

This bill creates significant new workload of the CPUC whenever the CPUC considers a large electrical corporation's request to upgrade the corporation's smart meter infrastructure and related information management and billing systems, which each large electrical corporation has recently done. This work results from the requirements that the CPUC (a) ensure the large electrical corporation offers all the corporation's customers at least one optional dynamic rate tariff that meets the bill's requirements, (b) monitor the data the large electrical corporation provides to a customer participating in an optional dynamic rate tariff and the methods by which the corporation does so, and (c), at least every four years, evaluate and, if necessary, mitigate the shifting of costs from participating customers to nonparticipating customers. Costs will likely be in the low to mid hundreds of thousands of dollars, ongoing (Public Utilities Commission Utilities Reimbursement Account, which is funded, primarily, by charges on utility ratepayers). It is reasonable to expect costs to be higher in the years immediately following enactment of this bill, as the CPUC considers large electrical corporations' requests to upgrade their smart meter infrastructure and related information management and billing systems, with ongoing work driven, primarily, by the need to periodically evaluate cost-shifting that may result from the utilities' optional dynamic rate tariffs.

For its part, the CPUC estimates this bill to result in ongoing costs of \$694,000 for three new permanent positions (PUCURA).

COMMENTS:

- 1) **Purpose.** The author describes existing electricity rates as relying on "broad averages that mask the actual market cost of power." This, the author contends, "prevents customers from responding to frequent price fluctuations of generating, transmitting, and distributing electricity, particularly the higher costs driven by peak demand." The author intends this bill to result in large electrical corporations offering dynamic rate tariffs, based on wholesale electricity prices and real-time data, which, the author asserts, will lead to broad savings, grid efficiency, expanded consumer choice and infrastructure-investment-based ratepayer savings.
- 2) **Background.** Electrical service in California is provided by several different types of entities, collectively referred to as load-serving entities. Roughly three-quarters of Californians receive electrical service from one type of load-serving entity known as an electrical corporation, also commonly referred to as an investor-owned utilities (IOU), a profit-seeking entity that charges its customers a rate for each unit of electricity the customer consumes. The three largest IOUs—and the ones subject to the requirements of this bill—are Pacific Gas and Electric (PG&E), San Diego Gas and Electric (SDG&E) and Southern California Edison (SoCal Edison).

State law charges the CPUC with regulating the rates the IOUs charge their customers. Rates approved by the CPUC must be "just" and "reasonable" to allow each IOU to recover the cost to operate, maintain and financing the infrastructure used to run the utility and to procure fuel and power. The CPUC establishes such rates by authorizing tariffs—a suite of rates an IOU may charge different customer classes according to specified conditions.

Traditionally, the IOUs have relied on flat rates, that is, charges for each unit of electricity that do not vary with time. However, the conditions that drive the cost of each unit of electricity vary based on several factors, such as the demand for electricity at a given moment. To account for these time-varying costs in pricing, the IOUs have more recently offered to their customers time-of-use (TOU) rates, according to which the per-unit price of

electricity varies by blocks of time—from 4:00 p.m. to 9:00 p.m. in the summer, for example, when the weather tends to be hottest and demand for electricity the greatest.

Since nearly the beginning of electrical utility service, utilities have measured their customers' electricity consumption through measurement via analog, mechanical meters that rotate in response to electricity use. More recently, many utilities have deployed what are commonly referred to as “smart meters,” digital devices that measure electricity consumption in real-time, or something close to it, and capable of transmitting information to the utility or to the customer. Many see smart meters as key to empowering customers to manage their own electricity use, for, as the CPUC describes it, “Smart Meters enable a utility to provide customers with detailed information about their energy usage at different times of the day, which in turn enables customers to manage their energy use more proactively.” The potential benefits include allowing the utility and the customer to better respond to changing conditions, which, when combined with time-varying electricity rates, can reduce a customer's electricity costs.

With these benefits in mind, the CPUC authorized the large IOUs to install millions of smart meters. As a result, almost all customers of the large IOUs have smart meters. More recently, the large IOUs have each requested the CPUC allow them to upgrade their smart meter infrastructure. The CPUC is considering these requests. In addition, the CPUC ordered the large IOUs to each implement pilot programs that include dynamic pricing of electricity based on changing conditions and, more recently, to propose dynamic pricing tariffs.

Despite these CPUC directives, bill proponents contend more needs to be done to ensure IOU customers, and California in general, benefit from the installation and upgrade of smart meters, now. According to a coalition that includes the Alliance for Retail Energy Markets, California Efficiency and Demand Management Council, NRG Energy, Inc. and Sierra Club California:

California has deliberated the issue of retail dynamic rate offerings for over two decades... 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. Most customers also do not know, for about half the year in mostly inland regions of the State, wholesale electricity prices dip into the negative range... without dynamic retail rates and the ability for customers to stay informed, customers are left in the dark on how their electricity usage affect their wallet and the environment. While the CPUC has ordered the large electrical corporation to propose dynamic rates, the electrical corporations continue to challenge the policy while proposing significant upgrades to the smart meter infrastructure and associated billing systems. The Legislature must act to direct the CPUC to put any ratepayer investment to effective use.

The large IOUs disagree. For example, PG&E contends:

PG&E supports California's clean energy goals and the development of effective dynamic pricing solutions... The development of dynamic pricing should be left to the CPUC, with guidance from the CEC [California

Energy Commission], due to the risks and complexity of the customer experience with optional rates that change on a day-ahead hourly basis as well as the need to ensure load response from these rates produces electric system benefits that are realized in a cost-effective manner...The CPUC's ongoing rate-setting proceedings are already providing robust opportunities to gather important data and incorporate feedback from a wide range of key stakeholders including ratepayer advocates, load management providers, utilities, and community choice aggregators who serve the energy needs of over half of the load in PG&E's service area. AB 1787 circumvents this process by prescribing specific rate structures and requiring program expansion before feasibility, CCA [community choice aggregator] participation, and affordability have been demonstrated.

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