



MEMORANDUM

Date: September 10, 2026

To: Aung Maung, California Department of Transportation (Caltrans), Deputy Director of Maintenance and Operations (Acting)

From: Molly Sterkel, California Public Utilities Commission (CPUC) - Energy Division, Director for the Office of Electricity Supply, Planning and Costs

Regina Galer, California Energy Commission (CEC), Director of the Siting, Transmission and Environmental Protection Division

Rohimah Moly, Governor's Office of Business and Economic Development (GO-Biz), Deputy Director for Energy and Climate

Subject: Revisions to Caltrans Encroachment Permit Policies to Facilitate Energy Development Consistent with Senate Bill (SB) 49 (Becker, 2023)

Introduction

At Caltrans' request, this memo provides the rationale and criteria for Caltrans to consider extending encroachment permit eligibility to independent power producers (IPPs) for the purpose of building generation tie-lines (gen-ties)¹ in the interest of realizing the value of Senate Bill (SB) 49 (Becker, 2023), which amends section 91.9 (b)(9) of the Streets and Highways Code, directing Caltrans to "provide recommendations to facilitate the development of renewable energy generation facilities, energy storage facilities, and electrical transmission and distribution facilities on department-owned rights-of-way." The authors of the memo appreciate Caltrans' interest in reviewing the agency's policy towards encroachment permitting practices for Rights of Way (ROW) in California given the critical importance of these permits for electrical infrastructure development, including renewable energy, storage, and transmission and distribution facility development. Reducing the uncertainty and costs associated with electric facility permitting and permits is central to customer affordability, grid reliability, public safety, and achievement of the State's aggressive clean energy goals.

This memo addresses the narrow issue of how Caltrans encroachment permit policy can be revised to allow IPPs access to Caltrans ROW to build gen-ties and it is also intended to provide the background for subsequent policies under SB 49. The memo does not suggest or recommend an override to existing environmental processes,

¹ Gen-ties are transmission and distribution lines interconnecting generation facilities to the electrical grid.

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approvals or requirements.² Rather, the explanations presented here should give Caltrans information and context to support the extension of the use of their ROW to utilities and IPPs alike, and the information should guide future policies facilitating generation, storage, transmission, and distribution buildout under SB 49.

Background

Under current Caltrans' encroachment permit policy, IPPs are not generally eligible for encroachment permits. For the purposes of this memo, an independent power producer is a non-public utility entity that owns and operates electricity generation and/or battery energy storage system (BESS) facilities. For a definition of a "public utility" (utility) refer to the [Public Utilities Code, Section 216](#). In particular, Section 216(h) clarifies that merely owning an electric plant which participates in the CAISO market does not make the corporation owning the plant a public utility. Public Utilities Code Section 218 defines an electrical corporation, which is a broader term than public utility, that refers to "every corporation or person" that owns, controls, operates, or manages a plant for compensation except for their sole use.

The California Public Utilities Commission (CPUC) regulates the three large California investor-owned utilities (IOUs) such as Pacific Gas & Electric Company (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E).

The California Energy Commission (CEC) serves as one of the state's primary energy policy and planning agencies. Among other things, its primary functions include forecasting electricity and natural gas demand for state planning, and siting and licensing power plants with generating capacity of at least 50 megawatts (including associated transmission lines to the first point of change in ownership).

The **Energy Unit at the Governor's Office of Business and Economic Development (GO-Biz)** works to accelerate the planning, financing, and execution of critical energy infrastructure projects that are necessary for the state to reach its climate, energy, and sustainability policy goals.

California has many POUs (over 40) and IOUs (3 large and 3 small), as well as a growing number of other types of entities that own and operate electric infrastructure in California, including independent transmission owners (ITOs) such as LS Power and NextEra. The CEC maintains a list of electric load serving entities in California,³ and the

² In accordance with Streets and Highways Code, Section 671.5 the applicant must submit a completed application, as determined by the department. An application for an encroachment permit is complete when all other statutory requirements, including the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code), have been complied with.

³ See the California Energy Commission's [Electric Load-Serving Entities \(LSEs\) in California](https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/electric-load-serving-entities-lses), available at <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/electric-load-serving-entities-lses>.

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California Independent System Operator (CAISO) maintains a list of Participating Transmission Owners that include both IOUs, POUs, and ITOs.⁴ The California electric grid today is owned and operated by a wide array of public and private sector actors – including IOUs, POUs, ITOs, IPPs – as well as rural electric cooperatives and some Tribal governments.

Senate Bill (SB) 319 (McGuire, 2023) established a framework for electrical transmission planning and permitting, with the CEC playing a coordinating role. SB 319 asks the agencies to improve coordination in developing California's transmission infrastructure. Further, SB 319 requires the CEC, CPUC, and CAISO to jointly develop a Transmission Infrastructure Development Guidebook by July 1, 2025. The SB 319 Guidebook and related information is available on the CEC website.⁵

SB 100 (De León, 2018) is a landmark California law requiring 100% of the state's electric retail sales to come from renewable and zero carbon sources by December 31, 2045.

The law, as well as numerous pieces of related legislation, sets a **statewide clean electricity policy** under Public Utilities Code §454.53. It applies to all utilities, community choice aggregators, and publicly owned electric utilities selling electricity to California retail customers to meet a 60 percent renewables portfolio standard (RPS) by 2030 and achieve 100 percent retail sales from greenhouse gas free sources by 2045. SB 100 and related laws are key drivers in the increase in clean energy development in California.

Senate Bill (SB) 49 (Becker, 2023) directed Caltrans to evaluate policies impeding the use of their ROW for renewable energy, storage, and transmission and distribution facility development.⁶ While utilities, namely IOUs and POUs, are able to receive encroachment permits to build gen-ties through Caltrans ROW at minimal cost, IPPs are currently not able to apply for encroachment permits and face a lengthy and expensive alternative process to gain similar access to Caltrans ROW. Without a policy allowing IPPs to apply for encroachment permits in place, developers have limited ability to build gen-ties within Caltrans ROW in a timely manner. The lack of timely access to Caltrans ROW impedes efficient routing of gen-ties and increases the cost of generation and storage development for California electric customers. Future efforts to develop generation and transmission within Caltrans ROW, consistent with SB 49 related efforts, will entail building gen-ties through Caltrans ROW. Thus, encroachment permit policy revisions are needed to enable future development contemplated by SB 49.

⁴ See the California Independent System Operator (CAISO) list of Participating Transmission Owners, <https://www.caiso.com/documents/list-of-participating-transmission-owners.pdf>.

⁵ See [California Transmission System | California Energy Commission](https://www.energy.ca.gov/programs-and-topics/topics/california-transmission-system), <https://www.energy.ca.gov/programs-and-topics/topics/california-transmission-system>; See also Draft SB 319 Guidebook available at the SB 319 Docket, <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=23-SB-319>.

⁶ See bill text for Senate Bill 49, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202320240SB49.

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Summary of Key Issues for Caltrans Consideration

This memo contains three key points:

1. An explanation of how energy development consistent with the objectives of SB 49 is unlikely if Caltrans does not allow IPPs timely access to their ROW.
2. An explanation of how allowing private (IPP-owned) renewable energy generation and storage development in Caltrans' ROW provides public benefits.
3. Suggestions for criteria Caltrans can apply to ensure that:
 - a. IPP projects applying for encroachment permits serve the public interest;
 - b. Projects will adhere to engineering, safety, and maintenance (O&M) standards equivalent to those that utilities already owning infrastructure in Caltrans ROW follow; and
 - c. Caltrans does not become overwhelmed with speculative encroachment permit applications.

1. Energy Development Consistent with the Objectives of SB 49 is Unlikely if IPPs Cannot Access Caltrans ROW in a Timely Manner

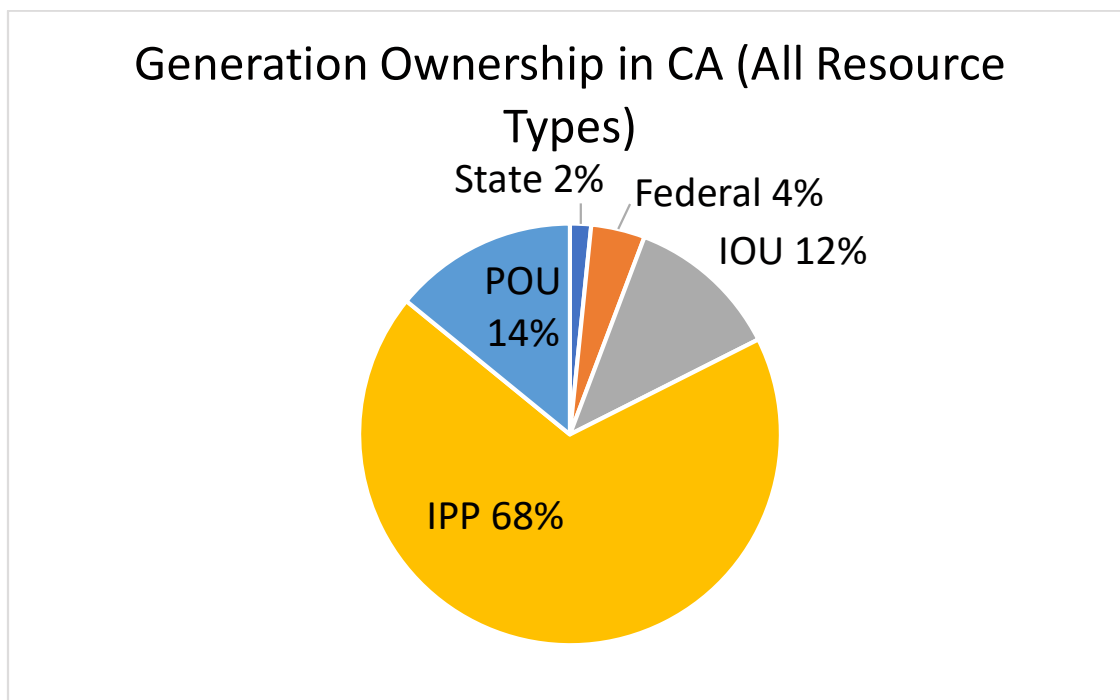
A. The majority of electricity generation in California is not owned by utilities.

As part of electricity restructuring efforts in the 1990s, California's three large IOUs were required to divest their generation assets, fundamentally changing California's electricity system. Prior to Assembly Bill (AB) 1890 (Brulte, 1996), IOUs owned or controlled most of the generation serving their customer bases.⁷ In the interest of fostering competition in the electricity industry, AB 1890 compelled IOUs to sell off many of their generation assets and to cede operational control of their transmission grids to CAISO. The result of electricity restructuring is that as of April 2026, IOUs only own 12% of the generation capacity in California. Public entities including POUs, state, and federal entities own a combined 20%, and IPPs own 68% of the generation capacity in California.⁸

⁷ See a short history of California electricity policy from the Senate Utilities Committee [here](https://seuc.senate.ca.gov/background-electricity-policy#:~:text=and%20subsequent%20legislation,-.Generation,via%20DWR%20contracts%20with%20EWGs), or <https://seuc.senate.ca.gov/background-electricity-policy#:~:text=and%20subsequent%20legislation,-.Generation,via%20DWR%20contracts%20with%20EWGs>.

⁸ This data comes from the CEC's California Energy Infrastructure datasets, which can be accessed [here](https://data.ca.gov/dataset/california-power-plants), <https://data.ca.gov/dataset/california-power-plants>

Figure 1. Generation Ownership in California (by Capacity)



Source: California Energy Commission Infrastructure datasets

B. IPPs own the vast majority of renewable energy generation in California.

California currently has approximately 100 GW of installed generation and storage capacity. According to CEC data, IPPs own 68% of all generation capacity in California, and they own 98% of the existing solar, wind and storage capacity in California. IPPs sell energy and capacity from IPP-owned resources to customers of both IOUs and POU.

C. Large quantities of renewable energy and storage will be needed to serve the California Grid in the Coming Decade

The CPUC is required to conduct Integrated Resource Planning for CPUC jurisdictional load serving entities, including large IOUs, as well as community choice aggregators (CCAs) and energy service providers (ESPs). In 2025, the CPUC modeled the need for an additional 90 GW of renewables and storage interconnecting to the California grid over the next 10 years.⁹ If trends hold, IPPs will develop and own the vast majority of those additional resources. Given that SB 49's purpose is to facilitate renewable energy and storage buildout on

⁹ See Table 6 in the 26-27 Decision transmitting the busbar-mapped IRP to CAISO [here](#) (page 60).

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Caltrans ROW, the bill can only succeed if IPPs – by far the most active developers of renewable and storage projects – are given equal access to Caltrans ROW.

D. The current encroachment permit policy has prevented development of gen-ties by IPPs in Caltrans ROW thus far and if not revised, will hinder energy development SB 49 seeks to facilitate.

Under current Caltrans encroachment permit and utility accommodation policies,¹⁰ IPPs are generally barred from applying for or receiving encroachment permits for gen-ties and instead must go through the alternate use agreement process to construct within Caltrans ROW.¹¹ Obtaining an alternate use agreement is both lengthier and more expensive than obtaining an encroachment permit. At the time of this writing, and according to Caltrans staff communications, at least six large solar projects in California have been indefinitely delayed from developing gen-tie lines through Caltrans ROW because of complications in the alternate use agreement process and uncertainty over whether IPPs should be allowed access to encroachment permits.¹² Additionally, the CEC, CPUC, and GO-Biz staff regularly hear from developers concerned about the lack of access to ROW as part of our work on the Tracking Energy Development (TED) Task Force.¹³ Based on these interactions with electric infrastructure development stakeholders, our understanding is that the lack of timely access to Caltrans ROW impedes efficient routing of gen-ties and increases the cost of generation development for California electricity customers. Because future efforts to build generation and transmission within Caltrans ROW will entail also building gen-ties through Caltrans ROW, encroachment permit policy revisions are needed and requested to unlock future development opportunities as contemplated under SB 49.

2. IPP-Owned Renewable Energy Generation and Storage Development in Caltrans ROW provide Public Benefits.

A. How the modern grid is operated

IPP projects are subject to strict interconnection rules whether they are connecting to an IOU, POU, or ITO. In each instance, an IPP signs a generator interconnection agreement (GIA) with the utility they are interconnecting to, and if the interconnecting utility is part of the CAISO – the agreement is also

¹⁰ See [Chapter 600](#) of the [Caltrans Encroachment Permits Manual](#) for the relevant policies.

¹¹ From conversations with Caltrans employees.

¹² From conversations with Caltrans employees.

¹³ The Tracking Energy Development Task Force is a joint staff effort, for more information visit www.cpuc.ca.gov/trackingenergy.

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signed by the CAISO. Once operational, IPPs are part of the electric grid and indistinguishable from infrastructure projects owned by the utilities themselves. All projects have to adhere to various electrical standards for safety, reliability, and operations.

The CAISO balancing authority controls the backbone transmission grid that serves approximately 80 percent of California's electric grid. (The CAISO also operates an electricity market for the day-ahead and real-time electricity grid.) The CAISO has a federally regulated interconnection process that applies to all generation and storage developers seeking to interconnect generating facilities on the CAISO-controlled transmission grid. Developers interconnecting projects to the CAISO sign three-party GIAs with the CAISO and the Participating Transmission Owner (PTO), an entity that has placed its transmission assets and entitlements under the CAISO's operational control, including, but not limited to, IOUs and ITOs. Once the generating facility successfully integrates into the CAISO market systems and transmission grid and achieves commercial operation, the CAISO dispatches the generating facility to serve load and maintain reliable grid operations. Generation facilities owned by IPPs are contracted by POU, IOUs, CCAs, and ESPs to provide energy and capacity products to their customers, as required in various state and federal laws. Therefore, there is little practical basis for distinguishing between generation assets owned by IOUs and generation assets owned by IPPs with interconnection agreements.

B. Renewable energy projects, regardless of ownership, serve the public interest by meeting the carbon-free emissions goal codified in SB 100.

SB 100 (De León, 2018) requires all retail sales of electricity to be renewable or carbon-free by 2045. Renewable energy projects, regardless of ownership, interconnecting to the California grid therefore serve the public interest by contributing to the meeting of SB 100.

3. Criteria Caltrans May Apply to IPP Applications for Encroachment Permits

A. Caltrans could require that IPP projects have a signed interconnection agreement with an electrical public utility (including IOUs, independent transmission owners, and POUs) as a condition for applying for an encroachment permit.

Requiring that IPP encroachment permit applicants have signed interconnection agreements prior to receiving an encroachment permit will ensure that:

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- i. The project will serve the public interest by interconnecting to the California electric grid.¹⁴
- ii. The project will be subject to the engineering and safety standards of the utility system that it is interconnecting to.
 - a. Caltrans staff inquired about a concern that IPP gen-ties may be riskier to their ROW because they are not held to the same high safety and engineering standards as utility projects. However, by requiring that applicants provide signed interconnection agreements this concern is alleviated because interconnection agreements mandate that gen-ties meet the safety, operational, and technical standards of the interconnecting utility.¹⁵ These requirements, which are common to all interconnection agreements,¹⁶ further mandate that IPP gen-ties meet applicable North American Electricity Reliability Corporation (NERC) and industry standards, which are often referred to as "Good Utility Practice" in interconnection documents.¹⁷
- iii. Interconnection agreements should be with an electrical public utility including IOUs, POU, and ITOs.
- iv. Interconnection agreements could be either for facilities seeking interconnection to the transmission system or facilities seeking interconnection to the distribution system. In various parts of California, the electric grid voltage considered distribution or transmission, or considered under the operational control of the CAISO or not, varies according to a complex multifactor test. The distinction between distribution and transmission voltages varies widely and is not relevant to this memo.

B. Caltrans may require that IPP projects provide approved permits (i.e., discretionary, land use, building, etc.) as a condition for receiving an encroachment permit.

In addition to requiring demonstration of a fully executed signed interconnection agreement, Caltrans may require that IPP encroachment permit applicants

¹⁴ This includes interconnection to transmission or distribution facilities within the CAISO area, as well as facilities operated by POU in California outside that area.

¹⁵ See CAISO's [standard LGIA template](#) section 5.10.2 which states, "Interconnection Customer shall make such changes to the Interconnection Customer's Interconnection Facilities as may reasonably be required by the Participating TO or the CAISO, in accordance with Good Utility Practice, to ensure that the Interconnection Customer's Interconnection Facilities are compatible with the technical specifications, Operational Control, and safety requirements of the Participating TO or the CAISO."

¹⁶ The Open Access Transmission Tariffs (OATT's) for three of the largest POU - LADWP, SMUD, and IID – were examined to confirm this. Refer to the following OATT links for more detail on the requirements POU place on interconnection facilities. [LADWP](#), Attachment M, Section 8.2; [SMUD](#), Standard Large Generator Interconnection Procedures (LGIP), Section 3.2; [IID](#), Facility Interconnection Studies, Section 2.3.3.

¹⁷ See CAISO's [standard LGIA](#) for a definition of "Good Utility Practice" in Article 1. Definitions.

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provide approved permits. This will ensure that Caltrans has a record of the designated lead agency (CPUC, CEC, or a local agency) with jurisdiction over each permit and can contact that agency for any related issues. The CPUC implements multiple General Orders to maintain and protect the public health and safety of California residents and businesses, to ensure that electric generating facilities are effectively and appropriately maintained and efficiently operated, and to ensure electrical service reliability and adequacy.¹⁸ Additionally, the CEC implements similar practices in cases where it has jurisdiction over permits.¹⁹

Given the complexity of encroachment permits and environmental permitting processes, it makes sense for an environmental permit to be a condition of receiving a final Caltrans ROW permit – but not necessarily a condition of commencing the encroachment permit discussion with Caltrans. Instead, the Caltrans encroachment permit process can be a key part of the environmental permitting process that will identify the final gen-tie routing. Without advance knowledge of the likely gen-tie routing, the environmental permitting process is delayed and speculative.

Finally, if an emergency occurs due to IPP infrastructure (such as a downed power line), and swift remediation is needed, 911 should be called followed by the interconnecting utility for swift remediation. See these [PG&E](#) and [SMUD](#) pages for examples. Additionally, the owner/operator of a generating facility would respond to repair the damage or address any operations and maintenance issues, and ensure the facility is functioning as expected.

¹⁸ For more information on the General Orders (GO), refer to GO 131-E, which sets forth rules for permitting, approving, and building electric transmission lines, substations and generation facilities, GO 95, which formulates uniform requirements for overhead electrical line constructions, maintenance and operation, GO 167-C, which details requirements for implementing maintenance, operation, and logbook standards for generating assets and BESS, and GO 165, which establishes requirements for the inspection of electric distribution and transmission facilities.

¹⁹ Public Resources Code section 25532 mandated that the CEC establish “a monitoring system to assure that any facility certified under this division is constructed and is operating in compliance with air and water quality, public health and safety, and other applicable regulations, guidelines, and conditions adopted or established by the commission or specified in the written decision on the application.” This is implemented in CEC’s Power Plant Compliance Program. For all CEC-jurisdictional power plants certified through the Application for Certification and Opt-In processes, the Energy Commission is responsible for plan review and construction inspection in accordance with the California Building Standards Code and the approved decision for the project. Staff conducts periodic inspections, reviews annual reporting requirements, conducts on-site audits, and investigates formal and informal complaints. Staff also works with project owners to bring plants into compliance or take enforcement action against violators.

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- C. Caltrans may require that IPP encroachment permit applicants have both signed interconnection agreements and approved permits as a condition for receiving an encroachment permit.**

This will ensure that only late-stage projects with a high probability of coming online will apply for encroachment permits, reducing the administrative burden on Caltrans to process permit applications.

Conclusion

The signatories of this memo appreciate the opportunity to provide guidance on Caltrans' encroachment permit policies to facilitate the development of renewable energy generation facilities, energy storage facilities, and electrical transmission and distribution facilities within Caltrans ROW, consistent with the objectives of SB 49.

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SIGNATURE PAGE

Policy Memorandum: Revisions to Caltrans Encroachment Permit Policies in Support of Implementing SB 49.

This memo may be signed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Emailed or faxed signatures will be treated as originals.

The undersigned authorized representatives hereby approve and attest to the accuracy of this memorandum on behalf of their respective agencies.

California Public Utilities Commission (CPUC)



Molly Sterkel, California Public Utilities Commission (CPUC) Energy Division, Director for the Office of Electricity Supply, Planning and Costs

09/14/2026

Date

California Energy Commission (CEC)



[Regina M. Galer \(Sep 15, 2026 07:47:07 PDT\)](#)

Regina Galer, California Energy Commission (CEC), Director of the Siting, Transmission, and Environmental Protection Division

09/15/2026

Date

Governor's Office of Business and Economic Development (GO-Biz)



Rohimah Moly, Governor's Office of Business, and Economic Development (GO-Biz)

09/15/2026

Date