I. Introduction

Constellation Energy Commodities Group, Inc., Constellation NewEnergy, Inc., and Constellation Generation Group, LLC (collectively, “Constellation”) have together been active participants in the resource adequacy and capacity market discussions that have been taking place at the California Public Utilities Commission (“Commission” or “CPUC”) pursuant to Docket R.05-12-013, and at the CAISO, including direct participation in the Capacity Market Issues Forum, held on March 6, 2007.


On March 13, 2007, Constellation submitted to the CPUC its capacity market proposal, the California Capacity Infrastructure Model (“Cal CIM”) in the Docket R.05-12-013, in preparation for a series of CPUC led workshops that are expected to begin on August 15, 2007. Subsequent to the filing of proposals on March 30, 2007, parties were
permitted to file Pre-Workshop Comments and Pre-Workshop Reply Comments, and Constellation did so on May 18, 2007 and July 13, 2007 respectively. Constellation’s March 30, 2007 proposal, its Pre-Workshop Comments and Pre-Workshop Reply Comments provide the full detailed description of Constellation’s capacity market proposal, and are the basis for Constellation’s completion of the Evaluation Criteria Matrix. Because the Evaluation Criteria Matrix does not adequately permit a full description of Constellation’s capacity market proposal, Constellation has included each of the three filings with these comments for the CAISO’s review, along with the Evaluation Criteria Matrix as follows:

Attachment A: Evaluation Criteria Matrix


Attachment C: Pre-Workshop Comments of Constellation on Track 2 Proposals, submitted to the CPUC on May 18, 2007 in Docket R.05-012-013 (“Constellation Pre-Workshop Comments”).

Attachment D: Pre-Workshop Reply Comments of Constellation on Track 2 Proposals, submitted to the CPUC on July 13, 2007, in Docket R.05-12-013 (“Constellation Pre-Workshop Reply Comments”).

II. Summary of Constellation’s Cal CIM Proposal

   A. Constellation’s initial Cal CIM proposal

On pages 7 and 8 of Constellation’s Initial Track 2 Proposal (Attachment B), Constellation summarized the principles that govern its Cal CIM proposal, as follows:
1. **Price Transparency:** Capacity price signals must be sufficiently transparent and liquid so that they work in conjunction with energy and ancillary services price signals to signal the need for infrastructure investment when and where it is needed.

2. **Locational:** Capacity market design should reflect locational capacity requirements created due to system constraints and the resulting locational price differences.

3. **Support Bilateral Transactions:** Capacity market design should support, and not supplant bilateral transactions. Said another way, when capacity markets are implemented, there should be little, if any, need for backstop capacity procurement either by the utilities or the CAISO, except in extreme and infrequent circumstances.

4. **Responsive to Changing Market Conditions:** Capacity market design should be responsive to improvements in energy market pricing so that over time, as demand response capabilities become widespread, energy price mitigation can be reduced and capacity market pricing can become an increasingly smaller component of overall energy market revenues.
5. **Market Monitoring and Mitigation:** Capacity market design should allow for careful market power abuse monitoring and mitigation.

In accordance with those principles, Constellation’s Initial Track 2 Proposal described the *Cal CIM* proposal, summarized as follows:

1. Three to four years in advance of the compliance period, the RA obligation is announced.

2. Three to four years in advance of the compliance period, locational demand curves establish the range of prices that will clear the capacity market, with higher clearing prices when the aggregate level of resources is below the desired reserve margin and lower clearing prices when the aggregate level of resources is above the desired reserve margin.

3. Between the time the RA obligation and demand curve are established, market participants may enter into bilateral transactions.

4. On a monthly basis during the compliance period, LSEs report to the CAISO the quantity of capacity resources to which they have committed for that month.

5. The CAISO conducts a demand curve clearing auction in which any uncommitted capacity may offer to sell its capacity for the coming month.

6. The combined amount of capacity committed by LSEs plus the uncommitted capacity offered in during the demand curve auction determines the demand curve clearing price.
7. All load pays the demand curve clearing price. For any load that executed a bilateral capacity agreement, the load pays only its bilateral transaction price because the amount it pays for its share of the capacity that cleared the auction is offset by the price it receives for the bilateral capacity that it submitted in to the auction.

The rationale for each of these elements of the Constellation proposal is explained in Constellation’s Initial Track 2 Proposal (Attachment B), and in the Evaluation Criteria Matrix (Attachment A).

**B. Proposed modifications to the initial Cal CIM proposal**

After reviewing all the capacity market proposals and the Pre-Workshop Comments submitted by other parties, Constellation recognized that the absence of a specific, explicit capacity backstop procurement mechanism was a key difference between its Cal CIM model and the capacity market proposals of other parties. Many parties believe that a safety net backstop mechanism is a necessary feature of any capacity market proposal to ensure reliability and to provide political durability. Constellation continues to believe that inclusion of a specific and explicit backstop procurement mechanism runs the risk that the backstop mechanism could become the primary investment vehicle for new generation, and that it may displace or undermine more market-based, bilateral investment.

Nevertheless, Constellation recognizes the concern that capacity market structures are untested in California – concerns that a backstop procurement mechanism could address. Therefore, Constellation outlined a modification to the initial Cal CIM proposal in its Pre-Workshop Reply Comments (Attachment D) that provides for a backstop
mechanism based on the following principles, each of which is described in more detail in Attachment D:

1. There should be specific and clearly defined criteria that trigger backstop procurement.
2. If backstop procurement is triggered, that should in turn trigger a comprehensive review to determine why the market based mechanisms are not producing price signals that support merchant investment.
3. Backstop procurement should be for capacity only.
4. Capacity committed through backstop procurement should be subject to the same capacity resource obligations as are resources committed directly by Load Serving Entities (“LSEs”).
5. The backstop procurement contract should be short in duration.

**III. Conclusion**

The implementation of a capacity market to ensure resource adequacy is the single most important market design element that remains necessary for the successful development of competitive wholesale and retail markets. Once in place, along with the deployment of MRTU and improvements to transmission planning processes, the California energy markets will be poised to provide price signals that will incent the competitive development of capacity resources without the need for continued regulatory intervention that mandates cost socialized investment, as is currently the case.

Constellation remains committed to working with market participants, the CAISO, and the CPUC staff on this important issue.
Please contact Mary Lynch (916 526 2860) or Sara O’Neill (415 293 8003) if you have questions.
### Evaluation Criteria Matrix

- Each proposal will be evaluated against two categories of criteria: “Benefits” and “Feasibility.” The specific criteria or attributes for each category are stated in the left-hand column of the matrix below.

- In the matrix please describe how the proposal meets each of the criteria. Please rank the proposal (with a justification) according to the attribute as High, Medium, or Low, based on your assessment of how well it meets the corresponding criterion. Please indicate if the proposal meets the criteria directly or indirectly and explain why.

- In addition to filling in the matrix, please attach a summary of your proposal for the CAISO stakeholder process.

**Note from Constellation:** For a complete understanding of the Constellation capacity market proposals, please review these matrix responses along with the cover comments and other Attachments submitted with this matrix.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>Description of Proposal and How it Meets Criteria</th>
<th>High, Medium, Low*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criteria</td>
<td>Cal CIM provides investment incentives in two ways. First, it ensures that there are transparent capacity price signals that, together with energy and ancillary services price signals, will allow investors to make infrastructure investment decisions. Second, it provides for a safety net backstop mechanism that is triggered when and if the expected merchant investment response is not forthcoming.</td>
<td>High, Direct</td>
</tr>
</tbody>
</table>

**1.** How does the proposal provide incentives to attract an efficient amount investment in California’s electricity infrastructure?
<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>Criteria</th>
<th>Description of Proposal and How it Meets Criteria</th>
<th>High, Medium, Low*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>2</strong></td>
<td>How does the proposal provide generation, transmission, and demand response a reasonable opportunity to compete in meeting both local and system capacity requirements?</td>
<td><strong>High, Direct</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Generation and demand response should be structured to compete directly with one another to serve as capacity resources, which is the case in the Cal CIM proposal. With respect to transmission resources, however, there must be recognition that transmission does not and will not compete on a level playing field with generation and demand response resources, because transmission investment takes place under the fundamentally different paradigm of cost-of-service ratemaking. Capacity resource investment is not intended, pursuant to Commission policy, to occur in that same paradigm. Simply put, there is no real way to evaluate the benefits of a transmission upgrade versus generating/demand resources; however, if we have created markets that provide viable, well-formed, transparent price signals for capacity resources such that those resources are being built in a timely fashion, transmission planning exercises will become less contentious.</td>
<td>High, Medium, Low*</td>
</tr>
<tr>
<td></td>
<td><strong>3</strong></td>
<td>How does the proposal provide a mechanism that ensures the retention of existing resources that are economic?</td>
<td>High, Indirect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Under Cal CIM, on a monthly basis, the CAISO would conduct the “demand curve auction.” In that auction, all resources that have been committed as RA resources via bilateral agreement between LSEs and suppliers are submitted to the auction. In addition, any other resources that are qualified to sell their capacity into the market, but have not been committed via a bilateral contract with an LSE, may also offer into the demand curve auction, and will be assured a capacity payment for that month.</td>
<td>High, Indirect</td>
</tr>
<tr>
<td></td>
<td><strong>4</strong></td>
<td>How does the proposal promote the acquisition of capacity sufficiently in advance of the needed time of delivery in order to support planning and allow new entrants to compete?</td>
<td>High, Indirect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cal CIM separates <em>forward planning</em> from <em>forward compliance.</em> Under Cal CIM, the system and local requirements are stated on a three to four year forward basis, and the demand curve pricing is established in the same forward time frame. LSE’s notify the CAISO and CPUC of their bilateral commitments on a month ahead basis. It is important to note that this does not mean or imply that there will be no forward commitments. LSEs will be entering into capacity commitments in accordance with their risk preferences and/or in accordance with mandates they receive from their regulators. More importantly, market intermediaries, who provide risk management services, and who sell energy and ancillary services to LSEs will have the price signals necessary to make investment decisions for new resources when those resources are needed and allow the market intermediaries to provide the capacity, energy and ancillary services that LSEs need.</td>
<td>High, Indirect</td>
</tr>
<tr>
<td>BENEFITS</td>
<td>Description of Proposal and How it Meets Criteria</td>
<td>High, Medium, Low*</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------------------------------</td>
<td>---------------------</td>
<td></td>
</tr>
<tr>
<td>Criteria</td>
<td>If the proposal contracts forward for capacity in</td>
<td>High, Medium, Low*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>advance of the operating year, how are the costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>of capacity in excess of the capacity requirement</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>during the operating year (i.e. arising from load</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>forecast error) allocated among LSEs?</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cal CIM does not include a requirement for a</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>demonstration of forward contracts until one</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>month ahead of the compliance period, primarily</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>because of the difficult issues associated with</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>allocating the costs of capacity that is</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>procured on behalf of load. On a month ahead</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>basis, all bilateral commitments and additional</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>resources that are available but have not been</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>committed via a bilateral contract participate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>in the demand curve auction and the price that</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>clears there is assessed to all LSEs for that</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>month. Any LSE that has not entered into</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>bilateral capacity contracts pays that clearing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>price. LSEs that have entered into bilateral</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>agreements pay the clearing price but also</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>receive the clearing price for the capacity they</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>submitted into the auction, so their obligation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>is hedged. As noted in response to Criteria 4,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>however, the Cal CIM approach does not mean or</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>imply that capacity commitments will not occur</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>in a forward time frame.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>How does the proposal make available to the</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td></td>
<td>market transparent price signals that ensure that</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>capacity is efficiently priced and traded?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>In the Cal CIM model, the demand curve pricing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>provides a range of prices that will prevail</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>in the month ahead time frame for any LSE or</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>supplier that waits until then to make a</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>capacity commitment. That demand curve price</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>signal is based on the cost of new entry less</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>the expected energy rents associated with the</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>new entry unit. Because the demand curve pricing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>is established four years forward, and because</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>it is updated on an annual basis to reflect</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>changes to the cost of new entry and energy rent</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>components, it is a transparent, efficient price</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>signal that allows for trading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>How does the proposal include performance</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td></td>
<td>incentives that are effective and clear, and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ensure that generation and other capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>resources meet their expected obligations?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Cal CIM proposal does not discuss performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>incentives that would be in place during the</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>compliance period. Constellation believes that</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>capacity resources should be subject to testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>requirements that validate on an annual basis</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>what the qualified capacity is for that unit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Furthermore, qualified units should also be</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>subject to a requirement for coordinated</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>maintenance scheduling. Finally, all RA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>resources will be required to bid in to the</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>day-ahead market and RUC. Constellation does</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>not believe that additional performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>incentives are needed because capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>resources are fully incented to produce energy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>on peak in order to secure energy revenues.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instances of specific anti-competitive</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>withholding should be dealt with as market</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>behavior issues, and should be not addressed</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>by additional performance incentives or</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>performance penalties.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BENEFITS</td>
<td>Criteria</td>
<td>Description of Proposal and How it Meets Criteria</td>
<td>High, Medium, Low*</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
<td>---------------------------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Second bullet provides more info</td>
</tr>
<tr>
<td></td>
<td>7a</td>
<td>How will performance incentives for suppliers affect incentive of LSEs to bid in DAM?</td>
<td>Since Constellation’s proposal does not include performance incentives during the compliance period, this question is not applicable to the Constellation model. However, Constellation would note that if there are specific performance incentives, and they are structured as penalties for not achieving a specific level of availability expressed as a percentage of qualified capacity, then the performance incentive will serve to encourage generators to hold back some of the qualified capacity from the RA market in order to manage the risk associated with the imposition of the penalty. This will potentially raise consumer costs, since LSEs will then have to contract with higher cost resources to make up for the MW that are being held in reserve. Constellation reiterates its position that performance incentives are not likely to significantly enhance generator performance in the day ahead or retail markets.</td>
</tr>
<tr>
<td></td>
<td>7b</td>
<td>How will performance incentives for suppliers affect dispatch incentives in real-time?</td>
<td>See response to 7a above.</td>
</tr>
<tr>
<td></td>
<td>7c</td>
<td>How will performance incentives affect variability of payments by LSEs and payments to capacity suppliers?</td>
<td>See response to 7a above.</td>
</tr>
<tr>
<td></td>
<td>7d</td>
<td>How will the determination of the gross capacity requirement account for differences in the nature of the resources offered to meet the requirement?</td>
<td>It is not clear to Constellation what this question is asking. Will comment further at the August 13 workshop.</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>How does the proposal allow for cost effective tracking mechanisms for monitoring and compliance?</td>
<td>Cal CIM calls for monthly reporting by LSEs of their capacity commitments. It also calls for annual testing of capacity resources to determine NQC. Constellation expects that both of these mechanisms will function essentially the same as they do today.</td>
</tr>
<tr>
<td>BENEFITS</td>
<td>Description of Proposal and How it Meets Criteria</td>
<td>High, Medium, Low*</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------------------------------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td>Criteria</td>
<td></td>
<td>*Second bullet provides more info</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>How does the proposal complement the CAISO's MRTU market design, systems, and operations?</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Constellation is not aware of any problems that would be encountered with respect to its MRTU market design, systems, and operations if the Cal CIM capacity market is adopted. Moreover because Cal CIM is focused on providing transparent capacity price signals that will work in concert with MRTU energy and ancillary service price signals to support investment decisions, the Cal CIM model is very complementary to MRTU.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>How does the proposal provide incentives for a diverse resource mix that is compliant with the California Energy Action Plan and meets the following four operational requirements:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10a</td>
<td>• Local, Zonal, and System Requirements</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The CPUC and CAISO have defined specific local, zonal and system capacity requirements. Under the Cal CIM proposal, demand curve pricing should be developed for each of these requirements (i.e. the demand curve pricing may be different for each defined location and the system).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10b</td>
<td>• Quick start, fast ramping, and cycling resources to optimize and fine tune the system.</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The key to ensuring the development of specific resources is to allow the price signals to reflect that value that these resources bring to the system. Constellation notes that the type of features requested here are more related to operating reserves than they are to planning reserves.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10c</td>
<td>• Resources with storage capability to shift output from intermittent resources from off peak to on peak periods.</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td></td>
<td>See response to 10b</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Attributes for Long Term RA
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description of Proposal and How it Meets Criteria</th>
<th>High, Medium, Low*</th>
</tr>
</thead>
<tbody>
<tr>
<td>10d</td>
<td>How will the proposal account for the impact of low hydro conditions on resource availability?</td>
<td>This is not an issue that is specifically related to capacity market design. Rather, it is an issue associated with how the planning reserve margin is developed.</td>
</tr>
<tr>
<td>11</td>
<td>How does the proposal minimize or eliminate the need for the CAISO to rely on backstop capacity procurement, Reliability Must-Run or other such mechanisms to obtain additional needed capacity?</td>
<td>By providing price signals that incent investment, the need to rely on backstop mechanisms should be minimized. The Cal CIM model does, however, contemplate a backstop mechanism that would employ specific triggers to indicate that the expected market response is not occurring, and that a backstop procurement mechanism should be triggered.</td>
</tr>
<tr>
<td>12</td>
<td>Does the proposal include a backstop mechanism for situations when insufficient values of capacity can be procured through the centralized market? Please describe.</td>
<td>Yes. Constellation's backstop mechanism proposal calls for the development of specific metrics to determine if the merchant investment is sufficient. If those metrics are not met, the CAISO would conduct a capacity RFO for specific resources to resolve the shortfall. The contract term for the backstop procurement would be no more than five years. When backstop procurement is triggered, a complete review of the capacity market structures would also be reviewed by the CAISO and stakeholders to determine why the market structures are not supporting new investment, and make the necessary modifications.</td>
</tr>
<tr>
<td>13</td>
<td>How does the proposal allow for effective use of imports to meet RA requirements?</td>
<td>Imports are treated the same as any other resource in the Cal CIM model – once qualified as a capacity resource, they may participate in the capacity market just as internal resources or demand resources.</td>
</tr>
<tr>
<td>14</td>
<td>How does the proposal ensure that all load serving entities recover the cost of their capacity requirements and ensure that cost shifting does not occur between LSEs?</td>
<td>Under Cal CIM, there is no provision that assures any entity of full recovery of the costs of their capacity requirements. LSEs that do not enter into bilateral transactions before the demand curve clearing auction will pay the demand curve clearing price for that month. The monthly auctions, however, do ensure that entities who have acquired capacity to meet load that they no longer service (and vice versus) have a clearing market that they can use to adjust their holdings due to load migration, if they have not done so through bilateral transactions.</td>
</tr>
<tr>
<td>BENEFITS</td>
<td>Criteria</td>
<td>Description of Proposal and How it Meets Criteria</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>How does the proposal accommodate load migration and changing LSE requirements?</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Is the proposal compatible with short and long term bilateral procurement and/or resource ownership by LSEs? How?</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>How does the proposal facilitate competitive market outcomes regardless of some self provisioning of capacity or use of opt-out provisions?</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>How does the proposal mitigate market power?</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Please describe any other attributes that should be considered and how the proposal meets these requirements.</td>
</tr>
</tbody>
</table>

Attributes for Long Term RA
## Feasibility Impact to CAISO

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description of Proposal and How it Meets Criteria</th>
<th>High, Medium, Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Cost of Implementation (CAISO).</td>
<td>Constellation believes that the costs of Cal CIM should be relatively low, but believes that this question must be answered by the CAISO</td>
<td></td>
</tr>
<tr>
<td>21 Ease of Implementation (CAISO).</td>
<td>See response to 20.</td>
<td></td>
</tr>
<tr>
<td>22 Time to Develop (CAISO)</td>
<td>Constellation believes that from the time Cal CIM is adopted, the time to develop the necessary tariffs, market rules, and systems, should be approximately one year.</td>
<td></td>
</tr>
<tr>
<td>23 Implementation Timeframe for Market Participants to transition to a new market design, and to achieve the Long Term RA objectives.</td>
<td>Constellation believes that market participants can transition to the Cal CIM market design in the same one year time frame specified in Item 22 above. Once in place, the capacity market will begin to stabilize and ensure resource adequacy, including providing incentives for new generation when and where it is needed.</td>
<td></td>
</tr>
<tr>
<td>24 Changes to RA Program Please include a description of changes to RA counting rules and other elements of the RA program that would need to be modified.</td>
<td>The key change to current RA rules would be that the RA requirement (system, local, and zonal) would be specified three to four years in advance, rather than just one year in advance. In addition, the existing process would be modified to include the development of a demand curve.</td>
<td></td>
</tr>
<tr>
<td>Criteria</td>
<td>Description of Proposal and How it Meets Criteria</td>
<td>High, Medium, Low</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Cost of Implementation (Market Participants)</td>
<td>See 20.</td>
<td></td>
</tr>
<tr>
<td>Ease of Implementation (Market Participants)</td>
<td>See 22.</td>
<td></td>
</tr>
<tr>
<td>Time to Develop (Market Participants)</td>
<td>See 22.</td>
<td></td>
</tr>
<tr>
<td>Implementation Timeframe for Market Participants to transition to a new market design, and to achieve the Long Term RA objectives.</td>
<td>See 23.</td>
<td></td>
</tr>
<tr>
<td>Changes to RA Program Please include a description of changes to RA counting rules and other elements of the RA program that would need to be modified.</td>
<td>See 24.</td>
<td></td>
</tr>
</tbody>
</table>
BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider
Refinements to and Further Development of
the Commission’s Resource Adequacy
Requirements Program.

Rulemaking 05-12-013
(Filed December 15, 2005)

TRACK 2 PROPOSAL OF
CONSTELLATION NEWENERGY, INC., CONSTELLATION ENERGY COMMODITIES
GROUP, INC. AND CONSTELLATION GENERATION GROUP, LLC

March 30, 2007

Lisa M. Decker, Esq. Andrew B. Brown
Constellation Energy Group, Inc. Ellison Schneider & Harris L.L.P.
111 Market Place, Suite 500 2015 H Street
Baltimore, Maryland 21202 Sacramento, CA 95814
Phone: (410) 468-3792 Tel: (916) 447-2166
Fax: (410) 468-3499 Fax: (916) 447-3512
Email: Lisa.Decker@constellation.com Email: abb@eslawfirm.com

On behalf of Constellation NewEnergy, Inc.,
Constellation Energy Commodities Group,
Inc., and Constellation Generation Group,
LLC

Attorneys for Constellation NewEnergy, Inc.,
Constellation Energy Commodities Group,
Inc., and Constellation Generation Group,
LLC
# TABLE OF CONTENTS

I. Introduction................................................................................................................ ............................1

II. Why Do We Need Resource Adequacy and Capacity Markets to Support Investment. .......................3
   A. Mitigated Energy-Only Markets Will Not Provide Price Signals that Support Investment in California. ..................................................................................................................................................3
   B. The Commission’s goals for wholesale market competition and retail customer choice are not achievable when infrastructure investment is achieved primarily through regulatory intervention and mandates on utilities...................................................................................................................................4

III. Capacity Market Design Principles.........................................................................................7

IV. Constellation’s Capacity Market Design Proposal ............................................................................8
   A. Overview .................................................................................................................... ........................8
   B. Forward Planning Elements – Establishing the RAR ................................................... ............................9
   C. Forward Planning Elements – Determining and Verifying the Qualifying Capacity and Capacity Resource Obligations ...............................................................................................................................10
   D. Forward Planning Element: Allocating the RAR to Specific LSEs................................................ ............................12
   E. Forward Planning Element: Implementing a mechanism to provide price transparency – the Demand Curve. ........................................................................................................................................12
      1. What is the demand curve approach and what does it do? ..........................................................12
      2. How is the Demand Curve Pricing Determined?.........................................................................15
   F. Compliance Demonstration Requirements – How Compliance Is Reported........................................21
   G. Establishing Penalties for Non-Compliance and Waivers ..............................................................21
   H. The Centralized Capacity Market Clearing Function ......................................................................22

V. Further discussion of Demand Curve and the Timing of Compliance Demonstrations ......................23

VI. Capacity Market and Standard Offer Service ................................................................................. .26

VII. Response to ALJ Questions ................................................................................................. ............28

VIII. Constellation believes that its proposal, contained in the preceding sections, addressed most of the questions contained in the ALJ Ruling. In this Section, Constellation provides additional clarity in response to selected questions. ......................................................................................................................28

IX. Conclusion ................................................................................................................. ......................34
BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider
Refinements to and Further Development of
the Commission’s Resource Adequacy
Requirements Program.

Rulemaking 05-12-013
(Filed December 15, 2005)

TRACK 2 PROPOSAL OF
CONSTELLATION NEWENERGY, INC., CONSTELLATION ENERGY COMMODITIES
GROUP, INC. AND CONSTELLATION GENERATION GROUP, LLC

I. Introduction

On December 22, 2006, the President Michael Peevey of the California Public Utilities
Commission (“CPUC” or “Commission”) issued the Assigned Commissioner’s Ruling and Scoping Memo
for Phase 2 setting forth the scope and timetable for Phase 2 of this proceeding (“Scoping Memo”). The
Scoping Memo established Track 2 of the Phase 2 proceeding to consider long term resource adequacy
(“RA”) program development, including market design proposals. On February 28, 2007, Administrative
Law Judge Mark Wetzell issued a Ruling on Track 2 Proposals (“ALJ Ruling”) that provided further
guidance to parties for their Track 2 proposals. In accordance with the ALJ Ruling, Constellation Energy
Commodities Group, Inc., Constellation NewEnergy, Inc, and Constellation Generation Group, LLC
(collectively, “Constellation”) submits for Commission consideration its proposal for capacity market
design in California, referred to as the California Capacity Infrastructure Model (“Cal CIM”), and
addresses specific questions posed in the ALJ Ruling.

Constellation has actively participated in the resource adequacy proceedings in California and in
multiple other jurisdictions throughout the country. Its diverse business interests –spanning wholesale
and retail marketing, development and ownership of fossil and nuclear generation, and investor owned
utility operations – have compelled Constellation to carefully and thoroughly deliberate market policy and
capacity market design issues. Those deliberations have consistently resulted in a continued commitment
to and belief that competitive wholesale and retail markets are the most efficient way to ensure cost effective and reliable electric service to consumers. The fundamental premise that robust and fair competition will produce better management of the risks inherent in the production and delivery of electricity service, more technological innovation necessary to meet our important environmental goals, and more customer choices is the backdrop for this proposal.

Constellation’s proposals are presented as follows:

- Section II reviews why capacity market formation is a fundamental component for transitioning away from utility-based investment and back to merchant investment, a policy preference that the Commission adopted in D.06-07-029.
- Section III notes that capacity market design in California will involve choices among markedly different alternatives, and lays out specific principles that should guide those choices.
- Section IV describes Constellation’s Cal CIM capacity market proposal.
- Section V describes two aspects of capacity market design that tend to be contentious – whether or not there should be a demand curve pricing mechanism and the timing of compliance demonstrations – and why the Cal CIM design proposed by Constellation best addresses these issues.
- In Section VI, Constellation addresses the relationship between Cal CIM and the standard offer service proposals it made in the LTPP proceeding, as it was invited to do by the Commission in D.04-12-048.
- In Section VI, Constellation addresses the specific questions posed in the ALJ Ruling.
II. Why Do We Need Resource Adequacy and Capacity Markets to Support Investment?


For infrastructure investment to occur, investors must have confidence that they will have a reasonable opportunity to earn a return on their investment. In competitive markets, that confidence is achieved when investors have the tools to analyze the market supply and demand fundamentals, along with the forward price signals applicable to their product. These tools allow investors to make a determination that investment in new infrastructure will allow them to offer a better product to their customers at a better price than can be achieved without that investment. In short, the ability to serve customers at the best possible price and thus attract their business causes suppliers to continually seek ways to improve their product and their price. When prices for the product begin to increase because there is more demand for the product than there is supply, investors add production capacity to satisfy the growing demand.

Since the energy crisis, energy price signals in California have been more heavily mitigated than in any other organized market, and this energy price mitigation precludes forward energy-only prices from signaling the need for new investment. In short, while supply and demand fundamentals in California have indicated a need for new investment, the ongoing suppression of energy prices through mitigation has precluded the opportunity for a reasonable return on investment through the market, and merchant investment has not occurred. The California legislature recognized that mitigated energy prices were compromising resource adequacy, and in 2005, passed legislation that required all Commission jurisdictional entities to “maintain physical generating capacity adequate to meet its load requirements, including, but not limited to, peak demand and planning and operating reserves.”

1 See Section 380(c) of the Public Utilities Code, adopted by Chapter 367 of the Statutes of 2005.
loads plus a 15% to 17% reserve margin – creating a new capacity obligation, and thus creating a new capacity product. The Commission’s proceedings have continued to resolve many of the implementation details associated with the resource adequacy policy. The formation of this new capacity product is intended to make up for the investment price signals that energy price mitigation eliminates, thus improving the overall price signals in the marketplace and creating market stability and certainty that will incent investment. Thus, all the work that has been done to date on RAR provides the framework and is critical to resolution of the Phase 2 issues, whether a centralized capacity market is adopted, as recommended in this proposal, or not. As described in the filings of the Capacity Market Advocacy Group (“CMAG”):

A centralized capacity market will build on the extensive work already completed by the CPUC and the CAISO. Indeed, the hardest work associated with establishing a capacity market has already been done via the threshold decision to implement a RA requirement. In addition, development of the resource qualification, counting protocols, performance obligations, deliverability, forecasting, and the local resource adequacy requirements are all elements of any capacity market, and each of these issues has already been established for the California market via the RA rules. A centralized market can incorporate this work as market rules, and can structure the market design to ensure that all rules are respected and enforced.

B. **The Commission’s goals for wholesale market competition and retail customer choice are not achievable when infrastructure investment is primarily pursued through regulatory intervention and mandates on utilities.**

There is a second and equally important reason for the Commission to move quickly on capacity market design implementation. Because infrastructure investment has been compromised by heavily mitigated energy prices that preclude investors from earning a reasonable return, needed capacity resource

---

2 CMAG is an ad hoc group of market participants who are unified in their commitment to the implementation of a centralized capacity market in California. Constellation has been an active participant in the CMAG discussion and is a signatory to the each of the filings that CMAG has submitted in this proceeding, as well as the filing that CMAG is submitting in this Track 2 phase of the proceeding.

investment has occurred in California only when the Investor Owned Utilities (“IOUs”) have been ordered to invest, in return for which they have been provided a regulatory cost recovery guarantee, including return on capital. In some instances, this regulatory guarantee has been afforded to the IOUs for utility investments completely outside of any competitive market framework. Southern California Edison’s (“SCE”) investment in Mountainview and the peakers it is currently constructing are clear examples. Pacific Gas and Electric’s (“PG&E”) acquisition of Contra Costa (now called “Gateway”) is another example. San Diego Gas & Electric’s acquisition of the El Dorado facility is yet another example. In other instances, the IOUs have entered into long term power purchase agreements (“PPAs”) with independent power producers as a result of competitive solicitations for infrastructure investment. While a modest level of competition can and has occurred in this paradigm when the IOUs are required to solicit competitive bids for the construction of new generation (thus often transferring construction cost risk and some unit performance risk to the developer), even these PPAs, once approved by the Commission, receive essentially the same level of regulatory guarantee afforded to the utility owned assets over the term of the contracts. Even now, as this RAR proceeding continues, an additional round of utility based investment is under consideration in R.06-02-013 (“LTPP Proceeding”), where SCE and PG&E have asked for authority to invest in significant amounts of new generation. This utility-based approach to infrastructure investment is in direct conflict with the Commission preference, stated in D.06-07-029:

Our intent is that the long-term market rules and institutions to be developed in Phase II of the RA proceeding will supersedes these temporary arrangements. That proceeding will examine creating multi-year RA requirements for all LSEs as well as capacity markets and other arrangements for assuring that sufficient generation is built when and where it is needed.4 (emphasis added.)

Implementation of a well-designed capacity market structure is a necessary step to ensuring that wholesale markets, rather than regulatory intervention, provide the incentives for infrastructure investment. Quite simply, it is unrealistic for this Commission to expect that investments will be made that do not get a regulatory guarantee while the Commission continues to regularly conduct separate, bifurcated proceedings that lead to investments that do get a regulatory guarantee. The former approach—merchant investment—will simply be too risky an undertaking for investors, because the assets afforded the regulated return and cost recovery undermine the value of the merchant assets. Thus, the hybrid market approach is unlikely to result in any meaningful levels of investment other than through the regulatory guarantee approach.

The work already done in the RAR proceeding defines the LSEs’ resource adequacy procurement obligation. The existing RAR implementation mechanisms set the stage for ensuring that RAR can form the underpinnings for infrastructure investment that does not rely on regulatory guarantees. For RAR to replace Commission-mandated procurement as the primary investment support mechanism, two additional steps need to be undertaken by the Commission, in close coordination with the California Independent System Operator (“CAISO”) and California Energy Commission (“CEC”), implement. Those steps are:

1. Creation of capacity market design that will best support the formation of forward capacity price signals and support bilateral transactions, the specific subject of the CalCIM proposal; and

2. Reforms to utility procurement practices so that the resource adequacy/capacity market mechanism adopted here is not undermined by continued rate-regulated and cost pass-through utility investment. In the LTPP proceeding, Constellation has offered
testimony on how these reforms can be achieved, and discusses them further in Section VI of these comments.

III. Capacity Market Design Principles

There has already been a significant amount of discussion of capacity market design in this proceeding, dating back to the Capacity Market Whitepaper issued by the CPUC staff on August 25, 2005. Furthermore, resource adequacy and capacity market design has been at the core of protracted proceedings that have taken place in both PJM and New England. All of these proceedings serve to make one thing certain: there is more than one way to design a capacity market that will serve to support infrastructure investment, competitive wholesale markets, and customer choice. The question that must be answered by this Commission is which design is the best one for California. Each of the models presented to this Commission, including Constellation’s preferred California Capacity Infrastructure Model, involve choices among different design elements. Each design element choice will have implications for how successfully the design supports needed infrastructure investments without regulatory intervention and regulatory mandates. In developing its capacity market proposal, Constellation has evaluated the different design elements against the following principles:

a. **Price Transparency:** Capacity price signals must be sufficiently transparent and liquid so that they work in conjunction with energy and ancillary services price signals to signal the need for infrastructure investment when and where it is needed.

b. **Locational:** Capacity market design should reflect locational capacity requirements created due to system constraints and the resulting locational price differences.

c. **Support Bilateral Transactions:** Capacity market design should support, and not supplant bilateral transactions. Said another way, when capacity markets are implemented, there should be little, if any, need for backstop capacity procurement either by the utilities or the CAISO, except in extreme and infrequent circumstances.
d. **Responsive to Changing Market Conditions:** Capacity market design should be responsive to improvements in energy market pricing so that over time, as demand response capabilities become widespread, energy price mitigation can be reduced and capacity market pricing can become an increasingly smaller component of overall energy market revenues.

e. **Market Monitoring and Mitigation:** Capacity market design should allow for careful market power abuse monitoring and mitigation.

IV. **Constellation’s Capacity Market Design Proposal**

A. **Overview**

In this section, each of the components of Constellation’s capacity market design proposal—CalCIM—is described. An outline of these components and when the activities take place relative to the Compliance Period (defined as the time period over which the capacity resources must be available to the CAISO) are as follows:

a. **Forward Planning Elements** – Established three years in advance of the Compliance Period.

1. Establishing the system and local resource adequacy requirements.
2. Documenting and verifying the Qualifying Capacity and capacity resource obligations.
3. Allocating the RAR to specific LSEs.
4. Determining the mechanism that provides price transparency for both system and locational requirements; specifically, the “demand curve”.

b. **Compliance demonstrations** – required one month in advance of the Compliance Period

1. When compliance demonstrations must occur; in the case of this proposal, one month in advance of the compliance period.
2. How compliance is reported.

3. Establishing penalties for non-compliance and waivers
   c. The Centralized capacity market clearing function – step by step review of how the capacity market mechanisms are administered.

Before describing each of these components in more detail, it is important to note that many of these components used in Cal CIM are currently in place as a result of the work already done in this proceeding. For instance, of all the Forward Planning Elements listed above, only the development of the demand curve has not been addressed in this proceeding; all the other components of the forward planning elements have been adopted or are, for the most part, being addressed in Track 1 of this proceeding.

B. Forward Planning Elements – Establishing the RAR

The process for establishing the system and local RAR is in place, due to the closely coordinated efforts of the Commission, the California Independent System Operator (“CAISO”), and the California Energy Commission (“CEC”). The existing process does not need to be repeated here, nor is there a need to revise the mechanism to initially implement the Cal CIM. It is important to note, however, that over time the process for establishing RAR and the assumptions upon which the RAR is based will likely change. For instance, the level of the planning reserve margin, and the assumptions as to whether the load forecast should be developed pursuant to “1 in 2” or “1 in 10” criteria, are already under active discussion. Such reviews are necessary and appropriate as market conditions change, and as our understanding of the reliability needs of the system changes due to changing energy usage patterns, environmental requirements, and technological innovations. Modifications to the planning assumptions should always be undertaken in a transparent and open process, so that the impact that any proposed modifications on existing business transactions can be evaluated and, if necessary, addressed.
C. Forward Planning Elements – Determining and Verifying the Qualifying Capacity and Capacity Resource Obligations

The CAISO currently tracks and monitors the Qualifying Capacity of resources that can meet the system and local RAR, and provides to market participants the list of resources that are qualified. Furthermore, significant progress is underway in Track 1 of this proceeding to ensure that the obligations that generators and other capacity resources take on when they sell capacity are clearly articulated in by the CAISO. There are two aspects associated with verification of qualifying capacity and capacity resource obligations that are being addressed in Track 1, but that should be highlighted here.

The first is the proper reflection of scheduled outages on a resource’s Qualifying Capacity. As Constellation will note in its April 6 Track 1 comments, Constellation urges the Commission and the CAISO to adopt rules that eliminate any unit de-rates, penalties, or generator sanctions as a result of scheduled outages. This recommendation is predicated upon the fact that the Planning Reserve Margin is intended to provide the level of reliability that is necessary to cover unit outages that occur throughout the system. This is particularly true with respect to scheduled outages, which must be approved in advance by the CAISO, and are closely monitored pursuant to the CAISO Tariff’s outage coordination protocol. While some scheduled outages may occur to address unanticipated maintenance requirements, the level of scheduled outages is largely predictable, and thus is appropriately reflected in the Planning Reserve Margin. If instances of scheduled outages are allowed to create an obligation for the generation owner to procure replacement capacity, or if the CAISO uses backstop procurement authority to secure replacement capacity, it is tantamount to purchasing that replacement capacity twice – once through the Planning Reserve Margin and once through the replacement obligation imposed on the generator or backstop.

---

CAISO procurement, imposing higher than necessary costs on energy consumers. Therefore, Constellation’s April 6 comments will recommend that scheduled outage should not impact the calculation of unit’s Qualifying Capacity, nor should the occurrence of scheduled outages create a replacement capacity obligation.

With respect to forced outages, current market rules have adopted a “forced is forced” approach, such that a unit’s Qualifying Capacity is not subject to modification during the compliance period due to forced outages. This recognizes that RAR includes a planning reserve margin expressly because capacity resources are sometimes forced out of service. However, there does still remain a need to implement performance metrics with respect to forced outages. In its April 6 Comments in the Track 1 proceeding, Constellation will recommend that CAISO data regarding capacity resources’ monthly forced-outage rates be developed.\(^6\) The purpose of collecting monthly forced outage data is to allow the compilation of a unit’s forced outage performance for purposes of potential adjustment to the unit’s qualifying capacity. On an annual basis corresponding to the RAR program year, the RA Qualifying Capacity for a unit would be based upon the various testing required to certify for other products, such as Ancillary Services, which would then be reduced by the average forced outage rate that occurred over the prior to annual period.\(^7\) The maximum capacity rating of the unit that is verified by testing, reduced by the average forced outage rate, becomes that unit’s Qualifying Capacity for the ensuing year. Knowing that forced outages that occur in the current period will impact the Qualifying Capacity in the subsequent period provides a very strong performance incentive to the generation owner, without imposing risks that would be costly to manage.

\(^6\) The reporting of forced outage data, as discussed here, is in addition to the reporting of forced outages that generators are required to make to the CAISO at the time forced outage occurs.

\(^7\) Should a unit not seek Ancillary Services certification from CAISO, some similar capacity testing could be used, or the QC could be set per the NERC GADS Net Dependable Capacity calculation, as it is now under the RAR policy.
D. Forward Planning Element: Allocating the RAR to Specific LSEs

Currently, specific rules are in place to allocate both system and local RAR procurement obligations to LSEs. Here too, modifications to those rules are under discussion in Track 1 of this proceeding. Constellation is still studying the specific proposal with respect to how RAR is allocated to LSE’s, especially the proposals relative to monthly true-up and zonal requirements, and will be submitting specific comments on these issues in its April 6 comments in the Track 1 proceeding.

E. Forward Planning Element: Implementing a mechanism to provide price transparency – the Demand Curve.

California’s approach to resource adequacy has been to impose the capacity procurement obligations on market participants and then proceed to develop the market structure and rules that will facilitate efficient compliance with those requirements. This approach has ensured commitment of the resources necessary to assure grid reliability, but the lack of price transparency and the lack of detailed market rules have led to significant difficulty in the negotiation of bilateral agreements with corresponding high transaction costs.

Furthermore, keeping in mind that a capacity market is an administrative construct that is needed to remedy the market pricing shortcomings created by energy price mitigation, it is important that this administrative construct provide for appropriate levels of regulatory oversight of the product pricing. Constellation recommends, as a central element of the Cal CIM the use of a demand curve pricing mechanism to provide much needed price transparency for the emerging California capacity markets (that will in turn provide the foundation for the development of forward capacity price signals to incent merchant investment), and to provide for regulatory oversight.

1. What is the demand curve approach and what does it do?

A demand curve is a downward sloping curve that provides a range of price signals for capacity that is a function of the amount of capacity this is available to serve the market. When there is ample supply, the demand curve pricing is low; conversely, as supplies become scarce relative to demand, the
demand curve pricing increases. When the demand curve approach is used, the capacity clearing price is the price on the curve that crosses the aggregate amount of available capacity, whether that capacity is available as result of bilateral transactions that LSEs have entered into or whether that capacity is available directly from a generating resource that has not entered into a bilateral agreement. The demand curve approach has several benefits for the capacity market design:

- **The Demand Curve Eliminates Boom-Bust Capacity Pricing.** In markets that imposed a resource adequacy obligation, but did not have a demand curve, prices tended to go to extremes. When there was capacity available in excess of the capacity obligation, the market’s prices tended to get close to zero, as capacity resources reduced their offered prices in an effort to secure revenue in a the market that has a fixed procurement requirement. This caused prices to settle at levels that did not support new entry. Alternatively, in periods of relative scarcity, without a demand curve, prices increased precipitately, as buyers sought to avoid the penalties associated with non-compliance. These market conditions are precisely what led the New York Public Service Commission to recommend, and the NYISO to be the first to implement, the demand curve approach.

- **The Demand Curve Provides Price Transparency:** Because the demand curve establishes up-front the range of price signals at which capacity prices will clear depending on the amount of resource available, it provides market participants with important information about what price they will have to pay if they decide not to forward hedge their capacity obligations. Put another way, an LSE may elect to defer bilateral capacity purchases, but if it does so, that entity will pay the demand curve market clearing price through the capacity market mechanism. Likewise a generator may elect to defer a long term sale of capacity but if it does so, it will receive only the demand curve market clearing price. Both buyers and sellers will
utilize the demand curve pricing information, along with their perceptions about the overall availability of capacity resources in the market, to determine the level of capacity purchases and sales that best suit their business needs and best manage their business risks.

Providing market participants with forward planning information about the magnitude of the requirement, and forward information about the range in which capacity prices will ultimately settle, will provide investors with powerful tools upon which to base their investment decisions. As decisions to retire generating units occur, and as load growth and energy usage increase overall demand on the system, the demand curve clearing price will increase. At some point, as those price signals increase, wholesale market participants who provide energy and capacity products to load serving entities will recognize that their ability to provide those products can be enhanced with new investment. The stability of this market structure will in turn allow investors to enter into the type of mutually beneficial transactions with LSEs and other market intermediaries that provide for appropriate management of the risks associated with the projects so that new investment projects can be financed. Thus, the demand curve provides strong support for bilateral contracting.

- **The Demand Curve Increases Market Stability and Reliability:** When the demand curve pricing is rigorously developed as described below, it provides a stable, predictable, and economically viable capacity price signal. This stability will serve to increase investor and market participant confidence that market structures are working and can be relied upon in making investment decisions. Furthermore, because the demand curve approach provides a revenue stream to resources that are willing to commit their capacity to the market but that may not have been able yet to secure a bilateral contract, it also provides a “safety net” to
existing resources that helps to ensure their availability when they are needed for reliability purposes. 8

- **The demand curve reduces the opportunity for market power abuse:** Because of the downward sloping nature of the demand curve, the ability to raise the price of capacity by taking capacity off the market is reduced, providing an additional structural safeguard to market power abuse beyond the existing CAISO market behavior rules. Furthermore, as described in the Section E.2 below, the demand curve pricing includes a price cap that sets an upper bound on capacity prices.

2. **How is the Demand Curve Pricing Determined?**

As noted above, the purpose of a capacity construct is to support investment by providing price signals that are not otherwise present due to energy price mitigation. Thus, capacity pricing must reflect the “missing money”. The formation of demand curve pricing does this by taking into account both the cost of new entry and the level of overall level of revenue that is achievable in the energy market.

The Cost of New Entry is comprised of all the costs that are incurred to develop and construct a new unit (usually a peaking facility), including equipment, construction costs (labor, materials, electrical interconnection and substation costs, other electric system upgrades, gas interconnects and laterals, site preparation, engineering and design, construction management costs), start-up and testing costs, contingency costs, owner’s development costs (permitting, legal, development costs, financing fees, marketing studies, environmental studies, interconnect studies), financing fees, and working capital and inventory costs.

8 There may be surplus capacity available in the market that exceeds the level of capacity needed to meet the adopted RAR procurement obligations. In that case, the price set by the demand curve will reflect this surplus supply as the demand curve pricing is a function of the total available capacity in the market relative to total demand. When more capacity is offered into the market than is required to meet the stated RAR, that surplus capacity receives a payment equal to the lowered demand curve clearing price, and the payments to that surplus capacity at the demand curve floor price is allocated to all load.
Energy Rent deductions are the estimated revenues that the cost of new entry unit would earn in the market place, and is a function of prevailing energy and ancillary services revenues.

The difference between these two components is plotted on the demand curve at a point that corresponds to a capacity resource level that matches the aggregate resource adequacy obligation. Once this point of the curve has been established, it is necessary to determine the price above which the demand curve pricing will not be allowed to go (the demand curve price cap), and the price at which additional quantities of resources will cause the demand curve to cross zero. Finally, the demand curve pricing should be developed for each identified load pocket, since both the cost of new entry and the energy rent deductions can vary significantly among load pockets. As an example, the following is a link to the demand curves that are currently applicable to each of the two defined load pockets in New York and to the remainder of the state that is not part of the defined load pockets:


On a periodic basis, the pricing components of the demand curve must be re-evaluated to determine whether there have been significant changes either to the cost of new entry component or to the peak energy rent deduction component. Cost of new entry can change due to changes in the cost of land, raw materials, labor costs, etc, and should be periodically reviewed to ensure that the demand curve pricing will indeed provide the price signals necessary to support investment. Likewise, peak energy rent deductions must be re-evaluated to determine if the general level of energy prices are going up, in which case the demand curve pricing would shift to the left – or go down. These periodic re-evaluations of the demand curve components are particularly critical for California’s implementation of a demand curve because there are likely to be significant changes to energy pricing as the CAISO’s MRTU market design
is deployed. For instance, MRTU calls for energy bid caps to be increased from the current $250/MWhr bid level to $500/MWhr and then $1000/MWhr after the first and second years of MRTU implementation, respectively. Furthermore, the CAISO has been required by FERC to investigate and implement scarcity pricing mechanisms that would allow energy prices to escalate during times of operating reserve shortages. Both of these measures will likely cause energy prices to reflect more of the overall value of the underlying capacity resource, causing the peak energy rent deduction to go up and the overall demand curve price to decrease. Likewise, improvements in the ability for demand response through advanced metering will bring a new level of price discipline to the markets that should, over time, allow energy price mitigation to be reduced. As energy price mitigation is relaxed, energy prices will, as with improved scarcity pricing mechanisms, allow more of the total value of energy to be reflected in energy prices, reducing, if not eliminating, the need for capacity market pricing mechanisms.

3. **Compliance Demonstration Elements – Establishing the Deadline for Compliance Demonstrations – One Month Forward.**

While Constellation supports a capacity market design that provides Forward Planning Information (as described above) on a multi-year forward basis, Constellation strongly recommends that the Commission avoid imposing a multi-year forward RAR compliance demonstration on LSEs. Rather, Constellation recommends that LSEs should be required to demonstrate compliance with the RAR on a monthly basis. There are several important reasons for this recommendation:

- **Provides better incentives for new generation:** Proponents of multi-year forward compliance demonstrations contend that compliance demonstrations three years in advance are necessary to ensure that new resources are added when necessary. They contend that giving a developer of new generation a one year contract for what may only be a fraction of its proposed output and at a price that is likely only a fraction of its fixed costs will provide the incentive necessary to stimulate capacity additions when necessary. It will not. A developer’s decision to build and a
generation owner’s decision – absent a regulatory guarantee of cost recovery of the type that are provided in California today – is predicated on the investor’s expectations of total revenue. Capacity market revenues are only a piece (albeit an important piece) of the decision data. The stability of market rules, and the stability and liquidity of the energy markets are equally important factors. Therefore, a better capacity market design is one that fosters bilateral activity among buyers and sellers and encourages those market participants to create solutions to forecasted shortages. The Cal CIM capacity market approach described herein does this. It supplies *forward planning information* to the marketplace about the resource adequacy requirement and it provides price transparency via the demand curve. It then allows market participants, including market intermediaries, to develop the products and services, including new capacity resources, that allow them to best meet their business and load serving obligations. It also assures generation owners that have not secured bilateral contracts that they can also commit their resources to the capacity market through the demand curve auction, and thus provides a safety net for those resources, just as the bid cap in the energy market provides a safety net for energy users.

- **Facilitates demand-side participation in the capacity market:** The Commission has supported demand side response as a vital component of robustly competitive markets. Indeed, the inability for many loads to meaningfully and directly curtail their energy consumption as prices rise is the primary reason that energy price are mitigated. While capacity market rules should include rules that allow demand side products to participate in capacity market on an equivalent basis as generating resources, the fact remains that committing to demand reductions several years in advance is likely to be problematic for many entities that can provide demand response because of uncertainties about the impact on their business processes. The Cal CIM approach described herein solves this problem by allowing load serving entities to make their compliance
demonstrations on a monthly basis; this will allow the capacity providers and load serving entities to better incorporate demand side resources into their capacity portfolios.

- **Provides better support for the development of competitive markets:** Where multi-year forward capacity market approaches are being implemented, they contain a feature that should be troubling to this Commission. That troubling feature is that while generators who offer their capacity into the multi-year forward centralized market are obligated to commit their resources on the multi-year forward basis, LSEs are not individually required to make any specific capacity compliance demonstrations on a multi-year forward basis. In effect, LSEs are permitted to enter into bilateral contracts to meet their expected load serving obligations, but are not required to do so. If they choose not to secure bilateral contracts, the forward capacity commitments are made on their behalf by the ISO who conducts the multi-year forward capacity solicitation. Essentially, LSEs have an option to allow their capacity requirements to be met by the ISO, who then allocates the cost directly to them.

Where this voluntary compliance approach is being adopted (both the PJM and NE models contain this feature), it is being done in recognition of the fact that mandatory forward compliance demonstrations are essentially incompatible with retail access markets that allow loads to migrate from one retail supplier to another. Constellation agrees that imposing compliance demonstration requirements directly on LSEs several years in advance is problematic due to load migration. But the alternative of voluntary LSE compliance with mandatory ISO backstop is likely to have a chilling effect on bilateral transactions that would otherwise support rational new investment. The likely result from imposition of voluntary multi-year forward compliance demonstrations by LSEs with mandatory multi-year forward backstop by the CAISO will be very similar to what we have
today – regulatory intervention that mandates regulated entities (utilities or the CAISO\textsuperscript{9}) to secure new resources in return for assured cost recovery from all benefiting customers.

Proponents of models that require multi-year forward demonstrations will likely argue that the certainty that comes with a multi-year forward procurement of the resources, even if that procurement is done by the utilities or the CAISO on behalf of all benefiting load, justifies implementation of their approach. Constellation strongly disagrees. Market stability, certainty about market rules, and ability to transmit to market participants well-formed and transparent forward prices will allow market participants, including generation developers, financial intermediaries, and load serving entities to respond when and where investment is required. To presume that investors will not respond rationally, and to design a market structure that builds regulatory intervention into the fundamental market structure, will serve only to ensure that regulatory intervention remains the status quo. The value delivered to end-use customers by competitive markets, including lower cost and increased service, should not be undermined in this way. Providing market participants with forward planning information and market structures that provide market stability will do far more to incent investment by entities that can manage the long term risks associated with new generation develop than will the command and control approach that is embodied in the approaches that call for multi-year forward compliance demonstrations. A monthly compliance demonstration will allow market participants to manage their assets and their obligations with the maximum flexibility, and the overall market stability that this approach will create will ensure that it does so with compromising reliability. The question for the Commission

\textsuperscript{9} Constellation would note that to the extent the CAISO becomes the entity responsible for capacity procurement, its independent administration of the markets could be called into serious question. Not only would the CAISO have to determine which resources are selected when the amount of generation offered exceeds the required amount (especially if the resources offered are only willing to participate in the market if they commit their entire Qualifying Capacity), the CAISO would also likely become some sort of a credit counterparty when the selected resource is new construction. Each of these examples represents an inappropriate market participant role for the CAISO.
will ultimately become one of relying upon the operation of the capacity market’s price signals and forward planning information to spur infrastructure development, or reversion to a market-undermining command-and-control approach whereby the public utilities are directed to undertake non-market based development.

**F. Compliance Demonstration Requirements – How Compliance Is Reported**

As with many of the Forward Planning Elements, RAR compliance reporting has largely been addressed via prior Commission orders, and is undergoing further modifications in the Track 1 portion of this proceeding. Constellation presented some proposals for modifications to compliance reporting in its March 22 Track 1 proposals, and will comment on other proposals in its April 6 Track 1 comments. With respect to the capacity market structure proposed herein, the structure itself, with inherent backstopping mechanism should an LSE not hedge its capacity market risk via bilateral capacity arrangements, provides a direct means of assuring compliance with the program and allocating costs to those capacity-deficient LSEs. The market results report will be the overall compliance report to the Commission. Additionally, as noted below, the results of certain voluntary market operations during the initial implementation of the market will provide indications of the forward procurement activities of participants.

**G. Establishing Penalties for Non-Compliance and Waivers**

Constellation considers it unlikely that LSE will fail to enter into bilateral transactions that meet their load ratio share of the system obligation, because a failure to hedge this risk exposes the LSE to monthly risk associated with the demand curve clearing price. Nevertheless, an LSE that does not on a monthly basis secure capacity in an amount that covers its share of the RAR should be subject to a penalty, and in that regard, Constellation supports the basic penalty approach already adopted in California and look forward to finalizing the procedures in this phase consistent with D.06-06-064, page 68, including a review of whether a waiver trigger value is appropriate at all, and if so, how and why the current trigger value must be revised.
The mechanics of the demand curve approach found in Cal CIM would work as follows:

- **Step 1:** Three years in advance of the first monthly compliance period, the CAISO, working cooperatively with the Commission and CEC, publishes the aggregate system and local RAR for that forward period.

- **Step 2:** Three years in advance of the first monthly compliance period, the demand curve pricing is established.

- **Step 3:** Three years in advance of the first monthly compliance period, LSEs are advised of their pro rata share of the system and local RARs based on their then-current load serving obligations – i.e., based on their then-current peak load ratio shares.

- **Step 4:** At predetermined times in advance of the compliance period, the CAISO conducts voluntary participation auctions in which entities that own Qualified Capacity resources may offer to sell and LSE may offer to buy capacity. Offers to sell are cleared against offers to buy. Constellation would suggest that these voluntary auctions should be conducted once a year for the first two years before the compliance period. An additional voluntary auction would be held shortly before each monthly compliance period.

- **Step 5:** One month prior to the Compliance period, LSEs are advised of their share of the RAR based on their then-current peak load ratio share. This allocation represents their RAR procurement obligation, and would address changes that occurred due to load migration.

- **Step 6:** One month prior to the compliance period, all LSEs submit their bilateral capacity purchases to the CAISO. Any Qualified capacity resources that are not already committed through a bilateral agreement may offer their capacity directly to the
CAISO for clearing in the market. The sum of the bilateral capacity plus the additional resources provided to CAISO is then calculated, and the clearing price of the demand curve auction is the point on the demand curve that corresponds to this aggregate amount of capacity that has been offered into the market. A separate demand curve auction is conducted for each defined load pocket reflecting the load and resources in those constrained areas.

- **Step 7.** All LSEs pay the demand curve clearing price for the compliance month. To the extent an LSE offered its bilaterally contracted capacity into the demand curve auction, it receives the demand curve clearing price for that capacity, so that the cost to an LSE who purchased bilateral capacity to meet its obligation is the price embedded in that bilateral agreement.

- **Step 8.** To the extent that capacity is committed through the demand curve auction that exceeds the established RAR, which can occur because all Qualified Capacity may participate, the excess is paid for by all LSEs at the demand curve clearing price on a load ratio share basis.

**V. Further discussion of Demand Curve and the Timing of Compliance Demonstrations**

The two elements of the capacity market design approach described here for which there is likely to be a significant level of disagreement are the use of a demand curve and the monthly compliance demonstration requirement. While the rationale for each of these elements of the design has been presented in the earlier sections, this section will summarize how these two elements are interrelated and what the implications for investment are in considering alternatives.

Constellation’s Cal CIM proposal provides two pieces of forward information that investors need to make their investment decisions – information about how much product the market will buy and
information about how to price the product. The forward information about how much product the
market will buy is the three year forward announcement of the RAR described in Step 1. The forward
information about how to price the product is embedded in the demand curve. The Cal CIM then relies on
market participants – buyers and sellers and other market intermediaries – to use this information to make
investments that manage the risks associated with RAR compliance. Constellation expects that Cal CIM
will lead to a wide variety of forward bilateral transactions that involve load serving entities, generation
developers, financial intermediaries and end use customers, as each of these industry segments use the
forward information, and their perception of their individual market risks, to make their business
decisions. In order to allow the maximum flexibility for these bilateral transactions to occur, the Cal CIM
requires specific RAR compliance reporting to occur only on a month ahead basis. Thus, it is important
to note that a month ahead reporting mechanism, as suggested herein, does not imply that capacity
transactions will be limited to one month.

The Constellation model could be changed to eliminate the demand curve. The impact of that change, if that were to (unfortunately) occur, is that the marketplace would no longer have a mechanism that provides for forward, transparent price signals, and the spot market pricing for the capacity product would exhibit the boom-bust cycles described in Section E.1. Bilateral transactions among competitive entities, that the counterparties would endeavor to keep largely confidential due to commercial sensitivities, would likely continue to occur, but the underlying negotiations would be more difficult without the transparency that the demand curve pricing provides. Furthermore, elimination of the demand curve pricing, and the cap that is embedded in it, would also eliminate specific pricing boundaries for those bilateral negotiations, thus eliminating a structural market power mitigation measure. The upshot of elimination of the demand curve feature is that meaningful forward price signals would be slow to develop, if at all, hindering prudent merchant investment decisions. In turn, this would lead to reliability
concerns due to lack of investment, exacerbating the need for regulatory intervention. To be sure, the development of a demand curve itself represents regulatory intervention in the market, but the regulatory intervention that occurs with developing a demand curve is much more measured regulatory intervention than is regulatory mandates for utility investment.

Likewise, the Cal CIM could be changed to require that capacity commitments are reported several years in advance of the compliance period – i.e., at the same time that the forward planning information is released. In effect, forward compliance demonstrations fix the capacity commitments and the capacity price several years in advance of the compliance period. Under that approach, the demand curve no longer functions as a price signal – around which market participants will structure transactions. Instead, it functions as a price setting mechanism. Furthermore, as noted above in Section E.3, where forward compliance mechanisms are being adopted, acquisition of capacity resources by LSEs on a forward basis is voluntary – i.e., the obligation for generators to sell on a forward basis is not matched by an LSE obligation to buy. Instead, the ISO’s in those regions take on the role of purchasing capacity on behalf of load, and simply allocating the costs to all load in real time. Under this approach, LSEs are not required to hedge their forward risks, and thus will likely only do so if they perceive an opportunity to secure capacity at a price they expect will be lower than the forward clearing price established by the ISO administered auction. This becomes particularly problematic when new generation is required to meet the RAR because the forward price that is set in each auction is for one year only, a commitment that may not be satisfactory to a resource developer. Thus, a prominent feature of all the forward procurement models is the opportunity for new resources to secure a longer term commitment directly from the ISO when that level of commitment is the only way that new resources will get built. That backstop feature of the forward procurement models, should it be invoked, represents the same type of regulatory intervention that is occurring here in California now, where the Commission authorizes the utilities to invest in
infrastructure (and spread the costs to all load) because merchant investment is not sustainable through the existing market structure. Because the backstop mechanism is a structural feature of those models, the result is that merchant investors will face a risk that their investment will be undermined by the regulatory intervention embedded in the model’s backstop procurement feature, and may defer any investment until the backstop is invoked. Furthermore, under this approach, the price risk that generation owners face (for existing and new resources) with respect to unit failures, environmental compliance, and other performance risks that may occur between the time of the forward sale and the delivery period are included in the fixed price that all customers will pay in the delivery period, eliminating the opportunity for those risks to be managed through bilateral transactions.

In summary, Constellation believes that its Cal CIM proposal – a demand curve with month ahead compliance demonstrations – provides the best way to incent merchant investment that will eliminate the need for regulatory mandates for utility (or CAISO) investment. But those two elements must be implemented together because omitting the demand curve compromises the formation of the necessary price signals, and exchanging the month ahead compliance reporting feature for compliance reporting several years forward will likely result in the continued need for regulatory investment mandates.

VI. Capacity Market and Slice-of-Load Standard Offer Service

Constellation has reiterated the slice-of-load recommendations that it first made in R.04-04-003, in testimony\(^{10}\) that it submitted on March 2, 2007 in R.06-02-013 (“LTPP Proceeding). Constellation believes that the issues associated with evaluation, adoption and implementation of the slice-of-load approach\(^{11}\) should be comprehensively addressed in that proceeding, but the efficacy of the slice-of-load


\(^{11}\) In the March 2, 2007 testimony, the slice-of-load service is referred to as the Wholesale Competitive Procurement Service (“WCPS”).
approach and its relationship to capacity market design is discussed here, as the Commission directed in D.04-12-048\(^\text{12}\).

As Constellation explains in its LTPP testimony, and in this Cal CIM proposal, merchant investment in capacity resources is undermined by – and incompatible with – the existing hybrid market model that provides regulatory guarantees for utility investment. Furthermore, the Commission has adopted policies in D.06-07-029 to transition away from this investment paradigm to one that is supported by wholesale market structures:

> Therefore, to assure grid reliability for the state as a whole, we adopt a plan to remove many of the remaining risks or barriers, perceived or real, to investment in new generation. We do not do this enthusiastically, but from necessity. Our ultimate goal is a robust and competitive wholesale market and a competitive retail market. Until that is a reality, we adopt an interim plan to encourage new generation. We intend this to be a short-term solution.\(^\text{13}\)

In order for the Commission to achieve the competitive market goals that it adopted in D.06-07-029, utility procurement practices must be reformed so that the paradigm of utility procurement planning transitions away from infrastructure planning, and instead focuses on procurement of wholesale products and services needed to meet its load serving obligations. The Wholesale Competitive Procurement Service ("WCPS") that Constellation describes in its LTPP testimony does just that.

Under the WCPS approach to utility procurement, the utilities periodically conduct auctions in which they solicit bids from wholesale market participants for full requirements service. Full requirements service includes load-following energy, capacity to meet resource adequacy obligations, ancillary services, renewable requirements, other loading order requirements, and scheduling and coordination services. Wholesale market participants then competitively bid to provide this full

\(^{12}\) In D.04-12-048, the Commission stated: “Constellation’s ‘slice-of-load’ proposal is also better considered as part of the resource adequacy process.” See pages 60-61.

requirements service for all or a portion of the utility’s load at a market-based fixed price that is effective for a specified time period. Under the WCPS procurement approach, the utility thus transfers its energy, capacity, ancillary service and environmental compliance requirements, and customer migration risks to the winning wholesale bidders, who must in turn assemble portfolios of assets and risk management tools to meet the market price obligations associated with their winning bids.

In order for WCPS to be successful, wholesale market participants must be able to effectively hedge the risks embedded in providing a fixed price service. Since compliance with the RA obligation is one of the full requirements service components that is transferred to the winning WCPS bidder, the ability to hedge the risks associated with capacity is an integral component of providing WCPS, just as is the ability to hedge energy prices. Thus the formation of a capacity market structure – its price transparency and the manner in which it facilitates bilateral hedging and risk management transactions – provides the foundation upon which wholesale suppliers can provide this service.

VII. Response to ALJ Questions

Constellation believes that its proposal, contained in the preceding sections, addressed most of the questions contained in the ALJ Ruling. In this Section, Constellation provides additional information on its capacity market mechanism in response to selected questions where those questions were not directly addressed in the preceding description of Constellation’s Cal CIM capacity market design proposal. If, however, the preceding sections do not adequately answer the ALJ’s questions, as posed below, Constellation is, of course, willing to provide additional clarity, and will respond promptly to any requests for further information.

a. Resource Adequacy (RA) Program Characteristics

Following is an illustrative list providing examples of various components, attributes, criteria, and objectives that might be part of an RA program designed to meet the overarching policy goals discussed in the foregoing ruling. Some of these characteristics have been adopted or approved by the Commission; others have not, at least at this time.
In Section I of their Track 2 proposals parties should address the importance of such RA program characteristics in relation to the proposals they are offering. A primary purpose of this exercise is to identify the characteristics that must be present in any variation of the RA program that might be adopted as well as those that might be unnecessary for (or even impediments to) successful achievement of the RA program goals. Parties may supplement the list as they find necessary or appropriate. It is not necessary to address each item in the list.

1. Establish system-wide resource adequacy through load-serving entity (LSE)-based forward procurement obligations reflecting forecast demand and a planning reserve margin (PRM). The forward obligation could either be “year-ahead” as under the current program and/or for a longer period.

Constellation response: In Section IV.B and IV.C, IV.D, IV.E Constellation explains that its Cal CIM proposal calls for the planning elements of the capacity market to occur on a multi-year forward basis. In Section IV.F Constellation explains that compliance demonstrations should occur on a monthly basis.

2. Establish local and/or zonal reliability requirements. Parties may wish to address the appropriate granularity of long term capacity obligations. A more granular approach may assure that resources will be built where needed and reduce the need for ISO backstop procurement, but it may also reduce liquidity in the market.

3. Establish rules for various types of Qualifying Capacity (QC) to count towards meeting the PRM, including base load, intermittent, and demand response resources.

4. Ensure resource availability via a Must Offer Obligation (MOO).

5. Establish a reporting and compliance mechanism with penalties for non-compliance.

6. Reduce/minimize reliance on procurement of resources by the system operator for reliability reasons, e.g., Reliability Must Run (RMR) and Out-of-Market (OOM).

7. Provide a durable backstop mechanism if the system is going to be short capacity in future years. Supplement generator revenues in an energy price capped market.

8. Mitigate market power, especially in local areas. Allow for load migration and trading capacity positions among LSEs with the least transaction cost.

9. Provide flexibility to LSEs in managing their financial risk without compromising system reliability. Provide the mechanisms for proper allocation of investment and price risk between generators and consumers.

10. Ensure that capacity procurement is efficient and consumers are getting the best deal.

11. Facilitate price transparency and competition in the capacity market.

12. Facilitate competition between new potential entrants and incumbents in the capacity market.

13. Promote an efficient level of investment in new generation and allow for orderly retirements of aging, non-economic generation units.

14. Allow market to decide when and where generation investment should occur.
15. Simplify the tracking of buying/selling capacity by using a centralized registration system for all capacity sales.
17. Provide clarity with respect to the roles of the Commission, the California Energy Commission, and the CAISO in the operation of the program.

Constellation Response: Constellation believes that the collaboration that the Commission, CEC and CAISO have attained thus far in the development of RAR has greatly facilitated all that has been accomplished to date. This level of collaboration remains critical. Constellation believes that, as the market structures become stabilized, the respective roles of each agency will become increasingly better defined, such that the Commission will continue to have an active role in all matters associated with establishing and modifying RAR policy, while the CAISO will continue to develop and administer the market related implementation of those policies. The CEC will continue to have an important role in developing load forecasts.

18. Ensure program simplicity to promote understandability and facilitate compliance.
19. Ensure program stability to promote long-term investment decisions.

b. Proposals for Long-Term RA Program and Market Design

As you discuss your proposal for Long-Term RA program design, please address all of the topics below. Please also indicate whether and how your market design proposal incorporates the program characteristics you have identified in Section I.

1. Centralized capacity market, bilateral trading, and alternative market design
   A. What is your proposal for a new or revised market design that ensures resource adequacy over the long-term time horizon?
   B. How does the efficiency of a bilateral market compare with that of a centralized market for capacity?
   C. Is your proposal a variation on a similar approach implemented elsewhere (e.g., PJM, NE, NY)? If so, please indicate the reference approach and how is your proposal different from that reference. What are the “lessons learned” from experiences with market design approaches implemented elsewhere?

Constellation Response: Constellation’s Cal CIM proposal is most similar to the NY capacity market model, with one notable exception that the Cal CIM proposal suggests that the planning reserve margin and resource requirements should be announced on a multi-year forward basis, whereas NY disseminates that information one year forward. Constellation believes that the availability of this planning information would increase the ability for market participants to manage their capacity obligation risks.

D. Is your proposed approach intended to replace or complement the current RA program? Explain how the proposed new design will
enhance or displace the existing RA mechanism and meet the RA policy objectives.

E. How will your proposed approach ensure that consumers get the best deal? If you are proposing a centralized capacity market that will supplement the current RA market, will such a market reduce the need for bilateral contracting and will the centralized market facilitate competition by establishing reference prices for the bilateral contract market?

F. How granular (in terms of location) should capacity obligations be for either a bilateral market approach or for a centralized capacity market? Explain how your proposal will reduce the need for CAISO backstop procurements and how much does your proposal rely on such CAISO procurements to meet local reliability needs.

G. Does your proposal envision differential treatment of new and incumbent generation in terms of contract duration or payment? If so, how will that be implemented?

H. Does your proposed approach reduce the need for price caps and other market mitigation measures in the CAISO spot market?

Constellation Response: The Cal CIM proposal does not directly address the need for price caps or market mitigation. The Cal CIM design responds to the fact that price caps and other forms of market mitigation exist, and that they impact investment price signals. Via the demand curve, the Cal CIM directly ties the price signal associated with capacity to the prevailing market prices for energy. Because the two are directly linked, as energy prices change - for instance with the implementation of scarcity pricing provisions - the capacity price will also change, such that if energy prices become less mitigated and more reflective of the full value of energy resources, capacity pricing will decline.

I. How does your proposal facilitate decentralized risk management and distinction between reliability assurance and financial risk management?

J. Will your proposed approach provide clear delineation between the role of the CPUC and the CAISO in assuring resource adequacy?

K. How do you propose to handle imports and to provide incentives for import availability?

Constellation response: Currently, imports are recognized as RA resources via the import intertie capacity that is allocated to all LSEs. LSEs may use that intertie space to demonstrate compliance with their RAR obligation, and if they do so, they are obligated to ensure that energy at the intertie space is scheduled into CAISO on a daily and non-recallable basis. Constellation believes that this approach to how imports participate in the capacity market is compatible with the Cal CIM approach.

L. How does your proposal facilitate demand response and self provision of resource adequacy (self-insurance)?

M. How does your proposal ensure performance and what kind of performance penalty scheme you envision for non performance?
2. **Registration/tagging for RA capacity** – What is your proposal for establishing a registration and/or tagging system for RA capacity?

3. **Multi-year forward commitment time horizons** – What is your proposal for whether the CPUC should require a forward capacity commitment by all LSEs?

4. **LSE opt-out from cost allocation mechanism (D.06-07-029)** – What is your proposal for how LSEs could demonstrate resource adequacy in order to allow them to opt-out of the cost-allocation mechanism is D.06-07-029? Would the demonstration include a 10-year time horizon and/or new resources? What transitional issues exist with a move to a new long-term RA paradigm from the interim procurement paradigm where the IOUs are investing in long-term contracts to ensure new generation gets built?

**Constellation Response:** Cal CIM is intended to provide a mechanism that allows California’s energy infrastructure investment paradigm to transition away from the need for regulatory imposition of cost allocation mechanisms. Until that transition is complete, Constellation believes that the transition mechanisms developed in D.06-07-029 – that limit utility cost recovery to no more than 10 years when the facility costs are allocated to all benefiting customers, and that the energy from such facilities must be auctioned – likely should remain in place, but reserves the right to comment further on this issue when it sees proposals that other parties may make in this regard.

5. **Coordination of RA program with MRTU as necessary** – What are the ways in which your proposal requires coordination with the CAISO’s Market Redesign and Technology Upgrade (MRTU) process? Does MRTU need to be modified to accommodate your proposal?

6. **Procurement obligations for resource mix and ancillary services** – The Commission has not adopted a resource adequacy obligation to ensure a certain mix of capacity resources (in terms of quick start, black start, ancillary services, peaking or load-following. Does your proposal incorporate these additional requirements?

**Constellation Response:** No. Constellation does not believe that it is necessary or appropriate for the defined resource adequacy obligation to specify the exact type of resources that market participants must buy in order to meet their RAR obligation. Instead, by providing a capacity market framework that provides price signals that reflect the value the resources bring to grid reliability will provide the incentives necessary for investment in diverse resources. Instead, to the extent that CAISO requires additional products beyond the existing Ancillary Services from capacity resources, Constellation expects that CAISO could explicitly state the needed products, and the market will respond with capacity meeting the characteristics necessary to provide those products. The Cal CIM would not inhibit any capacity from providing specific services or products to the CAISO’s markets.

7. **Market power mitigation** – How will your proposal mitigate market power in the capacity market on either the supply or the demand side?

8. **Planning Reserve Margin** – Does your proposal require an extension of the planning reserve margin for forward years? Should it be the same level (115-117%) for all years, or should it increase or decrease for all years or some years out in the future? Is a forward PRM a requirement that entails a resource
commitment showing? How will a new market structure ensure that the right levels of reliability (capacity) are bought for system, local, zonal, and ancillary services purposes? What coordination issues are there with respect to any related proposals that may be under consideration in R.06-02-013?

c. **Transition from Existing RA Program**

1. What transitional issues are there with a shift from the existing RA program to a new market design?

**Constellation Response:** As noted throughout these comments, the existing RA program forms the foundation for implementing the Cal CIM design. The only significant modifications to the existing RA program that are embedded in Cal CIM are the preparation and dissemination of the RA obligation several years in advance of the compliance period and a change from year-ahead compliance reporting to month-ahead compliance reporting.

2. Will the next iteration of market design be able to build upon and use as much as possible the existing RA “fundamental building blocks,” including established capacity requirements (system, local, and, if applicable, zonal) using the planning reserve margin, assignment of capacity requirements to LSEs, reporting mechanisms to demonstrate compliance, penalties for non-compliance, capacity product definition (including must-offer obligation rules), qualifying capacity rules, load forecast protocols, etc.?

3. What are the regulatory approval hurdles involved in moving from the existing RA program to the new market design proposed? What is your best estimate for the timing of how long it will take to move to the new market structure?

**Constellation Response:** The only regulatory hurdle that Constellation perceives to implementation of the Cal CIM is a Commission decision to implement a centralized capacity market mechanism. CMAG, in the filing that it is submitting on this same day, has put forth a specific timeline, which Constellation endorses.

4. How will the proposal Meet State’s Energy Policy Goals, including meeting the Energy Action Plan goals, such as RPS, EE, DR, Environmental Performance standards, GHG standards, once through cooling (OTC), Distributed Generation, Cogeneration, Aging Power Plant policies, Hybrid Market structure, etc.?

**Constellation Response:** Please see Section VI with respect to hybrid market structure issues. With respect to the remaining state energy policy goals, Constellation believes that the Cal CIM would provide strong incentives for competitive market entities to develop the resource and technological innovations, and industry efficiencies that will be necessary to meet those goals.

5. How will the proposal facilitate the reintroduction of retail markets?

6. How will your proposal provide adequate incentives to ensure new generation and orderly retirements?

7. How will new market design address credit issues, including risk for non-delivery of new resources?
8. How will a new market structure apply capacity requirements to CAISO and non-CAISO entities? To CPUC and non-CPUC jurisdictional entities within the CAISO?
9. What will be the costs and benefits of building and operating the new market structure and which customers will bear the costs?
10. How will a new market structure deal with DWR contracts (including non-unit specific contracts), imports, system deliverability requirements, firm transmission rights, congestion revenue rights?

**Constellation Response:** The Commission has already ruled that DWR contracts will be counted as RA resources and that the capacity associated with those contracts will be allocated to all LSEs that are paying the contract costs. The Cal CIM proposal does not contemplate any change to that decision. Constellation has addressed imports in its response to Question 1.K above. Deliverability Requirements are part of the process of defining the RAR obligation which Constellation describes in Section 4.B. The Cal CIM design proposal is not directly affected by firm transmission rights or congestion revenue rights.

**VIII. Conclusion**

Constellation believes that the implementation of a centralized capacity market structure, as described in the Cal CIM design herein, is critical to ensuring the renewed development of competitive wholesale and retail markets in California. Therefore, Constellation is pleased to offer this proposal, and looks forward to working with the Commission, its Staff, and stakeholders on these important issues.

Respectfully submitted,

March 30, 2007

Lisa M. Decker, Esq.  
Constellation Energy Group, Inc.  
111 Market Place, Suite 500  
Baltimore, Maryland 21202  
Phone: (410) 468-3792  
Fax: (410) 468-3499  
Email: Lisa.Decker@constellation.com

Andrew B. Brown  
Ellison Schneider & Harris L.L.P.  
2015 H Street  
Sacramento, CA 95814  
Tel: (916) 447-2166  
Fax: (916) 447-3512  
Email: abb@eslawfirm.com

*On behalf of Constellation NewEnergy, Inc., Constellation Energy Commodities Group, Inc., and Constellation Generation Group, LLC*

*Attorneys for Constellation NewEnergy, Inc., Constellation Energy Commodities Group, Inc., and Constellation Generation Group, LLC*
### ICAP/UCAP Translation of Demand Curve

~ Summer 2007 Capability Period ~

<table>
<thead>
<tr>
<th>ICAP Based Reference Points Monthly ($/kW-Month)</th>
<th>Summer 2007 ICAP/UCAP Translation Factor</th>
<th>UCAP Based Reference Points Monthly ($/kW-Month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Col. A</td>
<td>Col. B</td>
<td>Col. C = Col. A / (1-Col. B/100)</td>
</tr>
<tr>
<td>NYCA</td>
<td>$7.30</td>
<td>$7.64</td>
</tr>
<tr>
<td>NYC</td>
<td>$14.77</td>
<td>$15.37</td>
</tr>
<tr>
<td>LI</td>
<td>$13.52</td>
<td>$14.35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ICAP Based Maximum Clearing Price Annual ($/kW-Year)</th>
<th>Monthly ($/kW-Month)</th>
<th>Summer 2007 ICAP/UCAP Translation Factor</th>
<th>UCAP Based Maximum Clearing Price Monthly ($/kW-Month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYCA</td>
<td>$138.45</td>
<td>$11.54</td>
<td>$12.08</td>
</tr>
<tr>
<td>NYC</td>
<td>$280.08</td>
<td>$23.34</td>
<td>$24.28</td>
</tr>
<tr>
<td>LI</td>
<td>$246.66</td>
<td>$20.56</td>
<td>$21.82</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UCAP Requirement (MW @ 100% Req.)</th>
<th>Demand Curve Zero Crossing %</th>
<th>UCAP at $0 (MW @ Col. B %)</th>
<th>Demand Curve Slope (in UCAP) ($/kW-Month) per 100 MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Col. A</td>
<td>Col. B</td>
<td>Col. C = (Col. A) x (Col. B)</td>
<td>Col. D = -100 * Ref. Point/Col. C - Col. A</td>
</tr>
<tr>
<td>NYCA</td>
<td>37,228.3</td>
<td>112%</td>
<td>41,695.7</td>
</tr>
<tr>
<td>NYC</td>
<td>9,058.3</td>
<td>118%</td>
<td>10,688.8</td>
</tr>
<tr>
<td>LI</td>
<td>5,056.3</td>
<td>118%</td>
<td>5,966.4</td>
</tr>
</tbody>
</table>
Certificate of Service

I hereby certify that I have this day served a copy of “Track 2 Proposal of Constellation NewEnergy, Inc., Constellation Energy Commodities Group, Inc. and Constellation Generation Group, LLC” on all known parties to R.05-12-013 by transmitting an e-mail message with the document attached to each party named in the official service list. Parties without e-mail addresses were mailed a properly addressed copy by first-class mail with postage prepaid.

Executed on March 30, 2007 at Sacramento, California

/s/

Eric Janssen
BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider Refinements to and Further Development of the Commission’s Resource Adequacy Requirements Program.

Rulemaking 05-12-013 (Filed December 15, 2005)

PRE-WORKSHOP COMMENTS OF CONSTELLATION NEWENERGY, INC., CONSTELLATION ENERGY COMMODITIES GROUP, INC. AND CONSTELLATION GENERATION GROUP, LLC ON TRACK 2 PROPOSALS

May 18, 2007

Lisa M. Decker, Esq.
Constellation Energy Group, Inc.
111 Market Place, Suite 500
Baltimore, Maryland 21202
Phone: (410) 468-3792
Fax: (410) 468-3499
Email: Lisa.Decker@constellation.com

On behalf of Constellation NewEnergy, Inc., Constellation Energy Commodities Group, Inc., and Constellation Generation Group, LLC

Andrew B. Brown
Ellison Schneider & Harris L.L.P.
2015 H Street
Sacramento, CA 95814
Tel: (916) 447-2166
Fax: (916) 447-3512
Email: abb@eslawfirm.com

Attorneys for Constellation NewEnergy, Inc., Constellation Energy Commodities Group, Inc., and Constellation Generation Group, LLC
# TABLE OF CONTENTS

I. Introduction................................................................................................................ ...........................1

II. Comments on Track 2 Capacity Market Proposals..........................................................3  
   A. Metric #1: The level to which each model requires that either the CAISO or the IOUs are  
      required to be the procurement entity on behalf of all load is a key metric against which all  
      capacity market proposals must be evaluated.................................................................5  
   B. Metric #2: The level to which each model supports transparent capacity pricing is a key  
      metric against which all capacity market proposals must be evaluated.........................7  
   C. Metric #3: The level to which each model is capable over time of incorporating  
      improvements in energy pricing – through scarcity pricing and with improved demand response –  
      into the capacity pricing mechanisms is a key metric against which all capacity market proposals  
      must be evaluated...........................................................................................................8

III. Resolving Qualifying Capacity Issues. .............................................................................9

IV. Resolving Issues Associated with a Standardized RA Capacity Product .....................10

V. Reviewing the Planning Reserve Margin...........................................................................10

VI. Reforming Utility Procurement Practices. .....................................................................11

VII. Conclusion. ..................................................................................................................11
I. Introduction


Constellation’s capacity market design proposal, the California Capacity Infrastructure Model (“Cal CIM”), was one of the various proposals submitted on March 30, 2007. All the proposals are intended to achieve the same goal – stable and reliable investment in environmentally acceptable energy infrastructure when and where it is needed so that resource adequacy (“RA”) is achieved. While the goals are the same, the mechanisms vary significantly. Constellation believes that such a wide variation of mechanisms to achieve the same goal underscores the fact that there are important trade-offs to analyze when considering one proposal over another. The August Workshops should focus on ensuring that the
Commission, its Staff, and market participants gain a clear understanding of what the implicit trade-offs are in adopting one proposal instead of another.

Constellation believes that the important trade-offs inherent in the proposals should be assessed through a review of the following key areas:

- **What entity has the primary procurement obligation under the proposed capacity market design?** Are either the California Independent System Operator (“CAISO”) and/or the Investor Owned Utilities (“IOUs or utilities”) required to be the procurement entity on behalf of load? This is a key parameter against which all proposals must be evaluated because it will determine the extent to which the proposal will be effective in terms of replacing the transitional cost allocation mechanisms approved in D.06-07-029 with market-based merchant investment.

- **How transparent is the capacity pricing?** This is a key parameter against which all proposals must be evaluated because it will determine the extent to which the market risks associated with resource adequacy are communicated and therefore can be effectively managed, including the risks associated with new infrastructure investment.

- **How will the capacity market design impact the value of energy?** Over time, which model is capable of incorporating improvements in energy pricing – through scarcity pricing and with improved demand response – into the capacity pricing mechanisms? With energy efficiency and demand response major strategies in the state’s energy policies, it is important that energy prices reflect time and locational values. This is a key parameter against which all proposals must be evaluated because it will determine the extent to which the model will adaptable to changing market conditions.
In addition to the review of the competing capacity market proposals, there are four other Track 2 issues that will require priority consideration during the August Workshops, to build upon the existing RAR and complete the emerging capacity market. The first issue is a comprehensive review of how the Qualifying Capacity of capacity resources is established and adjusted over time. The second is the need to complete the work of standardizing the RA product as proposed in the *Proposal of Calpine Corporation, Coral Power, L.L.C., Constellation Energy Commodities Group, Inc., Constellation NewEnergy, Inc., J. Aron Company, Pacific Gas and Electric Company, Strategic Energy, L.L.C., Alliance for Retail Energy Markets, Western Power trading Forum, Mirant California, LLC, Mirant Delta, LLC, and Mirant Potrero, LLC, (“Proponents”) for a Standardized RA Contract and Associated Generator Obligations (“Calpine Proposal”), submitted in R.05-12-013 on March 22, 2007. The third issue concerns the appropriate value for the planning reserve margin (“PRM”), particularly in light of recent efforts in the Long Term Procurement Planning (“LTPP”) proceeding (R.06-02-013) to argue that additional capacity beyond the PRM used in the RAR program must be secured to handle risks of timing of new capacity additions or increased concerns over weather variability. The fourth issue is the need for the Commission to address how utility procurement practices should adapt as merchant investment in infrastructure replaces utility-based investment, an issue that Constellation has raised both in its March 30 Proposal, and in the LTPP proceeding.

II. Comments on Track 2 Capacity Market Proposals.

Currently, new capacity resource investment has occurred primarily through utility rate-base investment or through utility-backed long term Power Purchase Agreement (“PPAs”). The costs associated with those investments are passed directly through to ratepayers. There has been virtually no investment in new infrastructure outside of utility rate-base or PPAs because our current market structures are producing forward price signals that do not support investment. As a result, investors recognize that that they will not earn a reasonable return on their investment unless they have the upfront guarantee that
the utility rate-based or utility-backed contracts provide. Establishing a specific, physical RA requirement that LSEs must meet has provided the framework to shift that utility-based investment paradigm to one that relies on price signals – energy, capacity, and ancillary service price signals – to provide the necessary incentives for merchant investment by market participants, including market intermediaries without the need for utility-based regulatory guarantees.\(^1\) Constellation believes that paradigm shift is precisely the outcome that the Commission expected when it stated in D.06-07-029 that:

> Our intent is that the long-term market rules and institutions to be developed in Phase II of the RA proceeding will supersede these temporary arrangements. That proceeding will examine creating multi-year RA requirements for all LSEs as well as capacity markets and other arrangements for assuring that sufficient generation is built when and where it is needed.\(^2\) (Emphasis added.)

While compliance with the RA requirements as they have been imposed to date has been high according to Staff reports, there is other significant evidence indicating that managing the RA transactional requirements has been somewhat difficult, due to lack of pricing transparency, market liquidity, and clarity about qualified resources. For RA to successfully replace utility-based investment with merchant investment, there must be market transparency and liquidity to facilitate the type of transactions that market participants must enter to comply with the RA requirements. A more structured capacity market will, once fully developed, provide the remedies for these transactional inefficiencies, paving the way for merchant investment, where the risks of infrastructure investment are actively managed and hedgeable, to re-emerge as the predominant form of investment. The success of a capacity

\(^1\) For clarity in these comments, Constellation defines “utility-based investment” to include direct utility investment in rate-base generating infrastructure AND long term PPAs between the utilities and generation developers. In both cases, the market risks associated with the underlying facilities are borne by ratepayers because the utility is allowed, via a regulatory guarantee, to pass the costs directly on to ratepayers, regardless of changes in market conditions. Constellation defines “merchant investment” as the development of resources that is not directly supported by utility cost pass-through or rate base; instead the market risks associated with the investment are managed by the investors in the facility, who recover costs and earn a return based on market conditions.

market structure in supporting merchant investment will be impacted by (i) the type of backstop or safety valve mechanism that is included in the model (and whether this backstop is likely to become a *de facto* default process), (ii) the transparency and accuracy of the capacity price signal, and (iii) the ability of the capacity structure to adapt over time to changes in the energy markets. Each of these issues is discussed briefly below. Constellation recommends that the August Workshops specifically discuss each of these when reviewing the various proposals.

**A. Metric #1: The level to which each model requires that either the CAISO or the IOUs are required to be the procurement entity on behalf of all load is a key metric against which all capacity market proposals must be evaluated.**

Implementation of AB 57 has, to date, required the IOUs to present specific plans to meet their identified and approved infrastructure requirements. Once approved, the costs of IOU compliance are assured recovery from ratepayers, regardless of changes that may occur in market conditions. In essence, those utility-based investments, whether rate-base or PPAs, are not subject to the ongoing discipline of competitive markets. Merchant investment will not re-emerge while this form of regulatory guarantee investment continues because the merchant faces an unhedgeable risk, namely, that a seemingly profitable merchant investment will be undermined by regulatory intervention that provides a regulatory guarantee to other investment. Because merchant investment will be an unattractive proposition for investors when there is continued regulatory guarantee-backed investment, a capacity market model that contains a feature that provides for *backstop procurement* that supports investment through cost socialization poses a significant risk that the backstop procurement will become the default investment vehicle. In short, a capacity market model that provides for regulators to step in and provide a long term contract with guaranteed recovery when and if the market participants do not otherwise voluntarily invest is quite possibly going to see little investment except through the regulated long term contract. Thus, a backstop procurement mechanism in which either the CAISO or the IOUs provide the backstop support for investment in return for the ability to socialize the costs of those investments, is, indeed, essentially the
same paradigm that we are operating under today with the biennial utility procurement planning cycle – the same paradigm that is patently incompatible with merchant investment.

At the April 25, 2007 workshop, however, it was clear that backstop procurement – i.e., what should be done if investment does not occur in response to the newly formed market structures – is a key concern. Therefore, Constellation strongly urges that a significant amount of time at the workshops should be spent discussing whether backstop mechanisms are really necessary, and if so, how they should be structured.

At one end of the spectrum is Constellation’s Cal CIM model, which requires RA compliance demonstrations on a monthly basis only and does not contain any embedded backstop procurement mechanism. Constellation’s belief is that backstop alternatives – as they have been discussed to date – are premised on an assumption that markets may not work to support investment, so that the backstop mechanism must be “at the ready” to step in. Constellation is convinced that markets will respond with necessary investment when market prices are allowed to signal the need for investment when there is regulatory certainty that regulatory intervention will not devalue the investment, but that a “hard-wired” backstop mechanism will undermine an appropriate market response.

At the opposite end of the spectrum are proposals that would require the CAISO to procure capacity on behalf of all load several years in advance of the compliance period via multi-year contracts, when and if LSEs do not voluntarily make capacity commitments. This is a model that is strikingly similar to the utility procurement process practiced today, except that the entity procuring capacity changes from the utilities to the CAISO.

The tradeoffs associated with four-year forward procurement and the impact that will have on the need for backstop procurement should be fully evaluated in the August Workshops. Constellation recommends the following specific questions:
• Are backstop mechanisms necessary?

• How will backstop mechanisms impact the re-emergence of merchant investment or impact competition for the provision of capacity at the wholesale level?

• Can a backstop mechanism be devised that would ensure that backstop procurement does not become the default investment mechanism?

• Are backstop mechanisms likely to yield new nonbypassable charges?

• What are the other implications of four-year forward RA compliance on the ability for demand response and imports to participate as RA resources?

• Does four-year forward compliance lead to a higher level of reliability than monthly compliance?

B. **Metric #2: The level to which each model supports transparent capacity pricing is a key metric against which all capacity market proposals must be evaluated.**

Compliance with RA currently is achieved through bilateral transactions, without the aid of any transparent forward price signals. Mechanisms to improve price transparency range from the approach supported by the Bilateral Trading Group (“BTG”) that provides no centralized clearing mechanism or price discovery mechanisms other than a voluntary Electronic Bulletin Board System, to the development of a downward sloping demand curve price signal embedded in Constellation’s Cal CIM, to four-year forward capacity clearing auctions (with and without a demand curve) contained in other proposals, such as those recommended by Southern California Edison (“SCE”) and NRG Energy (“NRG”). Each of these pricing mechanisms creates implicit trade-offs with respect to how effective the model will be in supporting merchant investment. For instance, establishing demand curve pricing, as recommended in Constellation’s Cal CIM proposal, requires a certain level of administrative and regulatory intervention in determining the slope of the curve, the aggregate amount of excess capacity that will continue to be eligible for capacity payments (i.e., where the curve crosses zero), what the price cap will be (i.e., where the curve becomes horizontal), and when and how the demand curve pricing is adjusted. This
administrative intervention is avoided in the proposals advocated by the BTG, but the trade-off for eliminating the demand curve administrative intervention is the likelihood of increased amounts of backstop procurement, at least in the near term, which in turn will undermine new merchant investment. Similarly, the four-year forward procurement proposals set a capacity price for the specified requirements four years in advance of delivery, which serves to assure compliance with the requirement, but may well limit bilateral trading and market liquidity, as prices are set and “immutable” four years prior to delivery.

To fully vet these pricing mechanism trade-offs, the August Workshops should address the following specific questions:

- Will adequate forward pricing information develop that will support merchant investment in the absence of a centralized capacity clearing mechanism?
- What is the impact on bilateral transactions if capacity prices are set four years in advance of delivery?

C. **Metric #3:** The level to which each model is capable over time of incorporating improvements in energy pricing – through scarcity pricing and with improved demand response – into the capacity pricing mechanisms is a key metric against which all capacity market proposals must be evaluated.

For most commodity markets, the incentives to add capacity are created when demand begins to outstrip supply, prices rise, and investors recognize that new investment in capacity will be profitable. When prices are capped, these supply and demand fundamentals are not capable of producing those incentives. The California energy market is, as are all organized energy markets, mitigated so that energy prices are not currently capable of providing the price signals that would support investment. Capacity markets provide the mechanism to replace that portion of the investment price signal that is “lost” due to mitigation. Over time, however, energy pricing will most likely change, particularly in response to implementation of energy market scarcity pricing mechanisms, increased bid caps, and more robust demand response. These changes will allow more of the overall value of energy infrastructure to be
The capacity market proposals that have been submitted again demonstrate a fairly broad spectrum of thinking as to how the proposals will evolve over time to accommodate changes in energy pricing. At one end is the BTG proposal that calls for significant changes to energy pricing as soon as possible in terms of raising bid caps and implementing a scarcity pricing mechanism so as to avoid the need for significant capacity payments, while relying on backstop procurement to maintain reliability until those energy market modifications are in place. Cal CIM presents another approach that calls for the demand curve pricing to be established as a function of the cost of new entry less peak energy rent deductions; then, as energy pricing becomes more robust through the implementation of scarcity pricing and raising the bid caps, the demand curve pricing is adjusted to reflect those improvements.

To fully vet these trade-offs, the August Workshops should address the following questions:

- How does the capacity market proposal provide for evolution of the capacity pricing to occur as energy market prices change over time?
- Are there sufficient protections to ensure that the capacity market proposal will provide meaningful price signals to both capacity buyers and sellers, and address issues associated with potential market power?

### III. Resolving Qualifying Capacity Issues.

For the capacity product to be fully fungible, there must be clarity for both capacity buyers and sellers with respect to how much Qualifying Capacity a specific resource can sell, and when and how Qualifying Capacity for a specific resource is adjusted over time to reflect performance. There are four specific Qualifying Capacity issues that must be addressed in the August Workshops:

- CAISO currently has two QC lists – there should be only one list that provides all relevant information;
- The timing and process for periodic adjustment of QC relative to the RA showing cycle must be established;
• Specific testing requirements to establish QC for resources should be standardized and contained in the CAISO tariff; and,

• Impact of scheduled, maintenance, and forced outages on QC must standardized and contained in the CAISO tariff.

IV. Resolving Issues Associated with a Standardized RA Capacity Product.

As recommended in Track 1, a portion of the August Workshops should be devoted to refining and completing the Calpine Proposal for RA product standardization and the specific measures that need to be adopted to ensure that generator obligations are reflected in the CAISO tariff. There are significant near- and long-term benefits associated with this refinement that should be quickly pursued.

V. Reviewing the Planning Reserve Margin.

Constellation has consistently observed that establishing the PRM must be a transparent process to market participants, but that it should not be unduly influenced by stakeholders that have an economic interest in the outcome. Furthermore, it is imperative that there be a single calculation of the capacity obligation, so that market participants can enter into capacity transactions with certainty that they are procuring the right resources in the right place. The need for consistent, transparent determination of system and local RAR and the appropriate value for the PRM is urgent, particularly in light of recent efforts in the LTPP proceeding to argue that additional capacity beyond the PRM used in the RAR program must be secured to handle risks of timing of new capacity additions or increased concerns over weather variability. In that proceeding, each of the utilities is attempting to make a case that the resources committed under RAR will not be sufficient to maintain reliability, and that they should be authorized to procure additional new resources, in excess of the established PRM. A system that has one standard of reliability for utility planning and another standard of reliability for market purposes will undermine the markets and result in little, if any, market based investment. The process by which the Commission and its Staff will coordinate with the CAISO on determining the system and local RAR and the PRM, and
how those determinations will be used in all resource planning exercises, including utility planning and CAISO transmission planning, should be an important topic for the August Workshops.

VI. Reforming Utility Procurement Practices.

In D.04-12-048, the Commission stated that “Constellation’s slice-of-load proposal is also better considered as part of the resource adequacy process.” In its March 30 proposal, Constellation incorporated the slice-of-load mechanism, the Wholesale Competitive Procurement Service (“WCPS”), that it proposed in its testimony in the LTPP proceeding. Constellation urges the Commission follow through with its prior decision to explore this proposal further at the August Workshops.

VII. Conclusion.

Constellation looks forward to working with Commission staff and other stakeholders to address the important resource adequacy improvements discussed above.

Respectfully submitted,

Dated: May 18, 2007

Lisa M. Decker, Esq. Andrew B. Brown

Constellation Energy Group, Inc. Ellison Schneider & Harris L.L.P.
111 Market Place, Suite 500 2015 H Street
Baltimore, Maryland 21202 Sacramento, CA 95814
Phone: (410) 468-3792 Tel: (916) 447-2166
Fax: (410) 468-3499 Fax: (916) 447-3512
Email: Lisa.Decker@constellation.com Email: abb@eslawfirm.com

Constellation Energy Commodities Group, Constellation Energy Commodities Group,
Inc., and Constellation Generation Group, LLC Inc., and Constellation Generation Group, LLC

______________________________

3 D.04-12-048, page 60-61.
Certificate of Service

I hereby certify that I have this day served a copy of

PRE-WORKSHOP COMMENTS OF CONSTELLATION NEWENERGY, INC.,
CONSTELLATION ENERGY COMMODITIES GROUP, INC. AND CONSTELLATION
GENERATION GROUP, LLC ON TRACK 2 PROPOSALS

on all known parties to R.05-12-013 by transmitting an e-mail message with the document attached
to each party named in the official service list. Parties without e-mail addresses were mailed a
properly addressed copy by first-class mail with postage prepaid.

Executed on May 18, 2007 at Sacramento, California

__/s/__________________________

Eric Janssen
BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider
Refinements to and Further Development of
the Commission’s Resource Adequacy
Requirements Program.

Rulemaking 05-12-013
(Filed December 15, 2005)

PRE-WORKSHOP REPLY COMMENTS OF
CONSTELLATION NEWENERGY, INC., CONSTELLATION ENERGY COMMODITIES
GROUP, INC. AND CONSTELLATION GENERATION GROUP, LLC
ON TRACK 2 PROPOSALS

July 13, 2007

Lisa M. Decker, Esq. Andrew B. Brown
Constellation Energy Group, Inc. Ellison Schneider & Harris L.L.P.
111 Market Place, Suite 500 2015 H Street
Baltimore, Maryland 21202 Sacramento, CA 95814
Phone: (410) 468-3792 Tel: (916) 447-2166
Fax: (410) 468-3499 Fax: (916) 447-3512
Email: Lisa.Decker@constellation.com Email: abb@eslawfirm.com

On behalf of Constellation NewEnergy, Inc.,
Constellation Energy Commodities Group,
Inc., and Constellation Generation Group, LLC
Attorneys for Constellation NewEnergy, Inc.,
Constellation Energy Commodities Group,
Inc., and Constellation Generation Group, LLC
## TABLE OF CONTENTS

I. Introduction................................................................................................................ .............1

II. Key Capacity Market Design Features Must Be Discussed at the August Workshops........3
   A. Defining the role of backstop capacity procurement ....................................................5
   B. Ensuring that backstop procurement is not or does not become the primary – or only – capacity resource investment mechanism.................................6
      1. There should be specific and clearly defined criteria that trigger backstop procurement. .............................................................................................7
      2. If backstop procurement is triggered, that should in turn trigger a comprehensive review to determine why the market based mechanisms are not producing price signals that support merchant investment....................................................................................7
      3. Backstop procurement should be for capacity only..................................................8
      4. Capacity committed through backstop procurement should be subject to the same capacity resource obligations as are resources committed directly by Load Serving Entities (“LSEs”)...........................................................8
      5. The backstop procurement contract should be for no more than five years in duration.......................................................................................................8
   C. Providing capacity price transparency that facilitates the development of a liquid, hedgeable capacity product.................................................................9
   D. Establishing clear resource adequacy compliance rules, especially with respect to the timing for the centralized capacity market clearing function.................................................................10

III. Constellation’s Cal CIM proposal and modifications...........................................................11

IV. Integrating RA with LTPP..............................................................................................12

V. Reforming Utility Procurement Practices.............................................................................14

VI. Conclusion .......................................................................................................................15
I. Introduction

Pursuant to Administrative Law Judge Mark Wetzell’s Ruling on Track 2 Proposals (“ALJ Ruling”) issued on February 28, 2007, and in accordance with California Public Utilities Commission (“CPUC” or “Commission”) President Michael Peevey’s Assigned Commissioner’s Ruling and Scoping Memo for Phase 2 issued on December 22, 2006 (“Scoping Memo”), Constellation Energy Commodities Group, Inc., Constellation NewEnergy, Inc, and Constellation Generation Group, LLC (collectively, “Constellation”) submits these pre-workshop comments in preparation for the workshops in August (“August Workshops”).

Constellation believes that in order for the ongoing development of competitive wholesale and retail markets to be successful, it is critical that the Commission adopt and implement, along with the California Energy Commission (“CEC”) and California Independent System Operator (“CAISO”), a comprehensive capacity market design so that market price signals can induce and support merchant investment in new generation and demand resources. On March 30, 2007, Constellation submitted its preferred capacity market design proposal, the California Capacity Infrastructure Model (“Cal CIM”). In that filing, Constellation suggested the following three metrics for making the threshold comparison across the various capacity market proposals that will be considered during the August Workshops, including the bilateral approach.
• **Evaluation Metric #1 (3rd Party Backstop Role):** The level to which each model requires that either the CAISO or the IOUs are required to be the procurement entity on behalf of all load is a key metric against which all capacity market proposals must be evaluated. Commonly referred to as “backstop procurement”, Constellation has urged that backstop procurement should be unnecessary in a well designed capacity market. That said, the degree to which any backstop mechanism could likely become the default procurement mechanism would indicate a serious design flaw.

• **Evaluation Metric #2 (Transparency):** The level to which each model supports transparent capacity pricing is a key metric against which all capacity market proposals must be evaluated. In this regard, Constellation has urged that the capacity market model must provide clear capacity price signals that are transparent and hedgeable, and that LSEs should have the flexibility to manage and optimize their portfolios by not imposing a forward compliance demonstration obligation. The degree to which any capacity market proposal fails to provide transparent pricing or other core requirements (e.g., robust methodology for the LSEs’ procurement obligations) would indicate a serious design flaw.

• **Evaluation Metric #3 (Enhances Energy Pricing):** The level to which each model is capable over time of incorporating improvements in energy pricing – through scarcity pricing and improved demand response – into the capacity pricing mechanisms is a key metric against which all capacity market proposals must be evaluated. Constellation noted that locational energy prices, and the implementation of scarcity pricing mechanisms, already underway at the CAISO as part of its Market Redesign and Technology Update (“MRTU”), will lessen the need for capacity pricing. The degree to which any capacity market proposal impedes the ability of markets to reflect the time-differentiated values of energy over various system conditions would indicate a serious design flaw.

Upon reviewing the various parties’ comments submitted on May 18, 2007, Constellation believes that prior to applying these specific evaluation metrics to the various capacity market design proposals during the August Workshops, there should first be a full vetting of the following four threshold capacity market design features to ensure that the Commission and Commission Staff have a complete record upon which to make the ultimate capacity market design decisions:

1. **Defining the role of backstop capacity procurement;**
2. **Ensuring that backstop procurement is not or does not become the primary mechanism for investment in new capacity resources;**
3. **Providing capacity price transparency that facilitates the development of a liquid, hedgeable capacity product; and**
4. **Establishing clear resource adequacy compliance rules, especially with respect to the timing for the centralized capacity market clearing function.**
In Section II below, Constellation discusses each of these capacity market design features in more detail. Then, in Section III, Constellation reviews its Cal CIM proposal, and suggests specific modifications that could be considered to address some of the key criticisms of its proposal. In Section IV, Constellation addresses issues raised in the June 29, 2007, Motion of Mirant California, LLC, Mirant Delta, LLC, Mirant Portrero, LLC, Constellation Energy Commodities Group, Inc., Constellation NewEnergy, Inc., Constellation Generation Group, LLC and Reliant Energy, Inc to Supplement the Record (“Competitive Market Advocates Motion” or “CMA Motion”) and urges the Commission to ensure that RA planning metrics are incorporated into the LTPP planning metrics. Finally, in Section V, Constellation reiterates the need to review utility procurement practices in Track 2, as previously decided by the Commission.

II. Key Capacity Market Design Features Must Be Discussed at the August Workshops

The fundamental premise for implementing resource adequacy requirements in California has been to ensure that capacity investment needed to maintain grid reliability—both generation and demand side resources—occurs when and where needed. Current market price signals for energy and ancillary services do not provide investors a reasonable opportunity to recover costs and earn a fair return on their investment, due to the level of energy price mitigation that exists.\(^1\) However, until consumers are better able to manage their energy usage—and reduce their usage when resources are scarce through demand response—energy market price intervention will likely remain in place. The lack of price signals that would support merchant investment has resulted in the repeated authorization by the Commission for the

---

\(^1\) See, 2006 Annual Report on Market Issues and Performance, CAISO Department of Market Monitoring (“DMM Report”) posted at [http://www.caiso.com/1b7e/1b7e71dc36130.html](http://www.caiso.com/1b7e/1b7e71dc36130.html), pg 2: “The DMM’s financial assessment of the potential revenues a new generation facility could have earned in California’s spot market in 2006 indicates estimated spot market revenues fell short of the unit’s annual fixed costs. This marks the fifth straight year that the DMM’s analysis found that estimated spot market revenues failed to provide sufficient fixed cost recovery for new generation investment.” See also DMM Report, Chapter § 2.6.1 (Revenue Adequacy for New Generation Investment).
IOUs to provide financial guarantees for investment, either via direct investment (Mountainview and the Edison peakers, for example) and via long-term utility backed power purchase agreements (“PPAs”), both of which rely on direct cost pass-through to consumers. In the testimony submitted in the ongoing R.06-12-013 Long Term Procurement Proceeding (“LTPP Proceeding”), the Competitive Market Advocates (“CMA”) witness, Michael Schnitzer, described the conundrum that this creates for merchant investment:

Simply put, developers will not commit substantial capital to new merchant generation unless and until it is clear that utilities will no longer be in the business of funding new generation through ratebase investments or long term PPAs with regulatory guarantees. Merchant investors are willing to bear the risk that their investment can be “devalued” through the actions of other market competitors. They are not, however, willing to take the risk that their investment could be “devalued” by the actions of a utility with preferential access to regulatory guarantees. Although the common refrain is “no one will build without long term contracts”, the more accurate statement would be “no one will build a new plant without a long term contract while the state still has a policy of having utilities sign such contracts.” So long as the current hybrid model is perceived to be the permanent policy of the state, there is likely to be little or no true merchant entry. The use of long term contracts backed by regulatory guarantees creates a self fulfilling prophecy where “no one will build without one.”

In reviewing the proposals put forth in the LTPP Proceeding by Southern California Edison (“SCE”) and Pacific Gas & Electric (“PG&E”) for continued authority to make rate-base investment, Mr. Schnitzer commented as follows:

Neither company acknowledges the fact that a continuation of cost of service ratemaking is a barrier to the emergence of a competitive market model. There can be no peaceful coexistence: in the long run, it will be one model or the other – rate funded in one form or another, or merchant investment. It is not in the best interests of the California customer base to follow this cost of service model for the billions of dollars of new generation investment that will be needed over the next decade.

---

2 See Prepared Direct Testimony of Michael Schnitzer on behalf of CMA, presented in R.06-02-013, March 2, 2007 (Exhibit No. 77), page 9.
In short, merchant investment – pursuant to which the developer/owner actively manages the investment risks, including construction cost, operating, fuel supply, and technological risks – cannot and will not occur while the Commission is continuing to regularly authorize direct cost pass-through, non-market-based cost-recovery of utility investments. Implementation of a capacity market structure will provide the “missing” price signal that, along with energy and ancillary service price signals, will reflect the full value that reliable capacity resources bring to the electric grid. Thus, from Constellation’s perspective (as well as other parties) capacity market implementation in California is the single most important market design improvement that will enable the return of merchant investment, and eliminate the need for the Commission to authorize direct utility investment in capacity resources.

Constellation’s primary concern in reviewing the capacity market proposals and comments has been that many of them appear to focus less on capacity market design that will support investment but instead focus more on a capacity market design under which a centralized procurement entity (CAISO or IOUs) will execute cost socialized contracts to secure new investment through “backstop procurement”. Constellation believes that this focus will only serve to ensure that what should be considered the backstop mechanism will instead function as the primary investment mechanism for new capacity additions, unfortunately resulting in the RA capacity market supporting investment in much the same manner as the current LTPP process does with respect to new investment. To avoid this outcome, Constellation urges the Commission and Staff to fully vet the following:

A. **Defining the role of backstop capacity procurement.**

PG&E asserts that providing for timely new investment in resources must be the first priority and that this “can only be reliably assured through a “backstop” mechanism”.\(^4\) PG&E proposes further that its backstop procurement mechanism will identify the system needs five years in advance of the delivery

---

year, and that the costs of the backstop procurement will be allocated to LSEs who have not voluntarily secured capacity resources in that forward time frame. PG&E has further asserted that it should have the right of first refusal, but not an obligation, to build all such backstop facilities. PG&E describes its backstop procurement mechanism as being similar to the current “system” procurement role that PG&E has assumed in the LTPP context, were it seeks authority to procure capacity for needs forecast for other than its own customers, and indeed there is no substantive difference between the current LTPP procurement and cost socialization and PG&E’s capacity market proposal. Therefore, on its face, the PG&E proposal for backstop procurement is antithetical to the Commission’s policy preference for market structures that will support merchant investment. Put another way, the PG&E proposal does little more than give the IOUs the proverbial “two bites” at the investment apple, first in the LTPP proceeding where they seek to procure for needs other than for just their forecast customer load, and second in the RA capacity markets, all with 100% assured costs recovery from ratepayers.  

In order to avoid this outcome, the August Workshops should commence with a clear definition of backstop procurement, and the role that backstop procurement mechanisms will play in the capacity market design. In the next section, Constellation describes the principles that should apply to any defined backstop mechanism.

B. **Ensuring that backstop procurement is not or does not become the primary – or only – capacity resource investment mechanism.**

In light of the Commission’s goal to implement capacity market mechanisms that will support merchant investment in place of investments requiring utility guarantees through rate-base or long term PPAs, any capacity market must be carefully designed to avoid having the explicit backstop procurement mechanism become the default, primary investment mechanism. Put simply, the “backstop” should be the

---

5 Backstop mechanisms proposed by SCE, San Diego Gas & Electric, NRG Energy, and Reliant Energy, and the Bilateral Trading Group contain features similar to the PG&E backstop procurement proposal. The concerns raised by Constellation herein apply to those proposals as well.
safety net only, not the primary mechanism. By applying the following principles in the development of
the capacity market design, the Commission can be clear about the function of a “backstop” procurement
mechanism⁶:

1. **There should be specific and clearly defined criteria that trigger backstop procurement.**

   Unless market participants are aware of the criteria that will trigger backstop procurement, there is
the strong risk that merchant investors will be unwilling to invest in infrastructure outside of the backstop
procurement. Examples of explicit, measurable trigger criteria, that should be discussed at the August
Workshops include: (i) whether the aggregate RA Capacity base has reached a level that is at or below the
required planning reserve margin and (ii) whether there has been sufficient development activities
measured by efforts to secure new construction permits and related siting authority, and (iii) a leveling off
or decline in the growth of demand response participation in the RA Capacity or energy markets as
applicable.

2. **If backstop procurement is triggered, that should in turn trigger a comprehensive review to determine why the market based mechanisms are not producing price signals that support merchant investment.**

   This principle ensures that the commitment to competitive market support for merchant
investment remains a first priority. If and when backstop procurement – the safety net – is triggered
pursuant to the type of criteria described above, there needs to be a full review, inclusive of the
Commission Staff, as well as the CAISO and market participant, to determine what elements of the
market design are not working as intended to support that investment, and what corrective measures are
necessary to remedy the market design flaws.

⁶ Constellation notes that its recommendations herein for specific triggers for backstop procurement appear to be similar to the
recommendation of the Bilateral Trading Group (“BTG”). However, the BTG does not specify what those triggers would be,
and BTG indicates that the backstop procurement would continue to take place via an ongoing LTPP requirement.
3. **Backstop procurement should be for capacity only.**

To the extent backstop procurement is necessary as defined in these principles, the competitive solicitation should seek a RA Capacity-only contract, and should not be bundled with energy or ancillary services from the facility, but instead those unbundled, non-RA Capacity products would be made available to the wholesale market as the asset owner determines, subject of course to the must-offer obligation applicable to all RA Capacity.\(^7\) Confining the backstop procurement to RA Capacity only will maximize competition, and minimize non-bypassable charges. The RAR benefits associated with the contract should be allocated to all entities to whom the costs of the contract are allocated.

4. **Capacity committed through backstop procurement should be subject to the same capacity resource obligations as are resources committed directly by Load Serving Entities (“LSEs”).**

The RA Capacity resource that is purchased in the backstop procurement should be subject to the same market rules with respect to bidding and performance obligations as are all other RA Capacity resources.

5. **The backstop procurement contract should be short in duration.**

As noted above, the fact that backstop procurement is triggered would be indicative of the need for market modifications that will better ensure that market price signals adequately support new investment. Therefore, when the backstop is triggered, it should also trigger a review of the market rules so that the modifications that are needed are accomplished as quickly as possible, to obviate the need for further backstop procurement. The RA Capacity resources that are purchased through the backstop procurement trigger should be targeted to secure a quantity of RA Capacity necessary to maintain reliability until the market modifications are implemented, and should have as short a contract duration as possible, limited to

\(^7\) Constellation believes that a RA Capacity-only contract under the backstop would foster competition because the bidding entities would incorporate their perception of market opportunities associated with the other non-RA Capacity products they can offer in the market, such as energy and Ancillary Services. To the extent those non-RA Capacity product opportunities can contribute meaningfully to the asset-owner’s investment, competition will drive down the backstop procurement price.
two to three years, and certainly no more than five years in duration, to minimize the “overhang” of cost socialized investment.

C. Providing capacity price transparency that facilitates the development of a liquid, hedgeable capacity product.

Once the backstop procurement function has been vetted and established, if one is deemed necessary, the August Workshops should focus on determining which capacity market design provides the best mechanism for establishing price transparency and liquidity. Based on its review of the pre-workshop comments, Constellation believes that this discussion will center on whether or not a specifically stated administrative demand curve is necessary. Constellation has previously explained why it believes that incorporating the demand curve approach to the capacity market design facilitates the formation of capacity price signals that in turn will support investment, which will not be repeated here. However, Constellation is aware of the concerns raised by the Bilateral Trading Group (“BTG”) that implementation of a demand curve will create a windfall for generators that will not be corrected by competitive market forces. BTG states:

Unfortunately, there is no reason to believe that this “market discipline” will occur under a CCM regime. Bilateral negotiations necessarily take into account the other options available to the parties. If a seller can simply wait for the centralized market and obtain an excessive price for capacity, there will be no incentive for that seller to agree to a lower price in a bilateral negotiation. Absent significant excess capacity, there is will be no “market discipline” to force the seller to accept a reasonable price for its capacity if it can obtain a better price by simply waiting for the central market to run.\(^8\)

BTG’s concerns ignore economic realities. Suppose a hypothetical with two homeowners: one has bought a house that cost $100,000 20 years ago, her neighbor bought his house for $200,000 5 years ago and both seek to sell their house today at the prevailing market price. Furthermore, if our first neighbor had rented out that house for the full 20 year period, and then decided to sell her asset, the

\(^8\) See Pre-Workshop Comments of the BTG on Resource Adequacy, Phase 2, Track 2 Issues, dated May 18, 2007, page 16.
tenants would have no entitlement in the house. Now presume that our houses are power plants. If the prevailing market price of capacity is $70-kW/year, an owner of capacity will sell for that price, whether or not his initial investment was $30-kW/year or $100-kW/year. If we think that we can require the owner whose investment was $30-kW/year to sell below market prices, consumers may indeed be better off in the short term, but investors will flee that market because they too will face the same “taking” in the future. As a result, regulators will step in and mandate new investment guaranteed by consumer cost pass-throughs – returning to a regime of unmanaged risks, future stranded costs, and the absence of competitive wholesale and retail competitive markets. Such market intervention eliminates competitive pressures to lower the costs of this new generation, incentives for technological and environmental improvement, and the rewards for efficient operations of existing facilities.

Moreover, it must be pointed out that the BTG vision of an energy only market is one that will have market clearing prices at the marginal unit. The demand curve capacity market construct serves to implement the same price signal mechanism for capacity as already exists for energy.

D. Establishing clear resource adequacy compliance rules, especially with respect to the timing for the centralized capacity market clearing function.

The August workshops will need to address the practical implementation and compliance rules associated with whatever capacity market design the Commission ultimately adopts. Currently, RAR compliance calls for a combination of one year forward demonstrations (for Local RAR, and 90% of system RAR for the summer months) and monthly demonstrations (for non-summer months and the remaining 10% of summer months system RAR). Constellation’s Cal CIM proposal calls for all compliance demonstrations to occur on a monthly basis, a feature of the proposal that is criticized for potentially creating an undetected reliability shortfall. Constellation reiterates its belief that the timing of compliance demonstrations become a secondary issue when market rules and structures are put in place that allow market participants to reliably predict and price their forward obligations, so that they can enter
into forward transactions to manage the risks associated with those forward obligations. When market structures are (i) stable and there is regulatory certainty about how the RA obligations are determined and (ii) there is ability to hedge those obligations, including the ability to rebalance capacity positions in light of load growth and load migration, it should not be necessary to require compliance showings any more frequently than monthly.

To be absolutely clear, implementing monthly compliance demonstrations as contained in the Cal CIM model, rather than the current one year forward regime, or the four year forward regime contained in various other capacity market proposals, does not imply that bilateral capacity commitments are only of a month’s duration. Under Cal CIM, market participants will continually make their own assessments of market conditions—including the demand curve values—and adopt risk management approaches they believe are appropriate for their circumstances. In some cases this may lead LSEs to forward procure capacity on a bilateral basis well in advance of the compliance showing period for resource commitments as part of a risk management strategy. More likely, market intermediaries, who provide wholesale products and services that retail sellers need to serve their load, will enter into capacity transactions for existing and new resources that allow them to offer competitively priced wholesale services. In other cases, market participants may wish to release or remarket some portion of capacity currently held in their portfolio, or assume the risk of market prices for some portion of their needs. As long as entities carrying the RAR procurement obligation are managing these market risks these entities—along with potential suppliers—should anticipate market conditions and invest accordingly.

III. Constellation’s Cal CIM proposal and modifications

Constellation’s Cal CIM proposal is modeled largely on the NYISO capacity market structure. The following is a summary of Constellation’s Cal CIM proposal:

1. Three to four years in advance of the compliance period, the RA obligation is announced.
2. Three to four years in advance of the compliance period, locational demand curves establishes the range of prices that will clear the capacity market, with higher clearing prices when the aggregate level of resources is below the desired reserve margin and lower clearing prices when the aggregate level of resources is above the desired reserve margin.

3. Between the time the RA obligation and demand curve are established, market participants may enter into bilateral transactions.

4. On a monthly basis during the compliance period, LSEs report to the CAISO the quantity of capacity resources that they have committed to for that month.

5. The CAISO conducts a demand curve clearing auction in which any uncommitted capacity may offer to sell its capacity for the coming month.

6. The combined amount of capacity committed by LSEs plus the uncommitted capacity that offered in during the demand curve auction determines the demand curve clearing price.

7. All load pays the demand curve clearing price. For any load that executed a bilateral capacity agreement, the load pays only its bilateral transaction price because the amount it pays for the capacity that cleared the auction is offset by the price it receives for capacity that it offered in to the auction.

Constellation continues to believe that its Cal CIM model would serve well in California, and notes that the Cal CIM model could be viewed as a design approach that falls between the BTG purely bilateral approach and other proposals that require four year forward capacity procurement and compliance. However, Constellation is well aware of the criticisms that the Cal CIM faces due to the lack of a backstop procurement mechanism, and due to the monthly compliance demonstrations embedded in the proposal. Constellation believes that the Cal CIM model would address these concerns if it incorporates a backstop mechanism designed in accordance with the principles outlined herein is included. Incorporating a specific backstop mechanism into the Cal CIM model should alleviate the concerns associated with monthly compliance demonstrations.

IV. Integrating RA with LTPP

Concerns were raised in the LTPP Proceeding with respect to the planning criteria that the utilities use to develop their procurement plans, and how those planning criteria are different than the planning criteria used in RA purposes. Specifically, CMA witness, Michael Schnitzer made several
recommendations for modifications to the LTPP process to ensure that LTPP implementation does not conflict with emerging competitive market structures, such as MRTU and capacity markets. One of those recommendations is that there must be one – and only one – set of planning criteria that determines the capacity resource obligations. In describing this recommendation, Mr. Schnitzer testified as follows:

The first proposal would tie the LTTP procurement levels to the Commission adopted planning assumptions established for RAR, instead of allowing separate utility-generated criteria to drive procurement levels. This keeps the issue of what the appropriate planning reserve level should be to the RAR policy proceeding, and avoids the balkanization of the state due to variations in Planning Reserve Margins. Such consistency would limit “over-procurement” or “under procurement” through the LTTP procurement process relative to the RAR process. It is my understanding that the utilities have been permitted to develop planning assumptions and forecasts for their LTPPs that are different than the planning assumptions and forecasts used in the process of developing and allocating RAR requirements.

The purpose of my testimony here is not to comment on the validity (or lack thereof) of the utility planning assumptions used in the LTTP. In fact, I understand that review of the RAR planning assumptions is underway already in the RAR proceedings. While the utilities’ load forecast adjustments may or may not have merit, the RAR process is the right venue to cover the issue, so that regulated utilities and other market participants are operating under the same planning assumptions.9

To ensure that this integration of RAR with the LTPP process occurs, the CMA Motion (to which Constellation is a party) asks the Commission to incorporate the planning criteria discussion from the LTPP proceeding into the RAR proceeding. Constellation believes that approval of the CMA Motion will greatly facilitate the Commission evaluation of the current Planning Reserve Margin and will ensure that planning criteria are consistently applied with respect to both the LTPP process and the RAR process.

9 See Prepared Direct Testimony of Michael Schnitzer on behalf of CMA, presented in R.06-02-013, March 2, 2007, (Exhibit No. 77) page 18.
V. Reforming Utility Procurement Practices

In D.04-12-048, the Commission stated that “Constellation’s slice-of-load proposal is also better considered as part of the resource adequacy process.” In its March 30 proposal, Constellation incorporated the slice-of-load mechanism, the Wholesale Competitive Procurement Service (“WCPS”), that it proposed in its testimony in the LTPP proceeding, while noting that WCPS is not a capacity market proposal per se. Rather, WCPS is a comprehensive approach to utility procurement that is more compatible with competitive wholesale and retail markets than is the current LTPP approach. Thus, a full vetting of the WCPS should best occur in the context of Commission review of utility procurement processes, most likely in the regular LTPP proceedings. Nevertheless, consistent with the cited Commission’s directive that WCPS should be explored in the context of capacity market design, Constellation requests that the Phase 2 August Workshops specifically include time for this discussion as it is an important step to gaining a fuller understanding of how WCPS will serve to provide for the utilities’ bundled customer energy and, capacity related needs.

10 See D.04-12-048, page 60-61.
VI. Conclusion

Constellation looks forward to working with Commission staff and other stakeholders to address the important resource adequacy improvements discussed above.

Respectfully submitted,

July 13, 2007

Lisa M. Decker, Esq. Andrew B. Brown

Constellation Energy Group, Inc. Ellison Schneider & Harris L.L.P.
111 Market Place, Suite 500 2015 H Street
Baltimore, Maryland 21202 Sacramento, CA 95814
Phone: (410) 468-3792 Tel: (916) 447-2166
Fax: (410) 468-3499 Fax: (916) 447-3512
Email: Lisa.Decker@constellation.com Email: abb@eslawfirm.com

Constellation Energy Commodities Group, Constellation Energy Commodities Group,
Inc., and Constellation Generation Group, LLC Inc., and Constellation Generation Group, LLC
Certificate of Service

I hereby certify that I have this day served a copy of “Pre-workshop Reply Comments of Constellation NewEnergy, Inc., Constellation Energy Commodities Group, Inc., and Constellation Generation Group, LLC on Track 2 Proposals” on all known parties to R.05-12-013 by transmitting an e-mail message with the document attached to each party named in the official service list. Parties without e-mail addresses were mailed a properly addressed copy by first-class mail with postage prepaid.

Executed on July 13, 2007 at Sacramento, California

/s/

Eric Janssen