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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE

STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider Smart Grid Technologies Pursuant to Federal Legislation and on the Commission's Own Motion to Actively Guide Policy in California's Development of a Smart Grid System	Rulemaking 08-12-009 (Filed December 18, 2008)

JOINT COMMENTS OF THE CENTER FOR DEMOCRACY & TECHNOLOGY AND THE ELECTRONIC FRONTIER FOUNDATION ON PROPOSED DECISION ADOPTING REQUIREMENTS FOR SMART GRID DEPLOYMENT PLANS PURSUANT TO SENATE BILL 17

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Dated: June 10, 2010

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I. Introduction

The Center for Democracy & Technology[1] ("CDT") and the Electronic Frontier Foundation[2] ("EFF") jointly file these comments on Commissioner Ryan's Proposed Decision Adopting Requirements for Smart Grid Deployment Plans Pursuant to Senate Bill 17 ("Proposed Decision").

CDT and EFF again commend the Commission's initiative on these matters. As the Proposed Decision notes, there has been substantial agreement on the structure of and procedure for the deployment plans.[3] The parties to this proceeding have recognized that privacy is an important part of the plans and of the process for establishing the Smart Grid in California, and they have agreed generally on the major privacy principles that must be considered.[4]

In the sections that follow, we address several brief points. First, in Section II, we discuss and endorse the Proposed Decision. In Section III, we propose additional language to the

[1] The Center for Democracy & Technology is a non-profit, public interest organization with broad experience and expertise in matters of consumer privacy and emerging technologies. CDT has offices in Washington, DC and San Francisco, California.
[2] The Electronic Frontier Foundation is a non-profit, member-supported organization based in San Francisco, California that works to protect free speech and privacy rights in an age of increasingly sophisticated technology.
[3] Proposed Decision at p. 27.
[4] Proposed Decision at p. 8-9.

questions posed in the Proposed Decision Findings of Fact that would clarify utilities' responsibility to discuss in their deployment plans their relationships with third parties. We also propose additional language on interoperability to be added to Section 3.5.2's discussion of Smart Grid strategy. Finally in Section IV, we recommend a process for the Commission to take up privacy and security again in the future, first in the workshops to determine metrics and second in the future proceedings to discuss third-party information sharing.

II. The Proposed Decision Appropriately Addresses Privacy and Security by Requiring Utilities to Fully Discuss Privacy and Security in Their Deployment Plans

Overall, we endorse the proposed decision, and we caution against any "watering down" of its privacy provisions. The Proposed Decision recognizes the need to design privacy and security into the Smart Grid from the beginning, and we are encouraged that the Commission is attentive to these issues and has addressed them thoughtfully. The questions the Commission has posed to utilities, based on the Fair Information Practices (FIPs),[5] are the right ones; the FIPs provide a sound and adaptable framework for addressing consumer privacy concerns associated with Smart Grid deployment. Asking these questions now will help to ensure that privacy and security are considered now and are designed into the Smart Grid from the beginning.

Designing privacy and security into the Smart Grid at this beginning stage of its development will save costs for ratepayers and utilities in the long run; it would be much more expensive to attempt to graft fixes onto the Grid later, after the system has been developed and after various data flows have been instituted. Requiring utilities to include an assessment of privacy and security in their deployment plans and requiring the same structure for that assessment for all utilities[6] will allow the Commission, consumers, advocates, third parties seeking energy usage data and other concerned stakeholders to compare and assess the plans. Further, requiring utilities to update their security risk assessment and privacy threat assessments annually[7] will help stakeholders to evaluate the development of the Grid on a going-forward basis. This will also allow regulators and utilities themselves to plan effectively. An understanding of basic privacy and cybersecurity issues associated with the flow of energy usage data is important for interoperability, for consumer trust and acceptance, for third parties planning services based on energy usage data, and for the robust development of systems and

[5] Proposed Decision at pp. 111-112 (Finding of Fact ¶ 38), pp. 116-117 (Conclusion of Law ¶ 13).
[6] Proposed Decision at pp. 39-40.
[7] Proposed Decision at p. 97.

technology more generally; it will help prevent stranded costs inherent in building a system before the rules governing that system are fully thought out.

We are also encouraged that the Commission recognizes the need for metrics to assess utilities' plans and that the Commission will be requiring utilities include these in their deployment plans.[8] We agree that addressing metrics in a separate workshop within 90 days of the decision will allow for a full discussion of the issue and yet still allow utilities to develop and include the workshop findings in their deployment plans by the SB17-imposed deadline.

III. The Commission Should Add Language to the Decision to Ensure Utilities Are Transparent on Data Sharing with Third Parties and Interoperability

As we noted above, the questions the Commission poses to utilities to answer in their deployment plans are the right ones and will help to evaluate utilities' plans for securing the grid and protecting the privacy and security of consumers' data. However, we believe the Proposed Decision should be more clear on the requirement for utilities to discuss their plans for current and future relationships with third parties and their goals for developing and maintaining interoperability of Smart Grid technologies.

A. Additional Questions on Information Sharing with Third Parties

The Proposed Decision requires utilities to answer this question in their deployment plans: "With whom will the utility currently share the data?"[9] However, the questions in the Findings of Fact do not include anything further on third-party sharing. Because data in the custody of third parties will also be vulnerable to security breaches, misuse, and other problems, we propose the Commission add questions addressing third-party sharing to the Findings of Fact at Paragraph 38[10] and require utilities answer these questions in their deployment plans. These questions are intended to help utilities plan appropriately for data sharing; they will allow the Commission, consumers and other concerned parties to understand and evaluate utilities' relationships with third parties on an ongoing basis. Our proposed language is below and in Appendix A:

> *With whom does the utility share customer information and energy data currently? With whom does the utility reasonably foresee sharing data in the future? What does the utility anticipate is or will be the purpose for which the*

[8] Proposed Decision at pp. 81, 113 (Findings of Fact ¶¶ 52-53).
[9] *See* Proposed Decision at p. 116 (Conclusions of Law ¶ 13c).
[10] Proposed Decision at pp. 111-112.

third party will use the data? What measures are or will be employed by the utility to protect the security and privacy of information shared with other entities? What limitations and restrictions will the utility place on third-party use and retention of data and on downstream sharing? How will the utility enforce those limitations and restrictions?

Although the Commission has indicated that it plans to address third-party information sharing in more detail in the second phase of this proceeding, we urge the Commission to take an initial step on this issue now by including these questions in the final version of this Decision. The parties have agreed that privacy and security are important, and including these questions now will encourage utilities to be transparent about the onward flow of energy usage data and potentially privacy-invasive practices. These questions will make public their intentions for data sharing, thereby allowing stakeholders to evaluate these intentions within the context of each utility's full deployment plan.

B. Additional Language on Interoperability

The Proposed Decision rightly orders utilities to seek Commission approval of appropriate Smart Grid interoperability standards, noting that "prudence requires that the strategy section of a utility's deployment plan should consider how standards will be used and how the utility will minimize the risk of stranded costs in cases where consensus standards do not yet exist."[11] We encourage the Commission to require utilities to consider, as part of this process, how the various interoperability standards would affect the privacy of customer energy data. Strategizing about these standards now will help to prevent costs attributable to future privacy requirements or a privacy backlash if the data is not properly protected.

Interoperability standards related to demand response and to the Home Area Network (HAN) directly implicate consumer privacy issues, and there are significant privacy differences even within the set of NIST-approved standards. For instance, both Zigbee/HomePlug Smart Energy Profile, and Open Automated Demand Response (OpenADR) are approved by NIST. But utilities may collect far less information about customer's devices under the current version of OpenADR than under the current version of ZigBee; under OpenADR customers need not register their HAN devices with utilities, because utilities communicate directly with customers' energy management systems and not the individual HAN devices.[12] Utilities and other smart grid

[11] Proposed Decision at pp. 15, 46.
[12] Later versions of these standards are currently in development so this is just an example of possible privacy implications attributable to architecture choices.

entities should consider the impact of standards on privacy and should explain, in the strategy section of their deployment, the privacy implications of the standard they chose to adopt.[13]

Accordingly, we urge the PUC to require that utilities not only make recommendations on interoperability standards, but explain how such recommendations are justified in light of customer privacy concerns. We therefore suggest the following language be added to the Proposed Decision in Section 3.5.2. *Discussion: Smart Grid Strategy Should Provide Direction and Demonstrate Consistency with SB 17 and GO 156 Goals* at the end of the first paragraph on page 46 (*see also* Appendix B):

> *The strategic plans should also discuss the utility's plans for adopting and developing interoperable architecture designed to protect the privacy of customer energy data.*

IV. The Commission Should Address Privacy in Future Workshops and Proceedings Associated with the Smart Grid Rollout; The Commission Should Delay Third Party Sharing if a Privacy Framework Is Not in Place

In the Proposed Decision, the Commission declines to address metrics and information sharing with third parties until it has had further briefing and public participation.[14] We agree that both of these issues warrant further discussion and attention and urge the Commission to include privacy and security in that discussion.

A. Future Proceeding on Information Sharing with Third Parties

The Commission has set a goal to provide "retail and wholesale price information by the 'end of 2010,' [and] access to usage data through an agreement with a third party by the 'end of 2010.'"[15] We look forward to a proceeding before the end of 2010 in which those concerned with privacy and cyber security can address in full the issues raised by third party access to energy data.[16] It is critical to understand how information is likely to be shared and used, how it will be protected, and what procedures will be in place for consumer control before rules are put into place and third party access commences so that ratepayers are given true control and choice.

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[13] As we explained in our initial comments, protecting privacy includes limiting the collection of data in the first place.
[14] Proposed Decision at pp. 8-9, 81.
[15] Proposed Decision at p. 9.
[16] We also hope the Commission will at that time take up the issue of jurisdiction over third parties operating below the meter. *See* Proposed Decision at 41, n. 87. Consumers will look to the Commission to protect them from improper uses of their information and energy data, no matter who holds that data, and it will be important for all stewards of Smart Grid data to protect the data and to play by the same rules.

This proceeding will help all stakeholders understand whether the proposed end-of-2010 date to allow third-party access to usage data is appropriate or whether it would be more prudent to wait for data from utilities' deployment plans. We urge the Commission to delay the end-of-the-year deadline for third party sharing if a privacy framework is not in place by that time.

B. Future Workshops on Metrics

The Proposed Decision recognizes that quantitative metrics should be part of utilities' deployment plans but properly declines to adopt the limited set of metrics proposed by utilities. The Proposed Decision notes that further workshops are needed to develop these metrics.[17] We agree, and we look forward to the Commission addressing metrics in a series of workshops soon after this decision becomes final. We also look forward to reviewing the Commission's list of proposed metrics in the near future and urge the Commission to include in those proposed metrics the privacy and security-related metrics we raised in our initial comments.

V. Conclusion

The Center for Democracy & Technology and the Electronic Frontier Foundation thank the Commission for its careful consideration of the consumer privacy risks presented by the emerging Smart Grid. Including questions addressing privacy and security in the Proposed Decision and answers to those questions in utilities' deployment plans will support development of the Smart Grid in California and serve as a model for the rest of the nation.

Respectfully submitted this June 10, 2010 at San Francisco, California.

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[17] Proposed Decision at p. 81.

APPENDIX A

Proposed Language to Add to Paragraph 38 of the Findings of Fact

38. Answering certain questions in a Smart Grid deployment plan will help the Commission ensure that the information pertaining to customers and their usage of electricity and power is secure. These questions include:

    a. What types of information about customers are or will be collected via the smart meters, and what are the purposes of the information collection? Could the information collection be minimized without diminishing the specified purposes?

    b. Does the utility have or expect to have other types of devices, such as programmable communicating thermostats, which can collect information about customers? If so, what types of information is collected, and what are the purposes of the information collection? Could the information collection be minimized without interfering with the specified purposes?

    c. What types of information, if any, does the utility plan to collect from the smart meter and HAN gateway?

    d. How frequently will the utility take readings from the smart meter? Is this frequency subject to change? Will customers control this frequency?

    e. For each type of information identified above, for what purposes will the information be used? The purposes should be articulated with specificity, e.g., "targeted marketing" instead of "promoting energy efficiency."

    f. For each type of information collected, for how long will the information retained, and what is the purpose of the retention? Could the retention period be shortened without diminishing the specified purpose?

    g. With whom does the utility share customer information and energy data currently? With whom does the utility reasonably foresee sharing data in the future? What does the utility anticipate is or will be the purpose for which the third party will use the data? What measures are or will be employed by the utility to protect the security and privacy of information shared with other entities? What limitations and restrictions will the utility place on third-party use and retention of data and on downstream sharing? How will the utility enforce those limitations and restrictions?

    ~~g.~~ h. What measures are or will be employed by the utility to protect the security of customer information?

    ~~h.~~ i. Has the utility audited or will it audit its security and privacy practices, both internally and by independent outside entities? If so, how often will there be audits? What are the audit results to date, if any?

APPENDIX B

Proposed Language to Add to Section 3.5.2 in First Paragraph on Page 46

3.5.2. Discussion: Smart Grid Strategy Should Provide Direction and Demonstrate Consistency with SB 17 and GO 156 Goals

. . .

Similarly, concerning interoperability standards, prudence requires that the strategy section of a utility's deployment plan should consider how standards will be used and how the utility will minimize the risk of stranded costs in cases where consensus standards do not yet exist. In that context, the strategic plans should discuss whether it would be feasible and cost-effective to offer OpenADR via dedicated servers that can communicate with devices in the home even as the advanced meters communicate with customers and customer devices via SEP 2.0. <u>The strategic plans should also discuss the utility's plans for adopting and developing interoperable architecture designed to protect the privacy of customer energy data.</u>

CERTIFICATE OF SERVICE

I hereby certify that, pursuant to the Commission's Rules of Practice and Procedure, I have this day served a true copy of this document, JOINT COMMENTS OF THE CENTER FOR DEMOCRACY & TECHNOLOGY AND THE ELECTRONIC FRONTIER FOUNDATION ON PROPOSED DECISION ADOPTING REQUIREMENTS FOR SMART GRID DEPLOYMENT PLANS PURSUANT TO SENATE BILL 17, on all parties identified on the attached official service list for Proceeding: R08-12-009. Service was completed by serving an electronic copy on their email address of record and by mailing paper copies to parties without email addresses.

Executed on June 10, 2010 at San Francisco, California

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