

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

In the Matter of the Application of San  
Diego Gas & Electric Company  
(U902E) for Adoption of its Smart Grid  
Deployment Plan.

And Related Matters.

Application 11-06-006  
(Filed June 6, 2011)

Application 11-06-029  
Application 11-07-001

**CLEAN COALITION COMMENTS ON THE  
SMART GRID DEPLOYMENT PLAN WORKSHOP REPORT**

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March 15, 2012

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The Clean Coalition<sup>1</sup> respectfully submits these comments on the Smart Grid Deployment Plan Workshop Report, CPUC Staff Comments & Recommendations pursuant to the Administrative law Judge’s ruling dated, January 5, 2012.<sup>2</sup>

Our main points are as follows:

- The PUC, CEC, Governor Brown, and the California Legislature have all articulated clear policy in support of the wholesale distributed generation (“WDG”) and renewables market segments. However, the IOUs do not clearly explain how the plans will help achieve state policy goals and enable the WDG and renewables markets.
- The Clean Coalition disagrees with staff’s assertion that the Plans have met the minimum requirements of market enablement because they do not address interconnection reform and access to grid data, which are the main barriers to the wholesale distributed generation market.
- The interconnection process is limited by the current lack of data available on the grid. The Clean Coalition encourages staff to require the SGDPs include a discussion of how and when third parties will receive increased access to grid data to support more efficient and informed interconnection siting choices by distributed generation developers.
- The Clean Coalition urges staff to use the Smart Grid Deployment Plans (“SGDPs”) as an arena to bridge the current gap between the smart grid and interconnection policy silos.

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<sup>1</sup> The Clean Coalition is a California-based advocacy group, part of Natural Capitalism Solutions, a non-profit based in Colorado. The Clean Coalition advocates for policies that lead to high penetrations of wholesale distributed generation. We actively work for vigorous and efficient energy procurement programs, simplified and accelerated interconnection processes, and a smart grid that can integrate and balance large amounts of local energy.

<sup>2</sup> Administrative Law Judge’s Ruling Revising Schedule for Workshops, A.11-06-006 et al. (January 5, 2012).

Staff should require the SGDPs to address how utilities will open access to the grid by adding smart grid technologies to transform the interconnection process.

- Investment in the distribution infrastructure is required by all three IOUs to meet California’s Smart Grid vision and the state’s renewables goals, including the goal of 12,000 MW of localized energy by 2020.
- We recommend that staff require the IOUs to include in their annual reports progress towards a standardized, and minimum amount of foundational infrastructure that can accommodate higher penetrations of DG and renewables and meet the grid capabilities stated in SB 17.
- Smart Grid adoption should be accompanied by a paradigm shift in the way we think about the distribution grid, from the traditional model of top-down power flows, to a distribution grid where power flows freely both ways.

## **I. Introduction**

Wholesale distributed generation (“WDG”) is the most cost-effective and timely renewable energy market segment in California, and policies to enable the WDG market segment are strongly supported by the PUC, CEC, Governor Brown, and the California Legislature. However, fully realizing the massive economic and environmental benefits of WDG identified by these policy makers will require a smart grid that can integrate and balance large amounts of local energy. This vision of a smart grid integrated with distributed generation would allow for power to flow safely from thousands of generators across the state in any direction to meet load, keeping electricity supply in balance with demand at all times.

While the connection between a smart grid and distributed generation is clear, the Smart Grid Deployment Plans submitted by the IOUs fail to address how the utilities will prepare for and accommodate increasing levels of WDG and renewables through planned smart grid investments. Without this information, the plans do not meet the requirements of SB 17.<sup>3</sup> Because of these deficiencies, the Clean Coalition recommends not accepting the plans without requiring the IOUs to provide additional information, discussed further below.

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<sup>3</sup> SB 17 (Padilla), Chapter 327, Statutes of 2009.

## II. Integration of Wholesale Distributed Generation

The PUC, CEC, Governor Brown, and the California Legislature have all articulated clear policy in support of the WDG market segment. This policy is articulated in Senate Bill (“SB”) 17 and related PUC Decisions and Memos.<sup>4</sup> For example, Public Utilities Code Section 8360, enacted by SB 17, requires that California’s smart grid include the “[d]eployment and integration of cost-effective distributed resources and generation, including renewable resources.”<sup>5</sup> Interpreting the requirements for smart grid deployment plans in SB 17, Commissioner Ryan noted that one of the driving forces to building a smart grid is “enabling decentralized power generation so homes can be both an energy consumer and supplier.”<sup>6</sup> Similarly, Decision 10-06-047 states that smart grid policy goals must “[a]ccommodate all generation and energy storage options.”<sup>7</sup>

Despite these clear directives, Staff recommends accepting the SGDPs submitted by the IOUs, which fail to address how the utilities will prepare for and accommodate increasing levels of WDG through planned smart grid investments. A smart grid should allow for power to flow safely from distributed generators in any direction to meet load, while anticipating the intermittency of wind and solar power to keep electricity supply in balance with consumer demand at all times.

The Clean Coalition agrees with staff that the plans do not clearly explain how their smart grid deployment will help achieve these larger goals and enable the WDG and renewables markets. Staff should require the IOUs to clarify how the proposed plans and technologies will

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<sup>4</sup> SB 17 (Padilla), Chapter 327, Statutes of 2009; D.10-06-047; R.08-12-009. Assigned Commissioner and Administrative Law Judge’s Joint Ruling Amending Scoping Memo and Inviting Comments on Proposed Policies and Findings Pertaining to the Smart Grid.

<sup>5</sup> Public Utilities Code § 8360(c).

<sup>6</sup> R.08-12-009. Assigned Commissioner and Administrative Law Judge’s Joint Ruling Amending Scoping Memo and Inviting Comments on Proposed Policies and Findings Pertaining to the Smart Grid, p. 12 (February 8, 2010) (citing §§8360 c, d, e, f, g, h, and I; § 8366 b and d).

<sup>7</sup> (emphasis added)

work to address specific barriers to high penetrations of DG. For example, Balancing of local loads will require a smart grid with comprehensive monitoring, communications, and control (MC<sup>2</sup>) equipment, as well as distribution automation. The Clean Coalition is not asserting that the technologies proposed by the SGDPs will not help to integrate DG or include some of this technology. Rather, the Clean Coalition is asserting that there is no discussion of whether or when the IOUs' proposed SGDPs will successfully integrate technologies onto the grid in a manner that supports local balancing of energy supply and demand. Because of the vital role MC<sup>2</sup> and distribution automation will play in both the interconnection and management of DG systems, Staff should require the SGDPs to clearly address them.

### **III. Grid Access and Interconnection**

The Clean Coalition agrees with staff that market enablement includes not limiting access to the grid itself.<sup>8</sup> This value is required by SB 17 and Decision 10.060-047. In D.10-06-047, the Commission instructed the IOUs that the SGDPs should enable “maximum access to the grid, creating a welcoming platform for deployment of a wide range of energy technologies and management services.”<sup>9</sup> Staff notes that the SGDPs meet the “minimum requirements of encouraging markets,” yet none of the reports mention how they will improve the interconnection process, the main barrier to grid access for distributed generation project developers.

The current interconnection process for a wholesale generator connecting to the distribution grid may take an average of two years, regardless of the size of the project, making the interconnection process prohibitively time consuming and expensive. With smart grid

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<sup>8</sup> Smart Grid Workshop Report, Staff Comments & Recommendations, March 1, 2012, p. 5.

<sup>9</sup> D.10-06-047, p. 34.

technologies, however, this process could be completed in a number of days, rather than years. Staff should require the SGDPs to include interconnection reform that will enable maximum access by third parties to the smart grid, creating a platform for innovation in technology and services. Despite this current major hurdle for clean energy, the SGDPs make no mention of reforming their interconnection process through the adoption of smart grid technologies or increased access to grid data.

The Clean Coalition applauds staff's understanding that access to grid data, and not just customer data, is a business requirement for third parties.<sup>10</sup> The interconnection process is limited by the current lack of grid data. Staff should require the SGDPs to address two phases of improvements to interconnection through increased availability of grid data. As a first step towards improving interconnection, the Clean Coalition encourages staff to require the SGDPs include a discussion of how and when third parties will receive increased access to grid data to support more efficient and informed interconnection siting choices by developers. Without this information, we disagree with staff's assertion that the plans have met minimum requirements of enabling markets.

As a second step, staff should require the SGDPs to address how utilities will open access to the grid by adding additional smart grid technologies to transform the interconnection process. For example, an interconnection process that relies on up-to-date information technology and grid modeling would allow parties to obtain phase I and II studies and make decisions about moving forward with a project within a matter of days. This can be made possible through modeling software that eliminates or lessens the need for current procedures that rely heavily on engineering judgment and antiquated procedures. The Clean Coalition urges staff to use the

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<sup>10</sup> Smart Grid Workshop Report, Staff Comments & Recommendations, March 1, 2012, p. 5.

SGDPs as an arena to bridge the current gap between the smart grid and interconnection policy silos.

#### **IV. Foundational Infrastructure and Minimum Capabilities**

Investment in the distribution infrastructure is required by all three IOUs in order to meet California's Smart Grid vision and the state's renewables goals, including the goal of 12,000 MW of localized energy by 2020. We agree with staff on the importance of some standardization between the three utilities. In particular, we recommend that staff require the IOUs to include in their annual reports progress towards a standardized, and minimum amount of foundational infrastructure that can accommodate higher penetrations of DG and renewables, and meet the grid capabilities stated in SB 17. At a minimum, this should include monitoring, communications and control systems, distribution automation and Volt/VAR controls. These minimum standards are included in SB 17 as part the characteristics of a Smart Grid. SB 17 specifically 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:

...(e)Deployment of cost-effective smart technologies, including real time automated, interactive technologies that optimize the physical operation of appliances and consumer devices for metering, communications concerning grid operations and status, and distribution automation.”<sup>11</sup>

#### **V. Transformational Nature of Smart Grid Operations and Processes**

The Clean Coalition agrees with staff that the SGDPs are heavily technology focused, and do not necessarily take into account the transformational nature of the Smart Grid. The Smart Grid should be the demarcation point in shifting how we think of the grid and how

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<sup>11</sup> SB 17 § 8360.

customers, energy, and the utilities interact. Smart Grid adoption should be accompanied by a paradigm shift in the way we think about the distribution grid, from the traditional model of top-down power flows, to a distribution grid where power flows freely both ways.

## **VI. Conclusion**

The Smart Grid Deployment Plans do not adequately enable and integrate wholesale distributed generation. For this reason, the Clean Coalition respectfully requests staff to encourage the Commission and require additional discussion of the points stated above before approving the Deployment Plans.

Respectfully submitted,

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Dated: March 15, 2012