SENATE COMMITTEE ON ENERGY, UTILITIES AND COMMUNICATIONS
Senator Benjamin Allen, Chair
2025 - 2026 Regular

Bill No:	AB 1787	**Hearing Date:**	6/30/2026
Author:	Schultz		
Version:	6/16/2026 Amended		
Urgency:	No	**Fiscal:**	Yes
Consultant:	Nidia Bautista		

SUBJECT: Electrical corporations: rates: smart meter infrastructure: dynamic rate option

DIGEST: This bill requires the California Public Utilities Commission (CPUC) to require a large electrical corporation, if the CPUC approves the large electrical corporation's request to upgrade its smart meter infrastructure relative to infrastructure in place on January 1, 2026, to offer all its customers at least one dynamic rate option no later than one year after the upgraded smart meter infrastructure is anticipated to be placed into service.

ANALYSIS:

Existing law:

1) Establishes and vests the CPUC with regulatory authority over public utilities, including electrical corporations, also referred to as electric investor-owned utilities (IOUs). (Article 12 of the California Constitution)

2) Authorizes the CPUC to fix the rates and charges for every public utility and requires that those rates and charges be just and reasonable. (Public Utilities Code §451)

3) Requires each electric IOU customer with distributed energy resources (DERs), as specified, to participate in real-time metering and pricing programs; and requires the CPUC to adopt a real-time pricing tariff by December 31, 2001, to serve these customers. (Public Utilities Code §353.3)

4) Requires the CPUC to ensure that rates are sufficient to enable electric IOUs to recover a just and reasonable amount of revenue from residential customers as a class, while observing the principle that electricity and gas services are necessities, for which a low affordable rate is desirable and while observing the principle that conservation is desirable in order to maintain an affordable bill. (Public Utilities Code §739)

5) Requires the CPUC to establish rates using cost allocation principles that fairly and reasonably assign to different customer classes the costs of providing service to those customer classes, consistent with the policies of affordability and conservation. (Public Utilities Code §739.6)

6) Authorizes the CPUC to adopt new, or expand existing, fixed charges for the purpose of collecting a reasonable portion of the fixed costs of providing electrical service to residential customers. Requires the CPUC to structure the fixed charge on an income-graduated basis with no fewer than three income tiers. (Public Utilities Code §739.9)

7) Permits electrical corporations, with approval of the CPUC, to offer residential customers the option of receiving electric service pursuant to "time-variant pricing," which includes time-of-use rates (TOU), critical peak-pricing, and real-time pricing. Beginning in 2018, an IOU can employ default TOU pricing as long as the customer is provided with a rate comparison for one year of all billing options (commonly referred to as shadow-billing) and associated customer education. Subsequently, the customer must be guaranteed for one year that the total amount paid for electric service will not exceed the amount that would have been due under the customer's previous rate schedule (commonly referred to as bill protection). (Public Utilities Code §745)

8) States it is the policy of the state to modernize the state's electrical transmission and distribution system to maintain safe, reliable, efficient, and secure electrical service, with infrastructure that can meet future growth in demand and achieve all of the following, which together characterize a smart grid: increased use of cost-effective digital information and control technology to improve reliability, security, and efficiency of the electric grid; dynamic optimization of grid operations and resources, including appropriate consideration for asset management and utilization of related grid operations and resources, with cost-effective full cyber security; deployment and integration of cost-effective distributed resources and generation, including renewable resources; development and incorporation of cost-effective demand response, demand-side resources, and energy-efficient resources; among others. (Public Utilities Code §8360)

9) Prohibits electrical and gas corporations from sharing, disclosing, or otherwise making accessible to any third party a customer's electrical or gas consumption data, except in aggregated form or upon consent of the customer. (Public Utilities Code §8380)

This bill:

1) Makes several findings and declarations regarding dynamic grid conditions often resulting in widely fluctuating wholesale electricity prices, the potential for dynamic retail pricing to minimize electricity costs for participating customers with the tools to follow grid conditions and states the intent of the Legislature to ensure customers have near real-time access to the electricity usage data from their smart meters.

2) Requires the CPUC to require a large electrical corporation, if the CPUC approves the large electrical corporation's request to upgrade its smart meter infrastructure relative to infrastructure in place on January 1, 2026, to offer all its customers at least one dynamic rate option no later than one year after the upgraded smart meter infrastructure is anticipated to be placed into service.

3) Requires the dynamic rate option to include:

   a) Time-varying distribution rate that reflects dynamic distribution grid constraints in the distribution service area, if the CPUC determines it is feasible, cost-effective, and equitable.
   b) A time-varying generation rate for bundled customers that reflects day-ahead hourly wholesale conditions.
   c) Nonbypassable charges.

4) Require the CPUC to consult with the Federal Energy Regulatory Commission (FERC) to ensure implementation of dynamic rate option is consistent with the FERC's transmission ratemaking authority.

5) Requires the CPUC to ensure, in reviewing a request of a large electrical corporation to recover costs associated with upgrading its smart meter infrastructure, that specified conditions are met.

6) Requires the CPUC to ensure, among other things, the large electrical corporation makes the same time-varying distribution rates available to both bundled customers and unbundled customers located in the same geographic area, as specified.

Background

Dynamic rates. As the California Energy Commission (CEC) has noted, time-dependent rates are designed to reflect the time-dependent marginal cost of electricity more accurately, on a daily, hourly, or sub-hourly basis. The closer retail prices are

aligned with marginal costs in space and time, the better customers can manage flexible loads, enable further development of carbon-free supply resources and improve system efficiency. Time-varying electricity rates are designed to mirror the variability in wholesale electricity prices, with the intended effect of discouraging electricity use during periods of high demand and encouraging use when supplies are plentiful. While TOU rates are a form of time-dependent rates, real-time (or dynamic) rates have been the focus of the next frontier of electricity rate design as they better reflect market conditions in near real-time. The concept is to allow the real-time supply and demand of wholesale electricity prices to be reflected at particular time intervals to customers and thereby allowing customers to adjust their consumption based on these prices. This is somewhat similar to the real-time pricing that had been prevalent for long-distance telephone service (though it is no longer a common feature) or as is experienced by surge pricing for ride-hailing services, such as Uber and Lyft, when prices rise with increased demand.

Opportunities for effective real-time pricing. Effective real-time pricing rests on customers having control over their consumption, accurate real-time visibility of prices that reflects the marginal cost of the service, and the ability of customers to quickly adapt to changing conditions, among other requirements. Dynamic rates have long been an area of interest and pursuit among some electricity regulators, customers, and stakeholders, going back 20+ years. The investments in advanced metering infrastructure (smart meters) by electric utilities are a key component to deploying dynamic rates which ensure two-way communication between the customers' electric meter and the electric grid. Additionally, the increase in intermittent renewable energy resources on the electric grid, as well as the deployment of DERs, particularly solar, energy storage, thermostats, electric vehicles (EVs), and others, further supports the opportunities for dynamic pricing to help shift energy loads to times when prices are lower and supply is more abundant (known as load shifting and demand flexibility). This is particularly the case if customers are able to depend on automated programming afforded by these devices, thereby reducing the need for customers to manually monitor and adjust their load to account for changing prices.

State actively pursuing optional dynamic rates. California has been actively (but cautiously) studying and piloting dynamic rates, with particular concerns about potential impacts to electric grid reliability, overall costs on the system, impacts to customers (especially vulnerable customers), fairness in rate recovery among customers, and other concerns. The rapid growth of electric end uses – including EV charging, DERs, and building decarbonization – presents new challenges and opportunities for coordinating demand flexibility to meet system needs on a regular basis.

CPUC Proceeding on demand flexibility (R.22-07-005) Order Instituting Rulemaking to Advance Demand Flexibility through Electric Rates. In July 2022, the CPUC opened a rulemaking to establish demand flexibility policies and modify electric rates to advance the following objectives: (a) enhance the reliability of California's electric system; (b) make electric bills more affordable and equitable; (c) reduce the curtailment of renewable energy and greenhouse gas (GHG) emissions associated with meeting the state's future system load; (d) enable widespread electrification of buildings and transportation to meet the state's climate goals; (e) reduce long-term system costs through more efficient pricing of electricity; and (f) enable participation in demand flexibility by both bundled and unbundled customers. As an early basis of the proceeding, in June 2022, the CPUC's Energy Division released a whitepaper, *Advanced Strategies for Demand Flexibility Management and Customer DER Compensation*, a proposal for California Flexible Unified Signal for Energy (CalFUSE) that includes integrating real-time price signals in customer rates with better DER management. The whitepaper proposed strategies for advancing demand flexibility through a universally accessible, dynamic, and economic signal.

The staff Whitepaper identified six strategies:

1) Provide universal access to the current electricity price through a statewide internet-based price portal that provides the current composite electricity price specific to each customer at any time.
2) Introduce dynamic energy prices based on real-time wholesale energy costs that reflect the localized marginal cost of energy.
3) Incorporate dynamic capacity prices based on real-time grid utilization.
4) Offer bi-directional electricity prices that allow customers to import and export energy based on the same dynamic, composite prices.
5) Offer a subscription option based on customer-specific load shapes.
6) Enable transactive features that allow customers to lock in electricity prices to import or export a pre-determined quantity of energy at some future time.

As part of the proceeding, in April 2023, the CPUC adopted a decision *(D. 23-04-040) Decision Adopting Electric Rate Design Principles and Demand Flexibility Design Principles*, which updated electric rate design principles for the assessment of the rate design proposals of three large electric investor-owned utilities (IOUs). These principles were based on previously adopted versions, including those adopted in 2015, after the passage of AB 327 (Perea, Chapter 611, Statutes of 2013), which required changes to electricity rate designs which were also based on the 1961 Bonbright Principles which have guided electric utility ratemaking at the CPUC and across the country. The new electric ratemaking principles are intended to modernize the ratemaking approach and were informed by the Demand Flexibility Whitepaper. Within the proceeding, the CPUC has also directed pilots by the electric IOUs to

assess the real-life impacts of optional dynamic rates on customers and the electric grid. Learnings from these pilots are expected in 2027.

The adopted electric rate design principles are as follows:

a) All residential customers (including low-income customers and those who receive a medical baseline or discount) should have access to enough electricity to ensure that their essential needs are met at an affordable cost.
b) Rates should be based on marginal cost.
c) Rates should be based on cost causation.
d) Rates should encourage economically efficient (i) use of energy, (ii) reduction of GHG emissions, and (iii) electrification.
e) Rates should encourage customer behaviors that improve electric system reliability in an economically efficient manner.
f) Rates should encourage customer behaviors that optimize the use of existing grid infrastructure to reduce long-term electric system costs.
g) Customers should be able to understand their rates and rate incentives and should have options to manage their bills.
h) Rates should avoid cross-subsidies that do not transparently and appropriately support explicit state policy goals.
i) Rate design should not be technology-specific and should avoid creating unintended cost-shifts.
j) Transitions to new rate structures should (i) include customer education and outreach that enhances customer understanding and acceptance of new rates, and (ii) minimize or appropriately consider the bill impacts associated with such transitions.

Particularly relevant to this bill, the CPUC decision also adopted the following new *Demand Flexibility Design Principles* to guide the development of demand flexibility tariffs, systems, processes, and customer experiences of the state's three large electric IOUs:

a) Demand flexibility tariffs should be designed in accordance with all of the CPUC's Electric Rate Design Principles.
b) Demand flexibility tariffs should provide a dynamic price signal in a standardized format that can be integrated into third-party DERs and demand management solutions.
c) Dynamic prices should, to the extent feasible, accurately incorporate the marginal costs of energy, generation capacity, distribution capacity, and transmission capacity based on grid conditions.

d) The systems and processes for calculating dynamic price signals should be able to include bundled and unbundled rate components so that any load-serving entity can elect to participate.
e) Customers (including low-income customers and those who receive a medical baseline or discount) should have access to tools and mechanisms that enable them to plan and schedule their energy use while managing the monthly variability of their bills.
f) Demand flexibility tariffs should provide marginal cost-based compensation for exports to enable economically efficient grid integration of customer-sited electrification technologies and DERs.

CEC Load Management Standards. In addition to the CPUC proceeding, in 2022, the CEC made revisions to its Load Management Standards (Docket 21-OIR-03). The proposed amendments require the five largest electric utilities in California and the community choice aggregators (CCAs) located within their boundaries to: (i) develop retail electric rates that change at least hourly to reflect locational marginal costs; (ii) update the time dependent rates in the CEC's Market Informed Demand Automation Server database; (iii) implement a single statewide standard method for providing automation service providers with access to customers' rate information; and (iv) educate and enable customers to participate in load management through participation in hourly rates or load flexibility programs based on hourly rates. In January 2023, the Office of Administrative Law approved the CEC's revisions to the Load Management Standards which require all electric IOUs, CCAs, and publicly owned utilities to provide optional hourly marginal-based rates to all customer classes by January 1, 2027.

In August 2025, the CPUC closed the proceeding and adopted guidelines for Pacific Gas & Electric (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E) to design demand flexibility rates and comply with the CEC's Load Management Standards. Additionally, the CPUC directed SDG&E to propose demand flexibility rates for all customer classes by late November 2025, which was later extended to February 2026. The decision also directed PG&E and SCE to provide additional information within their pilot programs' proceedings and to share any learnings from their pilots by May 2028. In sum, there has been a directive from the CPUC to propose demand flexibility rates, but these proposals are still being developed, and data are still being collected in ongoing pilots.

Smart meters. Smart meters which are also known as advanced metering infrastructure are a critical component of smart grids. Smart meters and associated smart grid technology allow utilities and customers to quickly monitor energy usage, manage the grid system more effectively, and can better handle electricity from renewable sources like rooftop solar. Beyond the data-sharing benefits, smart meters also save utilities money on avoided meter operation costs and truck dispatch as

service issues can be handled remotely in some cases (such as disconnecting service due to nonpayment). The Sacramento Municipal Utility District (SMUD) saw over $8.6 million in savings in the first 13 months of smart meter deployment from reduction in manual meter readings and service calls alone.[1] Smart meters are also critical in achieving advanced rate design – such as dynamic, time-varying tariffs – which rely on the fast flow of customer usage data to be implementable. Smart meters enable more granular measurement of consumption from the electric system.

Tens of millions of federal dollars flowed to California utilities after passage of the American Recovery and Reinvestment Act in 2009, largely to finance smart meter installations. From 2009-2020, the CPUC annually reported on the state's smart grid activities and as part of their last report, the CPUC provided a status noted that less than one percent (<1%) of all SDG&E, SCE, and PG&E customers remained on older, analog meters (largely due to their opting out).

Recently, SDG&E, PG&E, and SCE have all submitted requests to the CPUC for upgrades to their current smart meter infrastructure. The IOUs suggest that these upgrades are not only necessary but will yield needed improvements in customer billing systems, more refined resolution of energy usage data, and easier integration with DERs.

Overview of Electric IOU applications for smart meter and related system upgrades at the CPUC

IOU	Project	Cost	Purpose
PG&E	Electric AMI 2.0 Program (Application A-25-05-009)	$194.5 M	Deployment of ~300,000 next-generation electric smart meters
PG&E	Gas AMI Program (Application A-25-05-009)	$452.6 M	Replacement of legacy gas meters and system upgrades
PG&E	Billing Modernization Initiative (Application A-24-10-014)	$761.3 M	Update billing services and data management systems
SDG&E	Smart Meter 2.0 (Application A-25-12-012)	$825 M	Replacing Smart Meter 1.0 technology
SCE	NextGen Enterprise Resource Planning (Application A.25-05-009)	$1.162 B	Update technology backbone responsible for many central processes, including smart meter technology

[1] Pg. 54, Office of Electricity Delivery and Energy Reliability, US DOE, *Advanced metering Infrastructure and Customer Systems*, September 2016; https://gridmap.gridwise.org/wp-content/uploads/2024/07/AMI-Summary-Report_09-26-16.pdf

Comments

Need for this bill. According to the author:

> To address California's electric affordability and grid resiliency challenges, AB 1787 requires investor-owned utilities to offer at least one dynamic pricing option and real-time data access as a requirement of their next smart meter and system upgrade. By aligning consumer retail rates with dynamic hourly wholesale costs, the bill encourages consumers to save money by shifting usage to time periods of abundant, low-cost renewable and carbon-free energy, which lowers bills for participating customers with flexible demand, and reduces overall grid stress and costs for all customers. Crucially, the legislation ensures these new rate designs are implemented without shifting costs between different customer classes.

The potential of dynamic rates. Dynamic rates hold much promise, but there is also a need to be cautious. As noted above, optional dynamic rates can provide electric utility customer savings, make more efficient use of the electric grid, support greater integration of intermittent renewable energy, and support reliability. However, there are many considerations that must be addressed in designing and implementing dynamic rates, especially as they could result in high electricity bills for customers if they don't have the ability to manage their consumption, let alone on the time intervals (potentially in a five-minute intervals) of the dynamic rate. This could include customers dependent on electricity for their medical needs, or those who aren't able to shift uses at other times of the day (for example, if they are working away from home and can only manage laundry or need air conditioning during times of the day when wholesale prices are highest). Additionally, the optional dynamic rates could result in unintended additional costs to nonparticipating customers. In many cases, these and other concerns are informing the CPUC's efforts to adopt the aforementioned principles, ensure learnings from current pilots, and generally address these and other issues within the proceeding. A February 2025 evaluation of a pilot by SCE that utilized shadow billing to test hourly rate time-intervals over three years (2022-24) did not find evidence of consistent and/or large changes in hourly energy usage due to customer price response. The evaluation further noted that TOU rates seemed to provide a greater price signal to encourage load shifting compared to the dynamic rates.

This bill prescribes dynamic rate options. This bill requires the CPUC to require optional dynamic pricing when the CPUC approves an electric IOU's application for smart meter infrastructure upgrades relative to the infrastructure in place as of January this year. This bill requires the CPUC to implement a dynamic rate option no later than one year after the upgraded smart meter infrastructure is anticipated to be placed into service. This bill prescribes specific elements of the dynamic rate option

that reflects dynamic distribution grid constraints in the distribution service area if the CPUC determines it to be feasible and cost-effective. This bill also requires the CPUC to consult with FERC to ensure the dynamic rate is consistent with the FERC's transmission rate authority. This bill requires the CPUC to ensure various components of the smart meter technology, including wireless communications that provides near real-time data directly from the smart meter to a device or service selected by the customer at no additional charge to the customer or the third-party with additional provisions. This bill prescribes various evaluations the CPUC must conduct as part of implementing the requirements of this bill, including information about potential cost shifts to nonparticipating customers. This bill authorizes net-energy metering (NEM) [and net-billing tariff (NBT)] customers to elect service under a dynamic rate option as an alternative to their NEM/NBT tariff.

Electric IOUs raise concerns with bill's prescriptive approach. The state's three large electrical IOUs oppose this bill raising concerns that there are existing and active efforts at the CPUC to develop dynamic pricing, including several pilots by each of the utilities and an ongoing rate-setting proceedings involving all stakeholders. PG&E argues that the bill "short-circuits this process by prescribing specific rate structures and requiring program expansion before feasibility, CCA participation, and affordability have been demonstrated." The electric IOUs also oppose this bill's requirement to tether cost recovery for investments in smart meter infrastructure upgrades to a single-prescriptive time-varying rate. They also oppose efforts to limit the CPUC's authority to approve cost-effective investments with multiple benefits. They further raise concerns about potential costs to non-participating customers for the prescriptive requirements of real-time data in this bill. SCE further raises concerns that this bill by requiring direct access to smart meters through wireless communication will require costly network and cybersecurity upgrades that will introduce risks that outweigh potential benefits.

Need for amendments. In order to ensure additional protections for all ratepayers, those participating and nonparticipating, *the author and committee may wish to amend this bill to afford the CPUC additional regulatory discretion in order to ensure the most beneficial rate options for all customers, while supporting the proponents' goal to deploy dynamic rate options, specifically:*

- *Clarify that the dynamic rate options must be available to applicable customer segments within 18 months from the upgraded smart meter infrastructure, in lieu of requiring options for all customers within one year.*
- *Delete the requirement that there will be no additional charge to participating customers and third-party providers for near real-time data to a standard compliant device, and instead require the CPUC to determine whether there are any costs to participating customers and third-party providers.*

- *Authorize the CPUC to discontinue dynamic rate options if they do not provide the expected benefits or create cost-shifting to other customers.*

Prior/Related Legislation

AB 1117 (Schultz, 2025) would have required the CPUC to develop optional dynamic rate tariffs applicable to each large electrical corporation for their customers, specifically by July 1, 2028, for medium and large commercial and industrial customers, and by July 1, 2030 for residential and small commercial customers. The bill was held by the Senate Appropriations Committee.

SB 541 (Becker, 2025) would have required the CEC, as part of each integrated energy policy report, to identify incremental load shifting targets to meet the statewide load-shifting goal, including biennial adjustments to the goal. The bill was vetoed.

SB 846 (Dodd, Chapter 239, Statutes of 2022) among its many provisions, required the CEC to adopt a load shifting goal to reduce net peak electrical demand.

AB 327 (Perea, Chapter 611, Statutes of 2013) among its many provisions, restructures the rate design for residential electric IOU customers.

FISCAL EFFECT: Appropriation: No Fiscal Com.: Yes Local: Yes

SUPPORT:

Advanced Energy United
Alliance for Retail Energy Markets
California Efficiency + Demand Management Council
California State Association of Counties
Environment California
NRG Energy
Sierra Club of California

OPPOSITION:

Pacific Gas and Electric Company
San Diego Gas and Electric Company
Southern California Edison

ARGUMENTS IN SUPPORT: According to a coalition letter including NRG Energy, Environment California, Sierra Club California, and others:

AB 1787 would ensure accountability with regards to any future smart meter upgrade expenditure, and reward electricity customers for shifting electricity usage to low-cost periods when carbon free and renewable energy is cheap and abundant. …Despite paying billions in investment for the smart meter infrastructure, most customers today do not know when wholesale electricity prices are rising except through a last-minute emergency text alert. …Yet without dynamic retail rates and the ability for customers to stay informed, customers are left in the dark on how their electricity usage affects their wallet and the environment. …AB 1787 would ensure that any customer who is obliged to pay for any smart meter upgrade be provided with their own near real-time usage data from the meter so both utility and ratepayer benefits can be realized.

ARGUMENTS IN OPPOSITION: San Diego Gas & Electric states:

AB 1787 imposes rigid statutory mandates that constrain adaptability, threaten to increase customer costs, duplicates certain existing requirements, and addresses issues for which the California Public Utilities Commission (Commission) has recently conducted proceedings, and which proceedings have resulted in final decisions – which the IOUs are already advancing.

-- END --