BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Integrate and
Refine Procurement Policies Underlying Long-
Term Procurement Plans

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PACIFIC GAS AND ELECTRIC COMPANY'S (U 39-E)
COMMENTS ON MRTU DEVELOPMENTS

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>II. THE COMMISSION SHOULD CONTINUE ITS ALREADY ADOPTED UPFRONT AND ACHIEVABLE STANDARDS FOR UTILITY PARTICIPATION IN THE CRR MARKETS, AT LEAST UNTIL SOME EXPERIENCE HAS BEEN GAINED WITH MRTU</td>
<td>3</td>
</tr>
<tr>
<td>A. Description of the Upfront and Achievable Standards for CRR Market Participation Adopted by The Commission</td>
<td>3</td>
</tr>
<tr>
<td>1. PG&amp;E is to Obtain CRRs that are Valuable as Hedges Against Congestion Costs, not for Speculation</td>
<td>3</td>
</tr>
<tr>
<td>2. PG&amp;E Must Analyze the Expected Value of CRRs, and Risk Associated with Holding Them</td>
<td>4</td>
</tr>
<tr>
<td>a. The Commission has Articulated Analytic Approaches for CRRs</td>
<td>4</td>
</tr>
<tr>
<td>b. The Commission has Determined it Should not Impose any Particular Model for the Valuation of CRRs, or the Assessment of Associated Risk</td>
<td>5</td>
</tr>
<tr>
<td>3. PG&amp;E Must Consult with its Procurement Review Group Prior to Executing CRR Transactions Longer than One Calendar Quarter and Report Regularly, and in Detail, on its CRR Activities</td>
<td>6</td>
</tr>
<tr>
<td>4. PG&amp;E Must Report all CRR Transactions in Detail in its Quarterly Compliance Report</td>
<td>7</td>
</tr>
<tr>
<td>B. The Commission Should not Modify its Already Adopted Upfront and Achievable Standards for Participation in the CRR Markets at this Time, as Little New Information is Available Since MRTU Has not Yet Been Implemented</td>
<td>7</td>
</tr>
<tr>
<td>C. Response to Specific Questions and Observations in the Scoping Memo</td>
<td>8</td>
</tr>
<tr>
<td>1. What Types of Existing Analytical Tools are Currently Available to Inform Such Interim Standards to be Applied in the Absence of Real-Life MRTU Experience</td>
<td>8</td>
</tr>
<tr>
<td>2. Whether Existing Tools are Adequate to Serve as an Interim Standard, or Conversely Whether New Tools are Called for</td>
<td>9</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS
(continued)

3. The Advantages and/or Disadvantages of Varying Degrees and Types of CRR Hedging Strategies. For Example, a Comparison of the Value of Flexibility Provided by Ownership of Short-Term CRRs Versus the Security of Owning Long-Term CRRs; Advantages and/or Disadvantages Of Position Volume Limits; Benefits and/or Detriments of Overall CRR Ownership Volume Limits ............................................................................................................... 10

4. Methods for Estimating Increases/Decreases to CRR Values Arising From Changes in Ordinary Grid Flows Arising From Changes in Load, Resources and Transmission Infrastructure, Etc........... 11

5. Whether the Utilities Should Use Identical Analytical Tools, or Whether There Are Reasons For Using Different Analytical Tools Between the IOUs ..................................................................................................... 12

6. How to Incorporate Real-Life Experiences With CRRs After MRTU Startup, Within Such Analysis Prior to Development of Long-Term Standards ......................................................................................... 13

7. Other Relevant Questions that May Weigh on these Decisions .............. 13

III. BECAUSE FUNDAMENTAL FEATURES OF VIRTUAL BIDDING ARE NOT YET SET, IT IS NOT POSSIBLE TO ESTABLISH UPFRONT AND ACHIEVABLE STANDARDS FOR THE UTILITIES’ PARTICIPATION IN VIRTUAL BIDDING AT THIS TIME ........................................................................... 14

A. Response to Specific Question and Observations in the Scoping Memo ........ 14

1. The Benefits and/or Risks of VB ........................................................................ 14

2. Possible Upfront Standards for IOU Participation in VB Markets within the Strictures of Pub. Util. Code § 454.5 ................................................................. 16

3. Whether the IOUs Should Participate in VB Markets ......................................... 16

4. Percentage of the Day-Ahead Market the IOUs Should Dedicate to VB ................................................................................................................................. 17

5. Whether IOU Speculation in VB Markets May Help/Harm Ratepayers ......................... 17

6. What Upfront Risk Analysis May Prevent Undue Speculation by IOUs ................................................................................................................................. 17

7. Whether IOU Participation in VB May Result in Higher Locational Marginal Prices for Energy ................................................................. 18
### TABLE OF CONTENTS (continued)

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Impacts IOU VB Participation May Have on CRR Hedging Activities</td>
<td>19</td>
</tr>
<tr>
<td>9. Tools and Framework Needed by the IOUs to Measure and Analyze Overall Portfolio Risk Management as Well As Risks From Participating in VB Market</td>
<td>19</td>
</tr>
<tr>
<td>10. Whether the IOUs Prefer Monthly, Quarterly or Bi-Annual or any Other Time Interval for Periodic Commission Review and Approval of the IOU Position on VB and Why</td>
<td>19</td>
</tr>
<tr>
<td>11. What Market Power and Manipulation Issues Result From IOU Participation in the CAISO VB Market</td>
<td>20</td>
</tr>
<tr>
<td>12. Other Issues that are Relevant and Need to be Addressed by the IOUs in their VB Proposals</td>
<td>20</td>
</tr>
<tr>
<td>IV. ADDITIONAL MRTU-RELATED CONCERNS RELEVANT TO COMMISSION PROCEEDINGS AND/OR PROGRAMS</td>
<td>20</td>
</tr>
<tr>
<td>V. CONCLUSION</td>
<td>21</td>
</tr>
</tbody>
</table>
I. INTRODUCTION

Pursuant to the August 28, 2008 Assigned Commissioner’s Ruling and Scoping Memo on the 2008 Long-Term Procurement Proceeding, Phase I (Scoping Memo), Pacific Gas and Electric Company (PG&E) provides these comments on developments relating to the California Independent System Operator’s (CAISO) Market Redesign and Technology Upgrade (MRTU).

More specifically, the Scoping Memo directs the utilities, including PG&E, to:

- File proposals for interim upfront and achievable standards regarding how they plan to acquire and retain Congestion Revenue Rights (CRRs);

- File proposals to establish upfront procurement rules and achievable standards regarding how they intend to participate in the CAISO’s virtual bidding (also known as convergence bidding) markets subject to California Public Utilities Commission (Commission) review; and

- Provide input as to whether and where state laws or the Commission’s decisions would require modifications to its procurement programs or further modifications to utility procurement plans because of the implementation of new market features and energy-related products.

With respect to CRRs, PG&E believes that the upfront and achievable standards set forth in the Commission’s resolutions approving the utilities’ requests for such standards should be
continued, at least until the Commission and the utilities have obtained some experience with MRTU. There is little new information available at this time, relative to what was available when the Commission issued Resolutions E-4122\(^1\) and E-4135,\(^2\) that would allow for reasoned refinement of the standards adopted there.

There is even less information available with respect to convergence bidding (CB). The CAISO is developing CB as one of several new market elements for its Markets and Performance (MAP) initiative, intended to be implemented one year after MRTU goes live. While the CAISO has taken several rounds of stakeholder feedback with respect to CB issues, fundamental questions about the structure of CB in the CAISO market remain unresolved.\(^3\)

Therefore, it would be premature at this point in time, with the structure of CB in the CAISO MRTU markets far from finalized, for the Commission to establish upfront procurement rules and achievable standards to be applicable to the utilities’ participation in CB. PG&E instead suggests that the Commission address the issue of upfront rules and achievable standards once the design for CB is approved by the CAISO Board. PG&E anticipates this will occur in the third quarter of 2009, approximately six months before implementation.

PG&E is not aware of any unresolvable conflicts between the Commission’s procurement programs and policies and MRTU. Achieving this harmony has required, and will continue to require, ongoing coordination and cooperation between the Commission and the utilities.

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1/ Resolution E-4122: Approves, with criteria for implementation, PG&E’s request to amend its AB 57 Procurement Plan and pending 2006 Procurement Plan to enable PG&E to procure Long Term Congestion Revenue Rights, October 18, 2007.

2/ Resolution E-4135: Approves, with criteria for implementation, the request by Pacific PG&E to amend its AB 57 Procurement Plan and pending 2006 Procurement Plan to establish upfront and achievable standards and applicable criteria for the procurement of Congestion Revenue Rights, December 6, 2007.

3/ This observation is not intended as a criticism of the CAISO. As PG&E has encouraged it to do, the CAISO is taking the time to gather and consider as much information as it can before it commits to a particular form of CB, which has the potential to have a significant influence on the CAISO markets once it is put into place.
II. THE COMMISSION SHOULD CONTINUE ITS ALREADY ADOPTED UPFRONT AND ACHIEVABLE STANDARDS FOR UTILITY PARTICIPATION IN THE CRR MARKETS, AT LEAST UNTIL SOME EXPERIENCE HAS BEEN GAINED WITH MRTU

In Resolution E-4135 the Commission approved, with criteria for implementation, PG&E’s request to amend its AB 57 Procurement plan and pending 2006 procurement plan to enable PG&E to establish upfront and achievable standards and applicable criteria for the procurement of CRRs, including long-term CRRs.

The following sections describe the upfront and achievable standards applicable to PG&E adopted by the Commission. These standards should not be modified at this time. Since MRTU has not yet been implemented, there is little additional information available now, as compared to when the standards were adopted, that would allow the Commission to refine or improve the adopted standards.

A. Description of the Upfront and Achievable Standards for CRR Market Participation Adopted by The Commission

The upfront and achievable standards adopted by the Commission reflect a combination of the following:

- Purpose limitation;
- Analysis obligations;
- Procurement Review Group consulting responsibilities; and
- Reporting requirements.

Each of these is discussed in turn below.

1. PG&E is to Obtain CRRs that are Valuable as Hedges Against Congestion Costs, not for Speculation

The purpose of PG&E’s participation in the CRR markets is for PG&E to hedge its
congestion costs of transmission of power from its sources to its load. PG&E is not to use CRRs as a method of financial speculation in congestion markets. “[T]he Commission directs that PG&E obtain CRRs that are valuable as hedges against congestion costs PG&E may face, subject to risk assessment regarding the specific source/sink combinations. PG&E should not obtain CRRs that are unrelated to PG&E’s sources of power.”

2. **PG&E Must Analyze the Expected Value of CRRs, and Risk Associated with Holding Them**

   a. **The Commission has Articulated Analytic Approaches for CRRs**

   With respect to analysis, PG&E is to estimate the value of the CRRs it anticipates obtaining. The Commission suggested various valuation methods including:

   - Running a model of the transmission network simulating the dispatch of generation to serve load and forecasting Marginal Congestion Costs (MCCs) or Locational Marginal Prices (LMPs) at CAISO nodes and hubs;
   - Obtain a forecast of MCCs or LMPs from one or more expert consulting firms;
   - Obtain market price quotations (where available) at trading hubs;
   - Analyze historical MCC and LMP data for trends, relationships, and correlations and using this data and observed trends and relationships to forecast future MCCs or LMPs; or
   - Average (or weight-averaging) forecasts of MCCs and LMPs that were developed using two or more of the methodologies described above.

   Further, prior to participating in the annual and monthly CRR allocation/auction processes, or prior to converting awarded CRRs to long-term CRRs (LT CRRs), PG&E is to

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4/ Resolution E-4135, p. 7 (footnote omitted); see generally, Id. pp. 6-7.

evaluate the risks of obtaining CRRs or not obtaining CRRs for the candidate CRR paths.

To evaluate that risk PG&E may employ several different metrics to quantify its risk assessment, including but not limited to:

- Simulating random variables, such as load, hydro, gas prices, and outages, creating a distribution of congestion costs or CRR values for a period of time, and calculating metrics based on that distribution;
- Creating a marginal cost of congestion duration curve indicating the number of hours (or percent of the time) that congestion exceeds a particular value and calculating metrics based on that duration curve;
- Creating a distribution of the hourly dollar amounts received or paid for holding a CRR and calculating metrics based on that distribution;
- Running various scenarios (or stress cases), such as for high or low loads, high or low gas prices, high or low generation/transmission outages, determining the expected congestion cost or CRR value for these scenarios over a period of time, and calculating the change in cost/value compared to the base case scenario;
- Forecasting how congestion costs paid might vary depending on whether the resource at the CRR source location is must-take or dispatchable;
- Estimating the risk mitigation achieved by the addition of candidate CRRs to the overall portfolio; or
- Forecasting the potential amounts paid for holding a CRR during periods of counter-flow.\(^6\)

b. The Commission has Determined it Should not Impose any Particular Model for the Valuation of CRRs, or the Assessment of Associated Risk

As the Commission noted in Resolution E-4135, MRTU is new to California and there is no history on CRRs, MCCs, or LMPs. Because models, assumptions, methodologies, and

\(^6\) Id., p. 15.
technologies continue to improve over time, the Commission chose not mandate that PG&E use any particular method or model to value or assess the risk of congestion.\footnote{Id.}

3. **PG&E Must Consult with its Procurement Review Group Prior to Executing CRR Transactions Longer than One Calendar Quarter and Report Regularly, and in Detail, on its CRR Activities**

Turning to PG&E’s CRR review responsibilities under the adopted upfront and achievable standards, PG&E is to review its CRR valuation and risk analysis with its Procurement Review Group (PRG).\footnote{Id.} Prior to executing transactions longer than one calendar quarter in delivery duration, PG&E is required by its procurement plan to consult with its PRG. PG&E is to provide the PRG participants, prior to the PRG meeting, a list of proposed annual and long term CRR nominations for allocation and auction, showing source, sink, MW quantity, term, expected value, past performance (if applicable), bid price, and a description the underlying arrangement that the CRR will hedge.\footnote{Id., p. 12.}

PG&E is not required to consult with the PRG prior to each monthly CRR allocation/auction process. Instead, PG&E reviews its CRR position with the PRG in periodic position update discussions, including the review of Quarterly Compliance Reports (see below). Within three business days of each monthly CRR allocation or auction tier, PG&E provides the PRG with a listing of proposed monthly CRR nominations for allocation and auction, showing source, sink, MW quantity, term, expected value, past performance (if applicable), bid price and a description the underlying arrangement that the CRR will hedge.\footnote{Id.}

Turning to secondary market transactions involving quarterly and monthly CRRs, PG&E
is to provide the PRG with the same information on a regular basis: source, sink, MW quantity, term, expected value, past performance (if applicable), bid price, and a description of the underlying arrangement that the CRR hedges against.\textsuperscript{11/}

4. PG&E Must Report all CRR Transactions in Detail in its Quarterly Compliance Report

PG&E is also required to report all CRR transactions in its Quarterly Compliance Report (QCRs). The QCRs are to contain, at a minimum, for each CRR, source, sink, MW quantity, term, expected value, past performance (if applicable), bid price (for CRR auctions or secondary market transactions), and a description the underlying energy supply arrangement that the CRR hedges against.\textsuperscript{12/}

B. The Commission Should not Modify its Already Adopted Upfront and Achievable Standards for Participation in the CRR Markets at this Time, as Little New Information is Available Since MRTU Has not Yet Been Implemented

As the \textit{Scoping Memo} states

Regardless of whether MRTU is implemented in the fall of 2008 or sometime in 2009, parties will not gain substantial real life experience with CRRs prior to the expected resolution of Phase I of this proceeding. We expect that such experience will contribute to a more complete record with which to analyze the procurement quandaries related to CRR acquisition and retention, and how those questions should be addressed in the preparation and approval of IOU procurement plans over the long run.\textsuperscript{13/}

For exactly these reasons, it does not make sense to revisit the currently adopted upfront and achievable standards for the acquisition and retention of CRRs. The currently adopted standards require the utilities to use the information they have available to evaluate the associated benefits and risks for CRR transactions, and to report that analysis to the PRG.

\textsuperscript{11/} Id.

\textsuperscript{12/} Id., p. 11.

\textsuperscript{13/} \textit{Scoping Memo}, p. 16.
including a prospective review for commitments longer than one calendar quarter. Since MRTU is not yet up and running, there is no real basis for testing the utilities’ current approach, or for developing recommended improvements.

Therefore, the Commission should not invest time and effort now, when there is no basis for believing that the current approach can be significantly improved, into a revision of the already-adopted upfront and achievable standards. Initiation of that effort will make much more sense once MRTU is implemented and parties have gained some experience with it, experience which can be used to help evaluate, constructively critique, and perhaps improve the current approach.

C. Response to Specific Questions and Observations in the Scoping Memo

1. What Types of Existing Analytical Tools are Currently Available to Inform Such Interim Standards to be Applied in the Absence of Real-Life MRTU Experience

The analytic approach outlined by the Commission in Resolution E-4135 is the correct one to evaluate CRRs. PG&E uses a number of tools, both commercially available and developed in-house, to follow that approach to evaluate prospective portfolios of CRRs on the basis of feasibility, expected cost, and expected hedging of congestion risk associated with PG&E’s generation resources. These tools typically incorporate the CAISO’s full network model of the CAISO grid to help construct and test a variety of portfolios which are expected to be feasible and obtainable within the allocation and auction processes.

One fundamental requirement for valuing CRRs is to estimate expected LMPs for the various nodes of the transmission system, and to apply the estimated LMPs to determine the expected value of CRRs associated with the various nodes. At this point, with no historical LMP data to evaluate, one must do that either by making one’s own estimates, or by asking an outside expert to do so.
Without any historic MRTU data to test one’s estimates against, it is very premature to dictate any one tool be mandated as a “standard” for estimating LMPs, or for evaluating CRRs generally. As the Commission noted in Resolution E-4135, “because MRTU is new to California and there is no history on CRRs, MCCs, or LMPs, and because models, assumptions, methodologies, and technologies continue to improve over time, the Commission does not mandate that PG&E use any particular method or model to value or assess the risk of congestion.”\(^{14}\) That approach, adopted in the resolution establishing upfront and achievable standards for CRRs, should be continued at least until experience is gained with MRTU.

2. **Whether Existing Tools are Adequate to Serve as an Interim Standard, or Conversely Whether New Tools are Called for**

As discussed above, PG&E uses a number of tools to evaluate CRRs consistent with the upfront and achievable standards adopted by the Commission. As the Commission determined in the resolution adopting those standards, it does not make sense to dictate the tools to be used in that evaluation, “because MRTU is new to California and there is no history on CRRs, MCCs, or LMPs, and because models, assumptions, methodologies, and technologies continue to improve over time . . . .”\(^{15}\)

At this point, without any historic MRTU data to test one’s estimates against, it is very premature to dictate any one “tool” for valuing CRRs, or evaluating their risk. The existing tools should be regularly updated to reflect analytical or market developments. While existing tools should be updated as new information becomes available, there is no basis for mandating a change in these tools at this time.

Even in the future, after substantial experience with MRTU is gained, it still may not

\(^{14}\) Resolution E-4135, p. 15.

\(^{15}\) *Id.*
make sense to dictate that a specific model or set of models be adopted to evaluate CRRs. But
the Commission does not need to make that determination now. PG&E recommends that the
Commission determine at this point only that it is premature at this time to dictate that any
specific model or set of models be used to conduct that analysis.

3. The Advantages and/Or Disadvantages of Varying Degrees and Types of CRR Hedging Strategies. For Example, a Comparison of the Value of Flexibility Provided by Ownership Of Short-Term CRRs Versus the Security of Owning Long-Term CRRs; Advantages and/or Disadvantages Of Position Volume Limits; Benefits and/or Detriments of Overall CRR Ownership Volume Limits

To a large degree the allocation nomination limits on CRRs imposed by the CAISO on all market participants limit CRR procurement strategies. These limits apply to both CRR sources and sinks, and significantly limit the possibility of financial speculation by those participating in the allocations. Also, the upfront and achievable standards already adopted by the Commission impose an additional limitation by directing utilities to use CRR nominations to hedge costs of transmission of power and not as a method of financial speculation.16 Or, as stated in another way by the Commission, the CRRs acquired by PG&E will be limited by PG&E’s expected grid use. This protection exists for CRRs acquired in both allocations and auctions.17

Regarding the short-term versus long-term question, the main issue is having adequate flexibility to match CRRs to long-term procurement arrangements which can last 20 or 30 years. The procedure to secure CRRs for new arrangements requires the market participant to first acquire annual CRRs which are then nominated as long-term CRRs. This is a cumbersome process, the outcome of which is difficult to predict. Moreover, currently there is a mismatch

16/ Id., p. 18.
17/ Id., p. 8.
between the maximum LT CRR term of ten years and the typical length of a long-term procurement arrangement, which is often longer. The result is that the out years of a procurement arrangement can remain unhedged until the ten-year CRRs are renominated at the end of their term. There is no guarantee of the results of the renomination. The CAISO is considering addressing the issue of long-term CRR flexibility in MRTU Release 2, including a long-term CRR auction and more flexible term lengths.

The currently adopted upfront achievable standards require PG&E to consult with its PRG prior to entering into any CRRs with term greater than one quarter, which includes all LT CRRs, in part to review the strategy and evaluation considerations of the nominations.

4. Methods for Estimating Increases/Decreases to CRR Values Arising From Changes in Ordinary Grid Flows Arising From Changes in Load, Resources and Transmission Infrastructure, Etc

The value of CRRs is determined using expected average congestion costs on the CAISO grid, which is determined by the expected LMPs on the grid. LMPs are expected to be affected by changes in load, changes in resources, and changes in transmission infrastructure.

However, it is not clear at this point, without any actual experience with MRTU, that changes in congestion values due to anticipated changes in these variables can be reliably estimated, at least on the level of detail one would need to select between similar CRR portfolios.

Large scale shifts in the transmission grid resulting from the construction of significant new facilities might be sufficiently predictable to aid in the acquisition process for long term CRRs. This is one of the factors that should be taken into account in evaluating CRRs. Because the CAISO updates its full network model to reflect, among other things, significant shifts in the transmission grid, and because the tools used by PG&E to evaluate CRRs under the currently adopted standards reflect the CAISO’s full network model, these shifts are captured by PG&E in meeting the currently adopted standards.
5. Whether the Utilities Should Use Identical Analytical Tools, or Whether There Are Reasons For Using Different Analytical Tools Between the IOUs

Because MRTU is new to California and there is no history on CRRs, MCCs, or LMPs, and because models, assumptions, methodologies, and technologies continue to improve over time, the Commission should not mandate that PG&E use any particular method or model to value or assess the risk of congestion. In particular, the Commission should not dictate that the utilities use identical tools to evaluate CRRs.

The upfront and achievable standards already adopted by the Commission require the utilities to use CRRs to manage congestion risk associated with their generation, not for speculation. With respect to analytics, they require the utilities to develop estimates of expected LMPs to evaluate the expected value of CRRs. They require the utilities to measure risk associated with CRRs. They require the utilities to simulate random variables, such as load, hydro, gas prices, and outages, thereby creating a distribution of congestion costs or CRR values for a period of time, and to calculate risk metrics based on that distribution.

In this context, it makes sense to require the utilities to present the results of their analysis to the Commission on a consistent basis, and in a consistent format. It does not make sense, however, to woodenly require the utilities to use identical tools for this analysis.

For example, the Commission currently requires the utilities to similarly evaluate the risk of price fluctuation associated with their electric procurement portfolios via the To-expiration-Value at Risk (TeVaR) measure. The Commission does not dictate the specific software model to be used to evaluate TeVaR. It does, however, require that all of the utilities measure risk in the same way.

18/ See, Id.
While on the surface it might seem that it would be possible to require the utilities to use identical analytic tools to evaluate CRRs that is a false hope. The inputs to these tools for each utility include not only the CAISO’s full network model, but also internal system-dependent estimates of market parameters, as well as judgments on how assets map to a nodal distribution picture. As a result, even the inputs vary among the utilities. In addition, the utilities have different risk control strategies and qualitatively different portfolios, so different CRR portfolios will be appropriate for different participants for different reasons.

As a result, any simplicity produced by requiring all utilities to use the same analytical tools would be more apparent than real. For any LSE, at a high level the issues in constructing a CRR acquisition strategy are the same: feasibility, value, risk, and portfolio fit. A showing in each of these or similar categories may be a more appropriate level at which to apply a cross-utility standard.

In short, the Commission should not impose a mandate that the utilities use any specific model, or set of models, in conducting their CRR analysis.

6. **How to Incorporate Real-Life Experiences With CRRs After MRTU Startup, Within Such Analysis Prior to Development of Long-Term Standards**

PG&E believes that once California has gained experience with MRTU, it may very well make sense to re-evaluate the currently adopted upfront and achievable standards for participation in the CRR markets.

7. **Other Relevant Questions that May Weigh on these Decisions**

PG&E has no other comments.
III. BECAUSE FUNDAMENTAL FEATURES OF VIRTUAL BIDDING ARE NOT YET SET, IT IS NOT POSSIBLE TO ESTABLISH UPFRONT AND ACHIEVABLE STANDARDS FOR THE UTILITIES’ PARTICIPATION IN VIRTUAL BIDDING AT THIS TIME

PG&E believes that the Commission should authorize it, as well as the other utilities, to participate in virtual bidding, which has the potential to provide benefits to the utilities’ procurement customers. As the Scoping Memo observes, utility participation in virtual bidding (also called convergence bidding (CB)) will require modification of the utilities’ procurement plans to include upfront and achievable standards for procurement of this new energy-related product.

PG&E agrees. However, establishing those standards at this time is not possible, because fundamental questions about the structure of CB in MRTU have not yet been resolved by the CAISO.

Nor is it necessary to set upfront and achievable standards at this time. Prior to implementation of CB the CAISO will need to resolve the fundamental questions about structure, and submit a specific proposal to the Federal Energy Regulatory Commission (FERC) for approval. PG&E proposes that the Commission address the issue of upfront rules and achievable standards once the design for CB is approved by the CAISO Board. PG&E anticipates this will occur in the third quarter of 2009, approximately six months before implementation.

A. Response to Specific Question and Observations in the Scoping Memo

1. The Benefits and/or Risks of VB

Virtual Bidding or Convergence Bidding (CB)\(^{19}\) has been mandated by FERC to be implemented in the CAISO market within one year of MRTU starting.

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\(^{19}\) The CAISO refers to virtual bidding as convergence bidding. PG&E's response to the Commission will likewise refer to it as convergence bidding or CB.
In general, CB is viewed as an important market design element that can improve market efficiency. The benefits are discussed in depth in the CAISO's November 2007 paper, *Convergence Bidding: Department of Market Monitoring Recommendations (DMM November 7 CB Paper)*. Specific possible benefits include (1) price convergence between the day ahead and real time markets, (2) the mitigation of supplier market power, (3) the deterrence of implicit virtual bidding, (4) an increase in market liquidity, (5) its availability as a hedging mechanism for generators, and (6) providing the ability for CRR holders to convert their hedge to the real-time price.\(^2\)

The benefits of CB do not come without risks. Concerns include (1) the use of virtual bids to increase congestion to earn greater revenues from CRRs, (2) the effect of virtual bids on local market power mitigation provisions, and (3) the potential use of uninstructed deviations in real time to take advantage of a position taken in the day ahead market using virtual bids. These risks are also described in detail in the *DMM November 7 CB Paper*.

PG&E is supportive of the CAISO efforts to implement CB. One critical element that is currently unresolved is whether CB will be limited, at least initially, to the coarser, Load Aggregation Point (LAP) level, or whether it will be applied at the more granular nodal level. PG&E supports the initial implementation of a LAP design instead of a nodal design. The LAP design captures many of the anticipated benefits without exposing the market to much of the risks. PG&E agrees with the October 30, 2006 conclusion of the CAISO’s Department of Market Monitoring that it is better to start with the simple LAP Convergence Bidding design since (1) it captures most of the benefits of convergence bidding, (2) minimizes potential for nodal price manipulation, and (3) provides opportunity for further study of the need and proper

\(^2\) *DMM November 7 CB Paper: http://www.caiso.com/1c8f/1c8ff5f46e90.pdf*

It is too soon in the process of developing CB to make specific recommendations to the Commission regarding upfront and achievable standards. Effectively, none of the critical CB design elements have been decided at this time. In fact, although there has been much discussion over the past two years identifying the major issues and reporting on CB in other markets, the design discussion will only start in earnest with the CAISO's upcoming October 16, 2008, stakeholder session.

The stakeholder process is anticipated to result in a final design approved by the CAISO Board in the third quarter 2009. The CB design may include some participation limits similar to the limitations imposed by the Commission on CRR acquisition.

It will be appropriate to work on upfront standards once the design and related limits are fully understood. It is premature to begin that work now, as it would run the risk of duplication or conflict between the CAISO design and Commission standards.

3. Whether the IOUs Should Participate in VB Markets

The utilities should be able to participate in the CB market. It would unfairly disadvantage the utilities and their ratepayers if the utilities were prevented from taking advantage of the benefits that CB is expected to provide to the CAISO markets. The Commission concluded with respect to CRRs that, "It would be poor policy to force utilities into a situation where they are systematically disadvantaged against other market participants because

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21/ DMM Comments and Recommendations on Convergence Bidding Design Options, October 30, 2006, p. 10: http://www.caiso.com/18a0/18a0b00f67110.pdf. See also, DMM November 7 CB Paper, p. 3.
such a situation may result in increased costs for utility ratepayers.\textsuperscript{22} Exactly the same conclusion applies, with equal force, to participation in CB.

Moreover, and most importantly from an overall market perspective, the anticipated benefits of CB, such as price convergence, will only be fully realized if the largest participants (i.e. the utilities) are allowed to participate.

4. **Percentage of the Day-Ahead Market the IOUs Should Dedicate to VB**

At this point, in light of the substantial uncertainty with respect to the specifics of CB in the MRTU markets, it is simply not possible to provide a reasoned suggestion for the utilities’ levels of participation in CB in the day-ahead market.

5. **Whether IOU Speculation in VB Markets May Help/Harm Ratepayers**

As an initial point, it is not clear if the question equates participation in the CB markets with speculation in the CB markets. While PG&E anticipates that it may very well participate in the CB markets (assuming Commission authorization to do so), it does not plan to engage in financial speculation through CB.

The potential benefits of PG&E’s participation in the CB market to the ratepayers and the overall market are described above. PG&E anticipates that its participation in CB would be via hedging actual or anticipated positions, both physical and financial, that are the outcome of its normal course of business. Examples include hedging the day-ahead prices of offered schedules in the day-ahead market or the hedging of outage risks.

6. **What Upfront Risk Analysis May Prevent Undue Speculation by IOUs**

PG&E’s overall strategy for managing energy resource scheduling and energy

\[22/\text{Resolution E-4122, October 18, 2007, p.12.}\]
procurement in spot markets will remain the same under MRTU. This strategy is to procure and schedule supply resources in a least cost manner while limiting PG&E’s net short open position in spot markets to within an established limit for each market and reduce the limit as trading moves from day ahead to real time markets.

How CB will be integrated into this process will depend heavily on the CB mechanism developed in the currently ongoing CAISO stakeholder process, as it is ultimately approved by FERC. As noted above, the CAISO has yet to determine the specifics of how convergence bidding will be incorporated into MRTU. Nor are just a few details uncertain. Fundamental design elements such as the acceptable granularity of convergence bids (e.g. zonal versus nodal), and the basic internal CAISO risk control provisions are completely unsettled at this time. Therefore, it is premature to suggest risk analysis and requirements to be applicable to the utilities.

7. Whether IOU Participation in VB May Result in Higher Locational Marginal Prices for Energy

There is the potential for a poorly conceived CB design with inadequate market protections to drive LMPs higher. For example, a market participant may use convergence bids to increase congestion to earn greater CRR revenue. However, this potential is independent of whether utilities participate in the CB market. In fact, utilities are least likely to engage in such practices.

The actual risk lies with other non-Commission regulated market participants’ manipulating a poorly designed CB market. This risk can be mitigated by the CAISO adopting the DMM suggestion of starting with the less complex LAP Convergence Bidding design.
8. **Impacts IOU VB Participation May Have on CRR Hedging Activities**

The impact of CB on CRRs is unclear today since none of the major CB design or market power mitigation rules have been developed.

The observations made in PG&E's response to the previous question also applies here. The potential for CB to adversely affect CRRs is independent of whether utilities participate in the CB market. In fact, utilities are least likely to engage in market manipulative practices. The actual risk lies with other non-Commission regulated market participants manipulating a poorly designed CB market. This risk can be mitigated by the CAISO adopting the DMM suggestion of starting with the less complex LAP CB design.

9. **Tools and Framework Needed by the IOUs to Measure and Analyze Overall Portfolio Risk Management as Well As Risks From Participating in VB Market**

Currently, the utilities have tools in place to measure and analyze overall portfolio risk management. They should continue to use those tools. New tools may be necessary to evaluate and management risks associated with CB participation. However, it is premature to discuss the specific nature of those tools since substantial elements of the CAISO’s CB program are not yet established.

10. **Whether the IOUs Prefer Monthly, Quarterly or Bi-Annual or any Other Time Interval for Periodic Commission Review and Approval of the IOU Position on VB and Why**

Just as is the case currently with respect to the utilities’ procurement activities generally, the utilities’ convergence bidding activities should be reviewed for compliance using the then-in-place upfront and achievable standards applicable to convergence bidding activities. No new, separate compliance review process is necessary or appropriate for this aspect of utilities’ participation in the electric procurement markets. It will make sense to sort out the details of the
process, including how review will be incorporated into the PRG, Quarterly Compliance Reports and/or Annual Compliance Review, at the same time that the Commission develops the upfront and achievable standards for participation in the CB markets, after the CAISO Board has adopted a specific CB proposal.

11. What Market Power and Manipulation Issues Result From IOU Participation in the CAISO VB Market

Market power risks resulting from CB and the necessary market power rules needed to mitigate those risks will be largely driven by whether the CAISO adopts a LAP or nodal CB design. This decision, along with the other major design decisions, has not been made by the CAISO.

As noted above, the potential for CB to create market power issues is independent of whether utilities participate in the CB market. In fact, utilities are least likely to engage in market manipulative practices. The actual risk lies with other non-Commission regulated market participants manipulating a poorly designed CB market. This risk can be mitigated by the CAISO adopting the DMM suggestion of starting with the less complex LAP CB design.

12. Other Issues that are Relevant and Need to be Addressed by the IOUs in their VB Proposals

PG&E has no other comments.

IV. ADDITIONAL MRTU-RELATED CONCERNS RELEVANT TO COMMISSION PROCEEDINGS AND/OR PROGRAMS

Generally speaking PG&E does not see any unavoidable conflicts with the CAISO’s implementation of MRTU, either the initial implementation or the MAP implementation expected to follow a year later, which will include CB as well as other enhancements to MRTU as initially implemented.

That said, the new features of energy and capacity markets that are scheduled for
adoption by the CAISO will have a significant impact on the procurement plans and programs of
the utilities. It is likely that the new features of the energy and capacity markets, such as
locational pricing, will require the Commission to examine and modify its policies regarding
utility procurement. For example, the existence of locational prices will have implications for
Commission policies and methods to accurately calculate utility avoided costs.

Given the myriad of state laws and Commission decisions that deal with energy
procurement programs, it is difficult to articulate all the ways in which Commission policy may
have to be modified to account for the realities of the new market. PG&E will continue to raise
these issues as it recognizes them in ongoing Commission proceedings, and has no doubt that
other parties will do the same.

V. CONCLUSION

With respect to CRRs, PG&E believes that the upfront and achievable standards set forth
in the Commission’s resolutions approving the utilities’ requests for such standards should be
continued, at least until the Commission and the utilities have obtained some experience with
MRTU. There is little new information available at this time that would allow for reasoned
refinement of the currently adopted standards.

There is even less information available with respect to convergence bidding. While the
CAISO has taken several rounds of stakeholder feedback with respect to CB issues, fundamental
questions about the structure of CB in the CAISO markets remain unresolved. Therefore, it
would be premature at this point in time for the Commission to establish upfront procurement
rules and achievable standards to be applicable to the utilities’ participation in CB. Instead, the
Commission should address the issue of upfront rules and achievable standards once the design
for CB is approved by the CAISO Board. PG&E anticipates this will occur in the third quarter
of 2009.
Finally, PG&E is not aware of any unsolvable conflicts between the Commission’s procurement programs and policies and MRTU. Achieving this harmony has required, and will continue to require, ongoing coordination and cooperation between the Commission and the CAISO.

Respectfully Submitted,

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By: ______________________ /s/ ______________________
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Attorneys for
PACIFIC GAS AND ELECTRIC COMPANY

Dated: October 3, 2008
CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of “PACIFIC GAS AND ELECTRIC COMPANY’S (U 39-E) COMMENTS ON MRTU DEVELOPMENTS” on all known parties to the official service list for R.08-02-007:

• transmitting an e-mail message with the document attached to each party providing an email address; or
• by first-class mail, postage prepaid, to each party not providing an email address.

Executed on October 3, 2008, at San Francisco, California.

/s/
MARTIE L. WAY