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California Public Utilities Commission

Smart Grid Workshop Report

Staff Comments & Recommendations

3/1/2012

Introduction

Decision (D.) 10-06-047 directed that Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) each file a Smart Grid Deployment Plan (Plan(s)) for the California Public Utilities Commission (CPUC or Commission) to review for consistency with Senate Bill (SB) 17 and the requirements that the Commission adopted in D.10-06-047 for the Plans. Parties filed comments in response to the investor owned utility (IOU) Plans. The Commission's Smart Grid team decided that rather than holding evidentiary hearings, a series of workshops using the conceptual framework adopted in D.10-06-047 offered the most reasonable way to proceed. The workshops were held pursuant to the November 22, 2011 Administrative Law Judge (ALJ) Ruling. In the Ruling, ALJ Tim Sullivan directed CPUC Staff to prepare a draft workshop report that provided an assessment of the Plans and direction to the utilities on how to refine their Plans.[1] In addition to the Ruling, the CPUC staff served "Initial CPUC Staff Comments" on the plans on November 23, 2011.

On January 30, 2012 through February 2, 2012, CPUC Staff held four days of workshops in an effort to gather additional information and initiate constructive dialogue between stakeholders, CPUC Staff, and the utilities on how to refine the utility-filed Plans.

Accordingly, this report is in compliance and pursuant to the ALJ Ruling and subject to opening comments and reply comments. Opening comments are due by March 16, 2012 and reply comments are due by March 23, 2012. Following the submittal of comments and reply comments, the Commission will issue a proposed draft decision that will rule on whether the Plans meet the requirements of SB 17 and D.10-06-047.

Executive Summary

Overall, CPUC Staff agrees that the Investor Owned Utilities (IOU) Plans are in compliance with the requirements set forth in D.10-06-047, as well as SB 17. However, the workshops as well as comments from various stakeholders identified areas in which deployment plans could be improved through a shared understanding among parties or via revisions.

The purpose of this workshop report is to highlight the key areas that were discussed during the workshops and provide direction on how to improve/enhance the Plans. A goal of this workshop report is to better align with the Smart Grid vision of the Commission, the stakeholders, and the utilities.

[1] November 22, 2011 ALJ Ruling at page 3.

To accomplish this, the CPUC Staff seek to ensure that there is enough detail in the roadmaps to support a common vision across the utilities and active parties.

Additionally, this report will discuss how this vision and goal can be further refined through the utility Smart Grid Annual Reports (Annual Reports).

The report continues with the conceptual framework of Smart Customer, Smart Market, and Smart Utility and discusses in more detail the key takeaways from the workshops; the strengths and weaknesses of the Plans; the corresponding CPUC Staff recommendations of possible solutions; and the summary of CPUC Staff recommendations for the next steps.

Section 1: Key Workshop Takeaways/Highlights

Smart Customer

The objectives of the Smart Customer workshop were as follows:

1. Clarify and/or define the role of the utilities versus third parties on customer awareness of available energy consumption information.
2. Identify potential customer concerns related to Smart Grid participation and acceptance as well as ways to manage them.
3. Bifurcate utility customer engagement and awareness to create a short-term roadmap that is more specific and a long-term plan that should be detailed over time.

The Initial CPUC Staff Comments noted that all three utilities failed to develop an actual roadmap/plan that included a detailed strategy and timeline to outreach to customers. The comments explained that at a minimum the Plans should include guidelines for outreach strategies that can be referred back to when the utilities propose related Smart Grid Marketing Education & Outreach activities in future proceedings.

On January 30, 2012, parties attended the Smart Customer workshop at the Commission. The key highlights from the workshop are as follows:

1. Customer engagement tools and products that can enable and engage consumers are also the responsibilities of third parties.
2. Customers appear to prefer to receive energy usage information from their IOU.
3. Potential customer roadblocks to toward the transition from a passive customer to one that is more engaged include the following: a) not having a price signal that provides the incentive to change behavior; b) difficulties in engaging low to moderate income customers; and c) failure to include a timeline for outreach and education.

4. The IOUs could better use of customer segmentation to ensure that all customers are being educated appropriately and allowed to take action.
5. There is a need to identify the baseline information to be provided to customers to raise their awareness by 2020.
6. Workshop participants agreed that education and price signals are two key factors in motivating customers to become active energy participants. There was, however, no plan to achieve these by 2020.

Stakeholders also identified specific barriers to customers' ability to realize the benefits of grid upgrades and advancement of new technologies. Following the workshop, CPUC Staff asked Michael Shames of UCAN to provide a list of barriers identified by UCAN (this list was not presented during the workshops).

The barriers that were identified by UCAN include three major categories:

1. **Dissemination of complex information**

    - Silos separating rate design and incentives for energy efficiency (EE) and demand response (DR) need to be broken down.
    - The utilities spend significant amount of money across a variety of programs to identify customer needs but the information must also be shared with third parties.
    - Customers need access to information that allows them to make cost-effective investments on their side of the meter.
    - Customer engagement opportunities will be missed if messaging does not occur at the point-of-decision for the customer.
    - Customers will not engage if the processes or services are too complex.
    - Information about services needs to be provided for late adopters as well as early adopters of technologies.
    - Information on smart grid needs to reach low- income customers.
    - Utilities and third parties need to identify channels to overcome language barriers and reach minority communities about services available to them.

2. **Cost**

    - The high cost to engage customers and convince them to sign up for services could undermine the market. Focus needs to be on how the utilities can reduce costs.
    - Shareholder incentives need to be addressed in order for the utilities to facilitate options for customers.
    - A methodology is needed to determine cost-effectiveness of grid upgrades.

3. **Timeline**

- There are not many meaningful value propositions available for small customers in the near- and medium-term.
- There are services that the competitive market will not fill, and that the utility will need to fill to make services viable to customers.
- Aggressive timelines for dynamic pricing outreach and oversold value propositions could result in a backlash if customers do not see the value, or see bill increases.

In addition to the potential barriers identified by UCAN, the Environmental Defense Fund (EDF) also evaluated each Plan. Greenlining also evaluated each plan, and their focus was on how to achieve smarter energy customers in the low to moderate income segments. Their suggestions are largely captured by the UCAN and EDF lists above.

EDF highlighted some deficiencies in the Plans. Specifically, EDF noted that all of the utilities failed to provide information about how they would do the following:

- Creating downward pressure on customer bills.
- Improving and supporting customer equity.
- Expanding generation choice.
- Expanding consumer technologies, such as Net Energy Metering.
- Expanding third party access to data for demand side resource sales.

Smart Market

The objectives of the Smart Market workshop were as follows:

1. Identification of the key markets dependent on Smart Grid solutions and the role that the utilities should play in supporting these markets.
2. Discussion of key enablers to market development and growth, such as access to data, standards, and transparency in processes.
3. Discussion of how well the Plans address market enablement and how the Plans could be improved.
4. Discussion on how well the Plans address market enablement, specific to electric vehicles.
5. Explore whether the CPUC should set a 'demarcation point' that delineates the role of the utilities vs. third parties.

Additionally, the Initial CPUC Staff Comments noted that all three utilities have as a core section of their market enablement strategies providing customers and third parties access to data, and providing appropriate prices and price signals to indicate the need for customer action or investment. To that extent, the three utilities have met the minimum requirement of

encouraging markets. However, market enablement goes beyond data access and prices, including not limiting access to the grid (*e.g.*, for distributed generation (DG)), not limiting access to other markets (*e.g.*, for DR/EE), and not limiting customer choice on new services (*e.g.*, for DR/EE). The workshops focused on discussing a broad range of market enablement topics presented in the numbered list above.

On January 31, 2012, parties that attended the Smart Market workshop at the Commission focused on the following four themes:

1. Access to customer and grid data and information.
2. The role and use of standards to facilitate markets.
3. Regulatory- and utility-created risks and barriers.
4. Setting of a potential 'demarcation point' between services and products of the utilities and the third parties.

First, the workshop identified that access to data is a business requirement for the third parties. The data required includes not only customer usage information, but also greater access to grid data that can support distributed energy resources (DER) and electric vehicles, which may be able to provide grid-supporting technologies. By leveraging access to customer and grid data, new services can be bundled that can offer benefits to the customers, the utilities and the grid in general. These new business models can move technology and services beyond the pilot phase and make them scalable.

The second key issue is the need to address standards to support market growth, innovation and enablement. The key to addressing this issue is to move beyond proprietary systems and into uniform standards and requirements which should lower overall costs to market participants and customers. This transition will help customers realize many of the benefits that they can expect from their investments in the Smart Grid, including the investment in the advanced meter infrastructure. Standards also allow manufacturers to streamline production to meet only a limited specified number of requirements. The introduction of standards will allow a proliferation of devices available to customers.

The third issue is the need to ensure that neither the utility nor the Commission act as a gate-keeper for the growth of the Smart Grid market. Participants noted that the Commission needs to be careful to not inadvertently create roadblocks towards market growth and innovation. For example, the lack of dynamic pricing, lack of support for advanced technology in General Rate Cases (GRC), and general regulatory delay in approving policies could depress enthusiasm for Smart Grid market developments. Regulatory processes and the utilities need to be more comfortable with the pace of technological change, the pace of innovation, and an unwritten future as it applies to market development and customer choice. The Plans must recognize the

potential for new customer demands and technological innovation to develop outside of their control, and utilities must not be a deterrent to this development.

The third issue is to ensure that the utility does not act as a gate-keeper and also that the Commission is not inadvertently creating roadblocks towards market growth and innovation. The lack of dynamic pricing, lack of support for Advanced Technology in General Rate Cases (GRC), and general regulatory delay in approving policies tend to depress enthusiasm for Smart Grid participants. Regulatory processes and the utilities will need to become more comfortable with the pace of technological change, the pace of innovation, and an unwritten future as it applies to market development and customer choice. The Plans must recognize the potential for new customer demands and technological innovation to develop outside of their control, and utilities must not be a deterrent to this development.

The last major topic discussed at the Smart Market workshop was a potential determination of a demarcation point that establishes what assets a utility could own inside a customer's home, past the meter. Overall, most participants were in favor of defining a demarcation point, but some concerns were also raised. Most notably, the home area network (HAN) and other related technologies are not sufficiently mature and a utility could play an important role in technology development and adoption. Setting a demarcation point prematurely could have negative impacts on the overall market. Additionally, there are also uncertainties related to how this would impact utility/third-party partnerships. From the discussion, it became clear that the issue required development of a further record.

Other key topics highlighted were access to prices and dynamic pricing, changing business models for third parties, and the current lack of products for customers. The main question during the workshop was whether the Plans support the development of a Smart Market. During the course of the day, the utility representatives made the point that their Plans were developed to have the utility act as the "platform" for future innovation and engagement with customers and third parties.

Smart Utility

The objectives of the Smart Utility workshop were as follows:

1. Discuss how foundational infrastructure approaches can be standardized across the Plans.
2. Develop a set of requirements for the presentation of project roadmaps going forward.

3. Identify the challenges of interconnection of distributed generation resources and whether the proposed Smart Grid projects help overcome interconnection challenges. Identify areas for improvement.
4. Identify how Smart Grid technologies support grid reliability and resiliency goals.
5. Identify the role of workforce enablement and organizational change in Smart Grid.
6. Discuss the role of standards in Smart Grid deployments and utility involvement in standards development.
7. Discuss how Plans will be incorporated into the project approval process and the role of the Annual Reports to be submitted by the utilities.

The Initial CPUC Staff Comments noted that the Plans, for the most part, are technology focused and do not seem to take into account the transformational nature of the Smart Grid on operations and processes. With some exceptions, there is limited discussion of training and aligning employee skills with new technologies. The Plans are uneven in terms of how clearly they explain why certain technologies are needed and how they will ultimately help achieve larger goals. This largely arises from a lack of technical depth when discussing what problem the proposed technologies are trying to solve. For example, many Plans state that a particular technology will help with integration of DER on the grid, but the Plans fail to mention what particular technical issue of integrating DER it is attempting to solve. The Initial CPUC Staff Comments also covered a range of other issues, such as showing the relationship between pilot phases and incremental roll-outs prior to full deployment in the roadmap sections of the Plans.

The Smart Utility workshop was a two-day effort beginning on February 1, 2012. Parties that attended the Smart Utility workshop at the Commission highlighted the following areas:

1. Significant investments in Smart Grid foundational infrastructure will be required in order to achieve the Smart Grid vision and the State's goals.
2. The Plans are a useful vehicle for aligning the industry. As an example, Cisco read the SDG&E Plan and aligned their product release roadmap to be consistent with SDG&E's vision.
3. Proliferation of renewable generation, particularly solar, is causing issues at the distribution level. The fluctuations of solar output are often dramatic, but can only be seen at sub-second interval levels. In order to support growth of renewable generation, particularly rooftop solar, the utilities will need to upgrade the distribution infrastructure.
4. Wholesale distributed generation can play a significant role in meeting California's goal of reaching 12,000 MW of localized generation by 2020. However, there are a number of interconnection challenges that are preventing wholesale distributed generation from

being widely adopted. Smart Grid technologies, such as Volt/VAR control, can potentially help mitigate some of the challenges.

5. Cyber-security is an important concern, and this issue was raised many times in both written comments and throughout the workshops. This area is new for state regulators and requires a more in depth investigation than was possible at this time. In particular, it is important to better understand the potential of cyber events to result in grid events. With the proliferation of communication and advanced technologies, it is vital that the Commission addresses the potential cyber-security risks to reliability and safety.
6. Training and enabling the workforce is a key component of Smart Grid, and this component often gets overlooked. The workshops revealed that utilities are working with community colleges and universities to develop programs that can better prepare the workforce for the specific demands of Smart Grid. Hands-on experience, particularly with high-voltage equipment, is very important aspect of training, but it is difficult to make this equipment available to a large number of students. Workshop participants stressed that it is important that the workforce does not get overlooked in the grid modernization effort. The Commission can help support workforce modernization by helping fund initiatives that educate the workforce and being connected with the academic community to better understand the opportunities for developing the future workforce.
7. Smart Grid technology is emerging and the utilities need to stay flexible and be able to adjust their Plans quickly to the changes in the industry.
8. The development and adoption of standards is critical for mitigating the risk of stranded or obsolete assets. Standards can help ensure interoperability of technologies. Interoperability supports necessary markets and provides utilities with more flexibility when choosing their vendors.
9. Utilities have had success in engaging in standards development. However, standards work takes time, often three to five years for a single standard. Also, participation in standards work requires high levels of technical expertise. The importance of standards is not well understood among state regulators and the utilities struggle to fund standards development efforts.

The two-day workshop further reiterated that the Plans have been useful in starting the dialogue amongst stakeholders regarding the vision for Smart Grid in California, including potential issues that need to be considered as the State proceeds with grid modernization. The workshops also highlighted the importance of Smart Grid activities, particularly in accommodating electric vehicles and distributed generation and ensuring that the grid is prepared for emerging challenges, such as cyber-security.

Overall, the four-day workshop identified that the utilities believe that for the most part their Plans are complete and any weaknesses arise from misunderstandings. Moreover, the utilities believe these misunderstandings can be dispelled if stakeholders initiate constructive dialogue with the respective utility.

During the workshops, stakeholders did not identify any major gaps in the Plans, but asked many relevant questions and provided observations on where the utilities should provide additional detail.

EDF provided a fairly comprehensive evaluation of the Plans. Specifically, EDF focused on utility roadmaps and identified that the Plans could be improved by the following:

1. Inclusion of timeline of targets/milestones.
2. Details for each year through 2020.
3. Description of each decade through 2050.
4. Coupling with a narrative paralleling the Strategy section.
5. Showing adaptive management processes for attaining targets/milestones.

EDF also argued that when seeking Commission approval for future Smart Grid related expenditures, the utilities should be required to report on how Smart Grid investment applications fit within the Plans approved by the CPUC.

A concluding theme that came out of the workshops was that Smart Grid technology is emerging and the utilities needs to be able to adjust their Plans quickly as the industry and technologies change. A good example that was brought up was implementation of the "Green Button" solution. The idea included the adding of a "Green Button" to utility websites to provide customers with standardized consumption data. This innovative solution was developed after the filing of the Plans. It only took the utilities several months to go from conception to having the first version of the "Green Button" implemented on their websites – a responsiveness that's needed for innovation but that falls outside of the planning process and the traditional cycle of regulatory reviews.

Section 2: Deployment Plan Strength & Weaknesses and CPUC Staff Proposed Solutions

The subsequent section summarizes the gaps or areas needing additional information that the CPUC Staff identifies in the Plans and proposed next steps to resolve the gaps. CPUC Staff recommends accepting the Plans as they are and addressing any need for additional information through Annual Reports and other means, as described below.

Smart Customer

The Plans of the three utilities include great vision statements. We applaud the utilities for having such a customer focused vision. However, a vision can only be successful if it is implemented properly. Consequently, CPUC Staff would like to see additional detail on how the utilities link their vision with day to day operations for marketing, education, and outreach to customers.

During the workshop, each utility provided an overview of the projects they are likely to conduct between 2012 and 2015 that could directly impact customers. The information provided in the workshop takes a step in the right direction of adding the level of detail that was missing from the original deployment Plans.

Specifically, the two areas that the CPUC Staff sees as weaknesses are as follows:

1. The plans lack a timeline that connects specific projects with specific marketing and outreach efforts.
2. The plans do not include specific steps to overcome roadblocks as identified in the workshops and included in this report.

The CPUC Staff requests a timeline along with how the roadblocks identified during the workshops will be dealt with by the utilities. Specifically, the CPUC Staff would like the utilities to provide a chart that includes a timeline with potential projects, an overview of the project, potential target audience and potential message. The CPUC Staff understands that over time, these projects could be modified, removed, or have new projects added. The benefit of providing this level of detail now is that it enables the Commission and stakeholders to identify opportunities for customer engagement in the short term.

Appendix 1 to this report contains a sample template that combines the level of detail provided by SCE and PG&E during the Smart Grid workshop. When the utilities provide a timeline of upcoming projects, the timeline should include barriers to customer enablement and practical and achievable solutions to overcome barriers. The timeline, along with the steps to overcome roadblocks, should be included as part of the utility Annual Reports filed with the Commission.

Smart Market

The utilities have generally described their approach to market enablement as the utility acting as the “platform” for future innovation and engagement between customers and third parties.

SDG&E's Deployment Plan explains well SDG&E's role in enabling markets to develop. However, PG&E's and SCE's Plans focused on specific utility programs, rather than on market enablement. The Commission's decision adopting Deployment Plan requirements stated that the utilities should support third party market development and the plans of PG&E and SCE could have better addressed this aspect. For example, the topic of "data access" could include not only access to customer usage information but also access to grid data that can support distributed DER and electric vehicles. In sum, the major weaknesses that have been identified are as follows:

1. The Plans outlined initiatives that support utility programs, but fail to explain how the initiatives but enable third party services or programs, such as DR.
2. Market rules are vaguely defined and not discussed in much detail.
3. Due to the timing of the proceedings, the Plans are not aligned with the Plug-in Electric Vehicles (PEV) decisions made in the PEV proceeding (R.09-08-009).
4. There is limited discussion of the role of the utilities vs. third parties (*e.g.*, addressing a possible demarcation point).

The CPUC Staff requests additional detail in the upcoming Annual Reports on how the utilities are enabling the market with respect to third party demand response programs, the growth of PEV adoption, and increased third party DER. In addition, through the revision of the metrics and goals for Smart Grid (R.08-12-009), the utilities should identify three to five clear objectives for plug-in electric vehicles (PEVs in) in 2020. The utility strategies can then be better aligned to reach the goals and articulate the utility role in PEV adoption, leveraging the earlier PEV decision. Updates can be made through the filing of the Annual Report.

Smart Utility

The Plans clearly present the Smart Grid vision and approach of each utility. Smart Grid is a vast subject matter and there are many additional details that the utilities could provide on a variety of topics. There are, however, several topics that stand out as the most important:

1. A significant portion of each Plan is dedicated to cyber-security. The Plans clearly discuss risk mitigation and cover technical, organizational and process aspects of risk management. The main difficulty in reviewing the cyber-security portions of the Plans is the lack of consistency in the level of detail provided by the utilities, with SDG&E providing the most in-depth information. While cyber-security was raised as an issue a number of times during workshops, the CPUC Staff did not have the opportunity to have in-depth discussions on this subject.

2. Utilities presented the projects in their roadmaps in different formats. The three utilities made different assumptions regarding what projects and costs to include. For example, SDG&E listed their Smart Meter project on the roadmap and counted the costs of Smart Meters as part of the overall estimate of the Smart Grid costs. The other utilities did not. This discrepancy made it very difficult for the CPUC Staff to compare the utilities with each other. The utilities also use different terminology when naming and describing projects, again making it more difficult to compare the roadmaps. The utilities commented that it is important for them to maintain their unique formats and assumptions, as it aligns with the way the projects are structured and named internally. The three utilities also pointed out that they are all starting at very different places and have different approaches, making any standardization difficult.
3. Standards have been identified as a critical enabler to Smart Grid, as well as for preventing stranded assets and thus realizing the full benefits of Smart Grid. Engagement in standard development is complex, time consuming and requires significant resources.
4. The CPUC Staff identified a lack of technical specificity and depth in the initial comments on the Plans. The source of this lack of specificity arises from the lack of technical depth that characterizes the discussion in the Plans. For example, the Plans state that some technology will help with integration of DER on the grid, but they do not mention the particular problem that this technology is attempting to solve. The workshops clarified some of the technical aspects behind the Plans. Overall, it would take a significant revision of the Plans to make them more technically specific and this specificity was not an explicit requirement set out by SB17 and the Commission's decision adopting the requirements for the Plans.

To address the issues outlined above, CPUC Staff recommends the following solutions:

1. Cyber-security is a topic of growing importance. The CPUC Staff believes that in-depth discussion and analysis is needed in order to determine how to approach cyber-security. The CPUC Staff recommends that cyber-security be examined in more detail by the Commission in a separate effort.
2. The CPUC Staff does not believe that it would be a good uses of resources to have the utilities reformat their roadmaps at this time. However, the CPUC Staff would like to see consistency between the three utilities in the Annual Reports. The CPUC Staff therefore recommends that the utilities submit a joint template for the Annual Report as part of their comments.
3. The CPUC Staff seeks to better understand the deployment priorities and technical standards in order to coordinate Commission involvement and oversight. The CPUC Staff requests the utilities to file a list of prioritized standards as part of comments to the CPUC Staff Proposal (the list may be limited to the top ten standards). The CPUC Staff would also

like to see priority standards identified in the Annual Reports, as well as any issues associated with standards development.

4. The CPUC Staff recommends no revisions to the Plans at this time to make them more technically specific. Technical information should be presented when seeking project approval, either in the application or the GRC.

Section 3: Summary of the CPUC Staff Recommendations

The CPUC Staff recommends approving the Plans with no revisions, as the utilities have complied with the requirements of SB 17 and the requirements set forth by the Commission.

Since each project will be subject to specific review when proposed, making further revisions to the Plans to include more information or clarify specific areas, while a desired activity, is not the best use of the resources both for the utilities and the CPUC Staff at this time. However, the Plans are very useful documents both for the CPUC and for other stakeholders. The CPUC Staff therefore encourages the utilities to keep the Plans current and have the latest version of the documents available through their respective websites. The Commission may request the utilities to provide an updated version of the Plans at some point in the future, and therefore, the utilities will benefit from making sure that their Plans are generally up to date.

In addition, the CPUC Staff also recommends the following activities as part of the party comments to this report:

1. The utilities should submit a joint template for the Annual Report (including any revisions to the customer roadmap in Appendix 1).
2. The utilities should submit a prioritized list of standards to indicate the current priorities (the list may be limited to the top ten standards).
3. The parties should submit their comments pertaining to whether the Commission should set a demarcation point and if so, whether this should be done now or at another time. Also, the parties should comment on whether a more detailed record should be established for this issue (*e.g.*, as part of a separate proceeding).
4. The parties should submit suggestions for how the CPUC should address cyber-security concerns, either as part of the Smart Grid Deployment Plan effort or through other methods.

For the Annual Report to be provided by the utilities every October, the CPUC Staff recommends the following additional information to be included:

1. Key Takeaways and Highlight: Summary of the most important Smart Grid developments by each utility (these could be used to brief senior decision-makers, the Governor's Office and the Legislature).
2. Summary of updates to the Plans: List of any major changes that have been/need to be made, with a brief explanation for the changes.
3. Project updates: Short summary of projects completed, currently in progress, planned to start, and/or to be submitted for the Commission's approval in the next year. The project information should be complete with cost and benefit estimates where available. The estimates for future projects could also be provided in aggregate, rather than at the project level. All projects should indicate a funding source (*e.g.*, Application vs. GRC) and state start and end dates.
4. Customer Roadmap: Overview of the customer engagement plan as provided in Appendix 1.
5. Key Risks: The utilities should identify key risks and actions taken to address them (*e.g.*, standards maturity, cyber-security, etc.). This may be done at a risk category level, with the high priority risks specified.
6. Reporting on metrics and goals: Provide data on the Smart Grid metrics and goals, to be set in a separate decision (R.08-12-009).

Section 4: Conclusion

In D.10-06-047, the Commission identified three different roles that a deployment plan could play as part of the Smart Grid regulatory program:

1. Creating a "baseline" against which the Commission could measure progress.
2. Providing the utilities with approved Plans that guide investment and provide the utility with a rationale that could support a proposed investment during review of the project and help in the determination of whether a specific project is reasonable and consistent with the Commission's overall Smart Gird vision.
3. Eliminating after-the-fact reasonableness reviews[2] for approved projects[3].

The Commission concluded that the best use of the Plans is as a baseline indicating the current deployment of Smart Grid technologies and to guide future Smart Grid investments. The Commission also concluded that the Plans are not a substitute for a Commission review of specific infrastructure investments that will take place prior to the time of deployment. The CPUC Staff recommends continuing with the direction as set forth in D.10-06-047.

[2] D.10-06-047 at 14.
[3] D.10-06-047 at 14.

With regard to the Smart Grid Deployment Plan documents, the CPUC Staff recommends that the Commission approve them without changes. To address some of the issues and need for additional information identified through the Smart Grid Deployment Plan review process, the Commission Staff recommends that the parties file comments as part of this proceeding and provide the information to be required as part of the Annual Reports.

Appendix 1

Template for Customer Outreach Project Timeline

The following table is a template for customer engagement and enablement activities. If it is not necessary for customers to be made aware of an activity, then that should be indicated in the Target Audience section. For every roadblock mentioned at least one practical and achievable strategy to overcome the roadblock should be provided.

2012	**2013**	**2014**	**2015**
Type of Project			
Project Name	Project Name	Project Name	Project Name
Project Description	Project Description	Project Description	Project Description
Target Audience	Target Audience	Target Audience	Target Audience
Sample Message	Sample Message	Sample Message	Sample Message
Source of Message	Source of Message	Source of Message	Source of Message
Current Road Blocks	Current Road Blocks	Current Road Blocks	Current Road Blocks
Timeline & strategy to overcome roadblocks	Timeline to overcome roadblocks	Timeline to overcome roadblocks	Timeline to overcome roadblocks

Example

2012	2013	2014
ENERGY MANAGEMENT TOOLS		
Smart Connect Online Tools Online tools will include- Budget Assistant, Bill-to Date information, Bill Forecasting… Target Audience: All Residential and Small Commercial Customers Sample Message: Online tools can help you reduce your energy use and save on your bills Message Source: Utility Roadblocks: 1. Customers not interested in being energy managers 2. Challenge reaching low income and hard to reach customers Strategy to overcome Roadblocks: 1. a. 2012 bill inserts with case studies b. 2. 2012 include messages about benefits of online tools in other communications to customers	**Energy Service Providers Interface** Automated process to provide usage data to-customer authorized third parties Target Audience: Residential and Small Commercial Customers likely to use ESP to view data Sample Message: Message Source: Utility & 3rd party	**Alerts and Notifications** Automate Delivery of information for customers Target Audience: Sample Message: Message Source:
Green Button Phase I Description, Target, Message, Source, Roadblocks, Strategies	**Green Button Phase II** Description, Target, Message, Source, Roadblocks, Strategies	
HOME AREA NETWORK		
Customer Enrollment in PTR	**Advanced Customer Enrollment**	**Launch Load Control Events**

Example

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