wiener
Version: 4/5/21
Consultant: Favorini-Csorba

Hearing Date: 4/8/21
Tax Levy: No
Fiscal: Yes

RESIDENTIAL SOLAR ENERGY SYSTEMS: PERMITTING

Requires cities and counties to adopt an automated, online permitting system for solar energy systems and energy storage.

Background

Solar energy systems. The cost of installing solar energy systems—devices or structural design features that collect, store, and distribute solar energy for heating, cooling, and electricity generation—has dropped dramatically over the past decade, from \$7.53/watt for a residential photovoltaic (PV) system in 2010 to \$2.71/watt in 2020, according to National Renewable Energy Laboratory (NREL) benchmarks for these systems.

Initial cost reductions were largely due to cheaper solar panels. However, in recent years, this trend has continued because of reductions in “soft costs,” such as sales taxes, supply chain costs, installer and developer profit, indirect corporate costs, transaction and financing costs, customer acquisition, permitting, and other non-hardware costs. Although soft costs have been declining, they have not dropped as much as hard costs, so are increasing as a share of the system’s total cost. According to NREL, soft costs comprised about 64% of the total system price for residential solar PV systems in 2020.

Lower fees for solar permitting. To address some soft costs, the Legislature capped building permit fees that local agencies can charge for residential and commercial solar energy systems: first by SB 1222 (Leno, 2012) until January 1, 2018, and then until January 1, 2025 by AB 1414 (Friedman, 2017). AB 1414 caps fees at the following limits:

	Base Fee	Additional Fees
Residential	\$450 for PV systems up to 15kW or solar thermal systems up to 10 kilowatt thermal (kWth)	\$15 per kW for each kW above 15kW; or \$15 per kWth for each kWth above 10kWth
Commercial	\$1,000 for PV systems up to 50kW or solar thermal systems up to 30kWth	\$7 kW for each additional kW between 51kW and 250 kW, plus \$5 per kW for each kW above 250 kW; or \$7 per kWth for each kWth between 30kWth and 260kWth, plus \$5 per kWth for each kWth above 260kWth

A city or county can charge permit fees exceeding these caps, provided that the city or county makes a written finding and adopted a resolution or ordinance showing substantial evidence of the reasonable cost to issue the permit. The city or county must also include in its finding:

- A determination that it has adopted appropriate ordinances to streamline the application and approval process in line with guidelines issued by the Office of Planning and Research (OPR), other state guidelines, and model ordinances.
- A calculation related to the administrative cost of issuing a solar permit that includes consideration of reductions in permitting cost due to adopting the streamlined processes under AB 2188, described below.
- A description of how the higher fee will result in a quick streamlined approval process.

Solar energy system permitting. Although exact procedures vary by location, the procedure for approving a solar energy system permit is similar to the procedure for approving a building permit. Typically, the solar installation company or customer submits an electrical diagram and roof layout plan to the city or county building department. If the plan is approved, the installer or customer pays a permit fee and starts the installation project.

In 2014, the Legislature required local governments to streamline their permitting processes for certain solar systems (AB 2188, Muratsuchi). AB 2188 requires every city and county, including charter cities, to adopt an ordinance that creates an expedited, streamlined permitting process for small residential rooftop solar energy systems, defined as systems that:

- Are no larger than 10 kW for PV systems or 30 kWth for thermal systems;
- Meet all building and safety codes as well as local building height requirements, and;
- Are installed on a single family or duplex family dwelling.

AB 2188 requires each city and county to develop a checklist of all requirements that allow rooftop solar energy systems to be eligible for expedited review, and requires them to approve all complete applications that meet the requirements of the checklist. A city or county must publish its application checklist and document requirements on a publicly accessible Internet Web site if the local agency maintains one, and to allow for the electronic signature on all forms, applications and other documents unless the city or county determines that it is unable to accept electronic signatures. Cities and counties must accept permit applications and all associated documents via email, the internet, or fax.

AB 2188 also limits local governments to administrative—nondiscretionary—review of solar energy system permits. Local governments cannot review permits based on standards other than health or safety, so they cannot require design review. The permitting process must generally conform to procedures identified in the “Solar Guidebook” developed by OPR, with modifications allowed only due to unique climactic, geological, seismological, or topographical conditions. Under AB 2188, only one inspection may be required for small residential rooftop solar energy systems that qualify for expedited review. Local officials must permit the system unless they find a specific, adverse impact on the public health or safety that cannot be mitigated.

State law also requires cities and counties to make all documentation and forms associated with the permitting of advanced energy storage, such as battery systems, available online (AB 546, Chiu, 2017). The city or county must also allow for electronic submittal and signatures of a permit application, much as is required for solar energy system permitting.

According to data collected by NREL, the median time to approval in California is four days, although NREL also notes that delays can add weeks or months to the process.

New Solar Homes Partnership. The California Energy Commission's New Solar Homes Partnership (NSHP) program provides financial incentives to install solar photovoltaic (PV) systems on new residential buildings. Administered by the Energy Commission, NSHP is funded by \$400 million collected from the state's three largest investor-owned utilities. These funds must be disbursed by December 31, 2021. Of the \$400 million, the Energy Commission estimates that \$72 million will remain unspent after current obligations are paid.

SolarAPP. SolarAPP is an online platform for rapid permitting of solar energy systems and associated battery storage that can check an application for code compliance and instantly issue an approval or denial. The NREL developed this software in collaboration with the following entities:

- International Code Council (ICC), which develops the code behind the California Residential and Building Codes;
- The National Fire Protection Association (NFPA), which develops the code behind the California Electrical Code;
- UL, which develops some of the standards for the equipment that make up a solar energy system (e.g., solar modules); and
- The International Association of Electrical Inspectors (IAEI).

SolarAPP integrates with certain popular planning programs, but can also be operated as a standalone application. This software is provided for free to local jurisdictions; applicants pay an administrative fee to defray the costs. In November 2020, the City of Pleasant Hill was the first city in the nation to issue a permit for a solar energy system using SolarAPP.

Despite the existing requirements regarding solar energy system permitting, the solar industry remains concerned with permitting delays. The Solar Energy Industry Association (SEIA) reports in a 2019 fact sheet on soft costs, "While there are direct costs associated with permitting (currently \$0.13/watt), the indirect costs of permitting can be much higher. Permitting and inspection practices are inconsistent across jurisdictions, so installers must take the time to become familiar with the practices of each jurisdiction they want to work in. Municipal permitting and inspection resources also vary greatly, and in some communities the gap between system installation and an inspector's permission to operate might take months. These complications lead to higher labor and overhead costs on the part of the installer, and in some cases can lead to the outright cancellation of the project by the customer. Based on data from our members, SEIA estimates that a one-week delay in system installation due to permitting, inspection and interconnection processes increases the client cancellation rate by 10%."

Some advocates want the Legislature to require local agencies to adopt SolarAPP for permitting solar energy systems and storage.

Proposed Law

Solar permitting process requirements. Senate Bill 617 requires cities and counties to implement an online, automated permitting platform, such as SolarAPP+, that verifies code compliance and instantaneously issues permits for a residential photovoltaic solar energy system

and an energy storage system paired with a residential photovoltaic solar energy system, and is consistent with the system parameters and configurations of SolarAPP+, including an inspection checklist. Cities and counties must also update their ordinances for streamlined solar permitting to allow a residential solar energy system and an energy storage system to use the online, automated permitting platform. SB 617 defines a residential photovoltaic solar energy system to be a solar energy system installed on a single family dwelling and limits the maximum size to 38.4 kW.

Cities and counties must also allow remote inspections, via video or photo, as an option for residential solar energy systems and battery storage systems. The remote option must be offered at no greater cost and no greater delay than in-person inspections. Local governments can only require one inspection, although a separate fire safety inspection can be performed if the local government doesn't have an agreement to perform inspections on behalf of the fire authority. Local agencies can also require an additional inspection if the system fails an inspection or if an inspector cannot verify compliance by remote means.

SB 617 sets certain dates by which cities and counties must comply with the bill, specifically:

- A city or county with a population of more than 50,000 must meet these requirements by September 30, 2022.
- A city or county with a population of 10,001 to 50,000 must meet these requirements by September 30, 2023.
- A city or county with a population of less than 10,000 is exempt from these requirements.

Cities, counties, and fire districts must report to the Energy Commission once they comply with the requirements of the bill. Cities and counties must also annually report to the Energy Commission on the number of permits within a year of implementing the permitting system required by the bill. The bill also provides that it does not limit or otherwise affect the generator interconnection requirements and approval processes for a local publicly owned electric utility.

Grant program. SB 617 allows the Energy Commission to provide technical assistance to cities and counties to support the adoption of the technology required by the bill, and requires the Energy Commission to:

- Develop grant guidelines by May 1, 2022;
- Make applications available by June 1, 2022;
- Prioritize processing grant applications from local jurisdictions serving low-income or disadvantaged communities, or communities containing high fire-threat districts as defined in existing law.

The bill also directs the Public Utilities Commission to require Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric Company to repurpose \$20 million of funds supporting NSHP for providing technical assistance and grant funding and to provide for the Energy Commission's costs to administer the program.

SB 617 makes a city or county that hasn't met the existing requirements for a streamlined solar energy permitting process and fee caps ineligible for the grant funds under the program, and cities and counties that don't meet the requirements in the bill are ineligible for all other state-sponsored or administered solar or energy storage monies.

SB 617 defines its terms and includes findings and declarations to support its purposes.

State Revenue Impact

No estimate.

Comments

1. Purpose of the bill. According to the author, “SB 617 requires jurisdictions of a certain size to implement an automated online solar permitting system, as well as offering remote building inspections for residential rooftop solar systems. Further, SB 617 establishes a program at the California Energy Commission to offer assistance to local jurisdictions in their implementation of an online permitting system and remote inspections. Although the costs of solar hardware have decreased by 80% in the past 15 years, the ‘soft’ costs associated with permitting are still a massive barrier. Beyond the cost, the unnecessary delays associated with solar permitting result in 10% of applicants rescinding their application prior to approval. This is a major hindrance to California’s clean energy goals, as current models suggest that the state will need to triple solar and wind capacity in order to meet 100% renewable energy by 2045. In order to address this delay and the costs associated with permitting, SB 617 will require that an online automated permitting system be utilized. In jurisdictions such as San Jose, the implementation of an automated system resulted in an increase in solar applications of over 600%. This system and the increase in applications that followed not only generated more revenue for San Jose through permitting fees, but also allowed for building officials to focus on other administrative tasks due to the ease and simplicity that an automated online system brings. Although San Jose utilized an alternative software, the National Renewable Energy Laboratory (NREL), in coordination with the Department of Energy, solar industry partners, and building safety experts, has created an open source software called SolarAPP+. SolarAPP+ allows for a simplified onboarding and adoption of automated permitting, as it only requires the jurisdiction to have an email account. SB 617 does not require that SolarAPP+ be utilized, but ensures that some form of automated online permitting be available so that residents can be efficiently approved for solar systems, and so that building departments are no longer inundated and slowed by solar permits. SB 617 also ensures accessible adoption for jurisdictions through the technical assistance program at the CEC.”

2. Say “please.” SolarAPP boasts impressive capabilities, and some jurisdictions (including the Cities of Los Angeles and San Jose) that have adopted it or similar programs praise the efficiency of automated permitting platforms for solar energy system permitting. However, SolarAPP is just rolling out to interested jurisdictions now, and as of February 2021, only 35 projects had been permitted through it. As adoption becomes more widespread, unexpected issues with SolarAPP may arise. SB 617 requires most jurisdictions in the state to adopt an application for permitting that has not been extensively deployed in the real world. Furthermore, it presumes that local governments are intentionally thwarting solar installations and wouldn’t adopt SolarAPP on their own, but for a mandate. SB 617 softens the impact to local governments by creating a grant program to assist local jurisdictions, but this grant program must run the gauntlet of the state’s budget to be funded, and even if it is supported by the full \$20 million repurposed from the NSHP, cities and counties will receive an average of less than \$50,000 to implement the bill. A more prudent strategy might be to enact the grant program to help early adopters implement SolarAPP and then, if uptake remains slow after it has been more widely adopted, consider more forceful direction.

3. Fire! Local building permit and inspection processes exist for good reason: to protect the health and safety of residents by ensuring that improvements are designed correctly and properly installed. Solar energy systems, especially those that are attached to battery storage systems, are no different. When installed incorrectly, they can pose potential risks of electrocution or fire. Local inspectors check many aspects of the design to ensure that solar panels are attached to a building in a structurally sound manner, are sized appropriately, and include all the requisite safety measures. SB 617 requires automated approvals of solar energy systems and remote inspections after they are built to confirm compliance. Electrical workers, firefighters, and others state that many aspects of permitting solar energy systems require thorough physical inspection, such as checking grounding wires, racking systems, operation of safety systems like rapid shutdown equipment, and cable management. They are concerned that SB 617's provisions could limit the important safety reviews of these systems by prohibiting reviews of plans by live personnel and putting up roadblocks to physical inspection. Does SB 617 strike the right balance between expediting permitting of solar energy systems and public health and safety?

4. We have the technology. Supporters of SB 617 argue that there is no technological reason not to adopt SolarAPP in every jurisdiction across the state. They argue that SolarAPP can be set up by a local jurisdiction by supplying only an email address and point to the City of Pleasant Hill, CA, which has a population of just over 34,000, as a city that successfully adopted SolarAPP at minimal cost. City representatives say that local jurisdictions may not want to rely on a third-party application that they don't control to meet a legal requirement, and therefore may develop their own software, at substantial cost. Smaller jurisdictions often have less capacity to adopt information technology systems and have fewer residents over which they can spread the cost of such systems. SB 617 exempts cities and counties with fewer than 10,000 residents (107 cities and just 3 counties) and delays implementation by a year for cities and counties with populations of 10,001 to 50,000. However, SB 617 includes some small jurisdictions that arguably should be exempted. Specifically, this metric improperly compares city populations to total county populations, which includes the people that live in each city within that county. The population in the unincorporated area may be a better proxy for the capacity of the county government to take on a new IT mandate. To ensure that SB 617 applies only to jurisdictions with sufficient capacity to adopt SolarAPP, the Committee may wish to consider amending SB 617 to exempt additional cities and/or the unincorporated area of additional counties.

4. Let's be clear. The Committee may wish to consider the following clarifying amendments:

- The bill requires the app to permit systems "instantaneously." To prevent technological issues from unintentionally putting local governments in a position to violate the bill, the Committee may wish to consider amending SB 617 to delete this term and require the app to permit systems "in real time."
- Except as specifically provided under law, a local agency and its employees are not liable for injuries, even if the injury arises from an act or omission of the local agency or its employees. SB 617 imposes a permitting process on local agencies that could short-circuit some safety reviews by limiting the number of inspections. The Committee may wish to consider amending SB 617 to clarify that the existing immunity applies to permits for solar energy systems issued via the process established in SB 617.
- The bill allows local agencies to require an additional inspection if an inspector cannot verify compliance by remote means, but it is unclear whether that inspection can be in

person. The Committee may wish to consider amending SB 617 to clarify that the additional inspection can be in-person.

5. Let's get technical. The Committee may wish to consider the following technical amendments:

- The bill refers to “SolarAPP+” as the name of the NREL application. However, NREL’s website and materials refer to the application as “SolarAPP.” The Committee may wish to consider amending SB 617 to refer to “SolarAPP.”
- The bill refers to fire authorities in certain parts of the bill but to fire departments and districts in another. The Committee may wish to consider standardizing these references throughout the bill.

6. Mandate. The California Constitution requires the state to reimburse local governments for the costs of new or expanded state mandated local programs. Because SB 617 adds to the duties of local planning officials and expands the definition of a crime, Legislative Counsel says that the bill imposes a new state mandate. SB 617 disclaims the state's responsibility for providing reimbursement because the costs are due to expanding a crime, but says that if the Commission on State Mandates determines that there are other mandated costs, reimbursement must be made pursuant to existing statutory requirements.

7. Double-referred. The Senate Rules Committee has ordered a double referral of SB 617: first to the Senate Governance and Finance Committee to hear issues of local permitting, and then to the Senate Energy Committee.

Support and Opposition (4/5/21)

Support: Dan Kalb- Oakland City Councilmember; Dianne Martinez- Mayor City of Emeryville; Gabriel Quinto- Mayor Pro Tem City of El Cerrito; Igor Tregub- Rent Board Commissioner (Ret.) City of Berkeley; Michael Vargas- Mayor City of Perris; Tom Butt- Mayor of Richmond; Advanced Energy Economy; Center for Sustainable Energy; Elders Climate Action, Norcal and Social Chapters; Environment California; Environmental Defense Fund; Grid Alternatives; Habitat for Humanity Greater San Francisco; Housing Action Coalition; Local Government Commission; Natural Resources Defense Council; Nextgen California; Sierra Club; Silicon Valley Youth Climate Action; Solar Rights Alliance; Solar United Neighbors; Spur; Sunpower Corporation; The Climate Center; Town of Windsor; Vote Solar

Opposition: California Professional Firefighters; California State Association of Electrical Workers; Coalition of California Utility Employees; International Brotherhood Electrical Workers Local Union 440; International Brotherhood of Electrical Workers Local Union 302; International Brotherhood of Electrical Workers, Local 1245; International Brotherhood of Electrical Workers, Local 18; International Brotherhood of Electrical Workers, Local 465; International Brotherhood of Electrical Workers, Local Union 441; International Brotherhood of Electrical Works Local Union 234; League of California Cities

-- END --