

Senate Bill No. 1006

CHAPTER 597

An act to add Section 454.58 to the Public Utilities Code, relating to electricity.

[Approved by Governor September 25, 2024. Filed with
Secretary of State September 25, 2024.]

LEGISLATIVE COUNSEL'S DIGEST

SB 1006, Padilla. Electricity: transmission capacity: reconductoring and grid-enhancing technologies.

Existing law establishes the policy of the state that eligible renewable energy resources and zero-carbon resources supply 90% of all retail sales of electricity to California end-use customers by December 31, 2035, 95% of all retail sales of electricity to California end-use customers by December 31, 2040, 100% of all retail sales of electricity to California end-use customers by December 31, 2045, and 100% of electricity procured to serve all state agencies by December 31, 2035.

This bill would require each transmission utility, as defined, on or before January 1, 2026, and every 2 years thereafter, to prepare a study of the feasibility of projects using grid-enhancing technologies to achieve, among other purposes, increased capacity to connect new renewable energy and zero-carbon resources, as provided. The bill would require each transmission utility, on or before January 1, 2026, and at least every 4 years thereafter, to prepare a study of which of its transmission lines can be reconductored with advanced conductors to achieve, among other purposes, increased capacity to connect new renewable energy and zero-carbon resources, as provided. The bill would, upon completion of those studies, require each transmission utility to submit the studies to the Independent System Operator, as specified, and would require each transmission utility to request that the Independent System Operator review the results of the studies as part of the annual transmission planning process for economic, reliability, and policy goals. The bill would, upon submission to the Independent System Operator, require the transmission utilities to make their studies publicly available. The bill would specify that information in the studies that is determined by the Independent System Operator, in consultation with the transmission utilities, to be necessary to protect the security of the electrical transmission system is to be withheld from public disclosure.

Under existing law, a violation of the Public Utilities Act is a crime.

Because the above-described requirements would be a part of the act, a violation of which would be a crime, this bill would impose a state-mandated local program.

Existing constitutional provisions require that a statute that limits the right of access to the meetings of public bodies or the writings of public officials and agencies be adopted with findings demonstrating the interest protected by the limitation and the need for protecting that interest.

This bill would make legislative findings to that effect.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

The people of the State of California do enact as follows:

SECTION 1. Section 454.58 is added to the Public Utilities Code, to read:

454.58. (a) The Legislature finds and declares all of the following:

(1) California must dramatically increase the capacity of its electrical transmission and distribution systems to meet the goals of Section 454.53 and to decarbonize its economy.

(2) The increase in transmission and distribution capacity must be done rapidly and cost effectively.

(3) California transmission utilities and the Independent System Operator can jointly explore opportunities to advance technologies that may quickly and cost effectively increase transmission capacity.

(4) Reconductoring existing transmission lines with advanced conductors and installing grid-enhancing technologies, such as advanced power flow control systems, dynamic line rating systems, and topology optimization software, can quickly and cost effectively increase transmission capacity.

(5) The benefits of these technologies include lower electricity rates, less wildfire risk, increased reliability, less transmission line congestion, less curtailment of renewable generation resources, and increased capacity to interconnect new renewable generation, storage, and other zero-carbon resources.

(6) Grid-enhancing technologies may expand and accelerate transmission capacity at a lower cost as compared to traditional transmission technologies.

(7) Reconductoring existing transmission lines with advanced conductors in existing rights-of-way can be accomplished at a fraction of the cost of building new transmission lines and are therefore often quite cost effective.

(8) Grid-enhancing technologies can be deployed within months and reconductoring with advanced conductors can be accomplished within one or two years. Other types of transmission capacity increases can take many years.

(9) The current transmission planning process assesses the value of transmission investments based strictly on the needs of a single assumed planning scenario of specific resources and geographies over a 10-year planning horizon, and does not appropriately incorporate the value that

increased transmission capacity can provide in reducing risks surrounding major technology and permitting uncertainties, expanding optionality for load-serving entities, and delivering benefits over a longer time horizon.

(b) For purposes of this section, the following definitions apply:

(1) “Grid-enhancing technologies” means hardware and software that increases the capacity of electrical lines and improves the efficiency, reliability, and safety of the grid. Grid-enhancing technologies include, but are not limited to, dynamic line rating systems, advanced power flow control systems, and topology optimization software.

(2) “Reconductored with advanced conductors” means replacing the existing electric conductor with a conductor that has a direct current electrical resistance at least 10 percent lower than existing conductors of a similar diameter on the system and may include rebuilding support structures or other associated facilities.

(3) “Transmission utility” means an electrical corporation that is a participating transmission owner that has turned over operation of its transmission system to the Independent System Operator.

(c) (1) On or before January 1, 2026, and every two years thereafter, each transmission utility shall prepare a study of the feasibility of projects using grid-enhancing technologies to achieve one or more of the purposes listed in paragraph (2). The transmission utility shall provide information on feasibility, cost, rating, implementation time, and any other necessary information to the Independent System Operator at the same time as any other projects proposed to be part of the Independent System Operator’s annual transmission planning process. The transmission utility shall request the Independent System Operator to review the results of the study as part of its annual transmission planning process for economic, reliability, and policy goals, and shall request the Independent System Operator to include grid-enhancing technologies in all transmission planning studies and analyses.

(2) The study shall be designed to identify projects using grid-enhancing technologies that can achieve one or more of the following:

- (A) Increase transmission capacity.
- (B) Reduce transmission system congestion.
- (C) Reduce curtailment of renewable and zero-carbon resources.
- (D) Increase reliability.

(E) Reduce the risk of igniting wildfire, by means of investments that are consistent with the transmission utility’s approved wildfire mitigation plan.

(F) Increase capacity to connect new renewable energy and zero-carbon resources.

(G) Increase flexibility to reduce risks surrounding technology and permitting uncertainties in statewide electrical system planning and improve optionality for load-serving entities.

(d) (1) On or before January 1, 2026, and at least every four years thereafter, each transmission utility shall prepare a study of which of its transmission lines can be reconductored with advanced conductors to achieve

one or more of the purposes listed in paragraph (2). The transmission utility shall provide information on feasibility, cost, rating, implementation time, and any other necessary information to the Independent System Operator at the same time as any other projects proposed to be part of the Independent System Operator's annual transmission planning process. Each transmission utility shall request that the Independent System Operator review the results of the study as part of its annual transmission planning process for economic, reliability, and policy goals, and shall request the Independent System Operator to include reconductoring with advanced technologies in all transmission planning studies and analyses.

(2) The study shall identify electrical lines where reconductoring with advanced conductors can achieve one or more of the following:

- (A) Significantly increase transmission capacity.
- (B) Reduce transmission system congestion.
- (C) Reduce curtailment of renewable and zero-carbon resources.
- (D) Increase reliability.
- (E) Reduce the risk of igniting wildfire, where the investment is consistent with the transmission utility's approved wildfire mitigation plan.
- (F) Increase capacity to connect new renewable energy and zero-carbon resources.
- (G) Reduce line losses.
- (H) Increase the ability to quickly energize new customers or serve increased customer load.
- (I) Increase flexibility to reduce risks surrounding technology and permitting uncertainties and improve optionality.

(e) (1) Upon submitting the study to the Independent System Operator pursuant to subdivision (c) or (d) and except as provided in paragraph (2), each transmission utility shall make the study publicly available.

(2) Information in the study that is determined by the Independent System Operator, in consultation with the transmission utilities, to be necessary to protect the security of the electrical transmission system shall be withheld from public disclosure.

(f) Each electrical corporation operating a distribution system shall consider grid-enhancing technologies and reconductoring with advanced conductors as part of its annual distribution planning process.

(g) This section does not affect the right of a transmission utility to implement self-approved projects.

(h) This section does not affect any project previously approved by the Independent System Operator.

SEC. 2. The Legislature finds and declares that Section 1 of this act, which adds Section 454.58 of the Public Utilities Code, imposes a limitation on the public's right of access to the meetings of public bodies or the writings of public officials and agencies within the meaning of Section 3 of Article I of the California Constitution. Pursuant to that constitutional provision, the Legislature makes the following findings to demonstrate the interest protected by this limitation and the need for protecting that interest:

To protect information determined to be necessary to protect the security of the electrical transmission system, it is necessary that this act limit the public's right to access that information.

SEC. 3. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.