

**SENATE RULES COMMITTEE**

SB 17

Office of Senate Floor Analyses

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UNFINISHED BUSINESS

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Bill No: SB 17  
Author: Padilla (D), et al  
Amended: 7/8/09  
Vote: 21

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SENATE ENERGY, U.&C. COMMITTEE: 10-0, 4/27/09

AYES: Padilla, Benoit, Corbett, Cox, Kehoe, Lowenthal, Simitian,  
Strickland, Wiggins, Wright

NO VOTE RECORDED: Calderon

SENATE APPROPRIATIONS COMMITTEE: 8-0, 5/26/09

AYES: Kehoe, Cox, Corbett, DeSaulnier, Leno, Wolk, Wyland, Yee

NO VOTE RECORDED: Denham, Hancock, Oropeza, Runner, Walters

SENATE FLOOR: 38-0, 6/1/09

AYES: Aanestad, Alquist, Ashburn, Benoit, Calderon, Cedillo, Cogdill,  
Corbett, Correa, Cox, Denham, DeSaulnier, Ducheny, Dutton, Florez,  
Hancock, Harman, Hollingsworth, Huff, Kehoe, Leno, Liu, Lowenthal,  
Maldonado, Negrete McLeod, Oropeza, Padilla, Pavley, Romero,  
Runner, Simitian, Steinberg, Strickland, Wiggins, Wolk, Wright,  
Wyland, Yee

NO VOTE RECORDED: Walters, Vacancy

ASSEMBLY FLOOR: 77-0, 9/1/09 - See last page for vote

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**SUBJECT**: Electricity: smart grid systems

**SOURCE**: Author

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**DIGEST:** This bill establishes the smart grid policy of the state and requires the California Public Utilities Commission to determine the requirements for a smart grid deployment plan no later than July 1, 2011.

Assembly Amendments allow the California Public Utilities Commission to modify or adjust the requirement of this bill for any electrical corporation with fewer than 100,000 service connections, as individual circumstances merit.

**ANALYSIS:** Existing federal law requires each state to consider investment in a qualified smart grid system and directs the National Institute of Standards and Technology to coordinate the development of smart grid standards. (Energy Independence and Security Act of 2007) Existing federal law authorizes the Department of Energy to award \$4 billion in grants ranging from \$500,000 to \$20 million for smart grid technology deployments and grants of \$100,000 to \$5 million for the deployment of grid monitoring devices. (American Reinvestment and Recovery Act of 2009)

Existing state law requires investor owned utilities (IOUs) to operate its electric distribution grid in a safe, reliable, efficient, and cost-effective manner and authorizes the California Public Utilities Commission (CPUC) to give each IOU a reasonable opportunity to fully recover from all customers the costs of operating the distribution system.

This bill requires the commission, by July 1, 2010, and in consultation with the State Energy Resources Conservation and Development Commission (Energy Commission), the Independent System Operator (ISO), and other key stakeholders, to determine the requirements for a smart grid deployment plan consistent with the policies set forth in the bill and federal law. This bill requires that the smart grid improve overall efficiency, reliability, and cost-effectiveness of electrical system operations, planning, and maintenance. The bill would require each electrical corporation, by July 1, 2011, to develop and submit a smart grid deployment plan to the commission for approval.

This bill authorizes a smart grid deployment plan that is adopted to provide for deployment of smart grid products, technologies, and services by entities other than electrical corporations. The bill authorizes smart grid technologies to be deployed in an incremental manner to maximize the benefit to ratepayers and to achieve the benefits of smart grid technology, authorizes the commission to modify or adjust the bill's requirements for an

electrical corporation with fewer than 100,000 service connections as individual circumstances merit, and would require the commission, in consultation with the Energy Commission, the ISO, and electrical corporations, at each step of deployment, to evaluate the impact of deployment on major initiatives and policies. The bill requires the commission to report, by January 1, 2011, and by January 1 of each year thereafter, to the Governor and the Legislature on the commission's recommendations for a smart grid, the plans and deployment of smart grid technologies by the state's electrical corporations, and the costs and benefits to ratepayers.

The bill requires a local publicly owned electric utility, as defined, to develop by July 1, 2011, a smart grid deployment plan consistent with the policies set forth in federal law.

This bill allows the CPUC to modify or adjust the requirements of the bill for any electrical corporation with fewer than 100,000 service connections, as individual circumstances merit.

### Background

What is a Smart Grid? The term smart grid refers to a distribution system that allows for the flow of information from a customer's meter in two directions and modernizes the electric distribution and transmission grid with a goal of using advanced, information-based technologies to increase power grid efficiency, reliability, and flexibility, and reduce the rate at which additional electric utility infrastructure needs to be built. A smart grid is a key element to the greening of California's grid due to the intermittent nature of renewable electricity resources such as wind and solar.

The most vital step in transforming California's distribution grid into an intelligent, integrated network enabled by modern information and control system technologies is deployment of an advanced meter infrastructure (AMI or smart meters).

Smart Meters. California's attempts to educate its grid have begun with the deployment of smart meters which is one of hundreds of possible applications that constitute a smart grid. For the last several years, the CPUC has encouraged the IOUs to increase demand response and implement dynamic pricing tariffs as a means of reducing energy demand

during peak periods which cannot be done without a smart meter. The technology also allows a utility to:

- A. Conduct remote meter reading, pinpoint outages, remote turn off/turn on capability, provide more accurate billing, and prevent energy theft;
- B. Monitor electrical load on an hourly basis to enable a utility to more accurately forecast load and identify load centers;
- C. Enable two-way communication to each customer's meter; and
- D. Offer time varying rates to customers.

Each of the three IOUs is in the process of deploying smart meters as follows:

- A. Pacific Gas & Electric, 5.1 million electric and 4.2 million gas meters at a cost of \$2.2 billion to be completed by 2011;
- B. San Diego Gas & Electric, 1.4 million electric and 900,000 gas meters at a cost of \$572 million by 2011; and
- C. Southern California Edison, 5.3 million electric meters at a cost of \$1.7 billion by 2012.

#### Prior Legislation

In 2008, a similar bill, SB 1438 (Padilla), which was held in the Assembly Appropriations Committee.

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

According to the Senate Appropriations Committee:

Fiscal Impact (in thousands)

<u>Major Provisions</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>Fund</u>
PUC regulations	Absorbable within existing resources			Special*
CEC consultation	\$50	\$100	\$100	Special**

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- \* PUC Utilities Reimbursement Account
- \*\* Public Interest Research, Development and Demonstration Fund

**SUPPORT:** (Verified 9/2/09)

AT&T  
California Public Utilities Commission  
Los Angeles Mayor Antonio Villaraigosa  
Natural Resources Defense Council  
Sempra Energy  
Sierra Club California  
Southern California Edison  
Tech Net  
Valley Industry and Commerce Association

**OPPOSITION:** (Verified 9/2/09)

Utility Services Customer Link

**ARGUMENTS IN SUPPORT:** Sempra Energy states in support, “The future Smart Grid will allow real-time, two-way digital communications between electric utilities and their customers, on the electric grid. The features can greatly improve the efficiency and reliability of electric distribution systems through self-healing capabilities, and facilitate conservation by enabling real-time demand response pricing. Smart Grid systems will permit the state to empower consumers and leverage distributed energy resources to increase distribution efficiently; lower customer prices; stimulate innovation and new green job creation; and ultimately reduce emissions of greenhouse gas.”

**ARGUMENTS IN OPPOSITION:** The opposition states that the bill does not define the term “smart meter” or require that the meters to be used and installed be “smart meters.” It does not provide consumers with the ability to purchase a remote stand alone real time information display that communicates with the meter and provides the consumer with the information contained in the meter’s memory registers that can be used to derive rate, energy usage, and accumulated cost, and although there is a specific date in which electrical corporations have to develop and submit a smart grid deployment play by, there is no specific “implementation” date. That means that the companies can provide the plan, but drag their feet with

respect to implementation. They would like to see amendments be taken to accomplish this.

**ASSEMBLY FLOOR:**

AYES: Adams, Ammiano, Anderson, Arambula, Beall, Bill Berryhill, Tom Berryhill, Blakeslee, Block, Blumenfield, Brownley, Caballero, Charles Calderon, Carter, Chesbro, Conway, Cook, Coto, Davis, De La Torre, De Leon, DeVore, Duvall, Emmerson, Eng, Evans, Feuer, Fletcher, Fong, Fuentes, Fuller, Furutani, Gaines, Galgiani, Garrick, Gilmore, Hagman, Hall, Harkey, Hayashi, Hernandez, Hill, Huber, Huffman, Jeffries, Jones, Knight, Krekorian, Lieu, Logue, Bonnie Lowenthal, Ma, Mendoza, Miller, Monning, Nava, Nestande, Niello, Nielsen, John A. Perez, V. Manuel Perez, Portantino, Ruskin, Saldana, Silva, Skinner, Smyth, Solorio, Audra Strickland, Swanson, Torlakson, Torres, Torrico, Tran, Villines, Yamada, Bass

NO VOTE RECORDED: Buchanan, Salas, Vacancy

DLW:nl 9/2/09 Senate Floor Analyses

SUPPORT/OPPOSITION: SEE ABOVE

\*\*\*\* **END** \*\*\*\*

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