

Decision 10-12-034 December 16, 2010

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

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

Rulemaking 10-05-006  
(Filed May 6, 2010)

**DECISION AUTHORIZING INVESTOR OWNED UTILITIES TO PARTICIPATE  
IN CONVERGENCE BIDDING IN THE CALIFORNIA INDEPENDENT SYSTEM  
OPERATOR ELECTRICITY MARKETS**

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## **DECISION AUTHORIZING INVESTOR OWNED UTILITIES TO PARTICIPATE IN CONVERGENCE BIDDING IN THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR ELECTRICITY MARKETS**

### **1. Summary**

In this decision, we adopt upfront standards<sup>1</sup> for investor owned utilities (IOUs), Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), and Southern California Edison (SCE), to participate in convergence bidding (also known as “virtual bidding”) in markets operated by the California Independent System Operator (CAISO). Convergence bidding currently is scheduled to commence in February of 2011.<sup>2</sup>

This decision grants each IOU interim authority to participate in convergence bidding in the CAISO markets until a subsequent decision in this or its successor proceeding supersedes or modifies this authority, or until an annual stop loss limit is reached.

This interim authority is subject to a uniform set of three authorized bidding strategies for all IOUs. Uniform rules will provide broad consistency among the IOUs where applicable. Each IOU will have the discretion to allocate their bidding activities among these three bidding strategy categories.

The first convergence bidding strategy allows IOUs to use convergence bids to hedge risks associated with generation outage and load uncertainty. The

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<sup>1</sup> Pursuant to Assembly Bill 57 (Stats. 2002, ch. 835),<sup>1</sup> codified as Pub. Util. Code § 454.5, by approving procurement plans, the Commission establishes “upfront standards” for the IOUs’ procurement activities and cost recovery. This obviates the need for after-the-fact reasonableness review by the Commission of the resulting utility procurement decisions that are consistent with the approved plans.

<sup>2</sup> *Cal. Indep. Sys. Operator Corp.*, 130 FERC ¶ 61,122, at P 24 (2010) (Convergence Bidding Design Order).

second convergence bidding strategy allows IOUs to use convergence bids to hedge against uncertainty regarding renewable generation scheduling. The third category allows the IOUs to guard against market manipulation that can impact wholesale electricity prices. These three strategies allow the IOUs to take measures that will benefit ratepayers by mitigating market price volatility and improving the pricing of renewable resources in the CAISO's day-ahead market.

The Commission will impose an annual stop loss limit. The stop loss limits will be \$20 million for PG&E, \$20 million for SCE, and \$5 million for SDG&E. Once an IOU reaches this threshold, its authorization to engage in convergence bidding is suspended, subject to the rules described herein.

In addition, this decision considers whether the utility affiliate rules adequately protect ratepayers in relation to IOU convergence bidding activity. We also decline to adopt a ratepayer-shareholder risk and reward sharing mechanism for IOU convergence bidding activities.

Finally, we identify metrics and IOU reporting requirements by which the Commission and non-market participants can evaluate the effects of convergence bidding. This reporting is required because we are only granting interim authority for IOU participation in convergence bidding. These reports will provide the Commission with the information necessary to make any changes to IOU convergence bidding authority in any subsequent decision extending or modifying such authority.

## **2. Theory of Convergence Bidding in Multi-Settlement Electricity Markets**

A convergence bid (also known as a virtual bid) is not backed by any physical generation or load, and therefore is completely financial. Convergence bidding allows market participants to arbitrage expected price differences

between the Day-Ahead and Real-Time markets. Using convergence bids, market participants can sell (buy) energy in the Day-Ahead market, with the explicit requirement to buy (sell) that energy back in the Real-Time market without intending to physically consume or produce energy in Real-Time. Convergence bids that clear the Day-Ahead market will either earn, or lose, the difference between the Day-Ahead and Real-Time market prices at a specified node multiplied by the megawatt volume of their bids.

Theoretically, convergence bids should cause the Day-Ahead and Real-Time prices to “converge,” reducing the incentive for buyers and sellers to forgo bidding physical schedules in the Day-Ahead market in expectation of better prices in the Real-Time market,<sup>3</sup> and thus improve price stability and market efficiency. In addition, Federal Energy Regulatory Commission (FERC) believes that convergence bidding improves market performance by adding liquidity, increasing the numbers of offers in the Day-Ahead market and preventing the exercise of market power.<sup>4</sup>

There are two major rationales for any California Independent System Operator (CAISO) market participant to engage in convergence bidding activities. First, as is true of any market arbitraging activity, the market participant may seek financial gain due to its insights into market activities. Second, the market participant may be seeking to hedge risks associated with the market.

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<sup>3</sup> *Cal. Indep. Sys. Operator Corp.*, 133 FERC ¶ 61,039, at par. 14 (2010).

<sup>4</sup> *Cal. Indep. Sys. Operator Corp.*, 133 FERC ¶ 61,039, at par. 13 (2010).

### 3. Background

#### 3.1. FERC Order to Implement Convergence Bidding

In November 2009, after completing its stakeholder process, CAISO filed, at FERC, its proposal for convergence bidding and motion seeking an extension of time in which to implement convergence bidding.<sup>5</sup> On February 18, 2010, FERC conditionally accepted CAISO's proposal and ordered CAISO to open its energy market to convergence bidding by February 2011.<sup>6</sup>

In June 2010, CAISO submitted a tariff modification to FERC to implement convergence bidding in the CAISO's markets.<sup>7</sup> On October 15, 2010 FERC conditionally accepted CAISO's tariff revisions, approving the majority of the proposed tariff.<sup>8</sup> Notably, the FERC order accepts the CAISO's revised 12 month phase-in period for position limits at internal trading nodes and 16 month position limits at the interties.<sup>9</sup> The order accepts the CAISO's cost allocation methodology for convergence bidding, netting convergence bids to determine market impacts, finding that it reasonably balances cost-causation principles with administrative feasibility.<sup>10</sup> The order also approves CAISO's authority to

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<sup>5</sup> CAISO November 20, 2009 Convergence Bidding Design Filing, Docket No. ER10-300-00.

<sup>6</sup> *Cal. Indep. Sys. Operator v. FERC*, 130 FERC ¶ 61,222, at par. 24 (2010).

<sup>7</sup> *Cal. Indep. Sys. Operator Corp.*, 133 FERC ¶ 61,039, at par. 5 (2010).

<sup>8</sup> *Id.*

<sup>9</sup> *Id.* at par. 91-129

<sup>10</sup> *Id.* at par. 22-69

suspend convergence bidding that detrimentally affects system reliability or grid operations, and in the event of market disruption.<sup>11</sup>

The FERC order, however, requires CAISO to revise the tariff provisions to clarify the circumstances in which CAISO may suspend convergence bidding in the event of “unwarranted” price divergence between the markets.<sup>12</sup> The order approves the CAISO’s congestion revenue rights (CRR) settlement rule aimed at deterring the use of convergence bidding to increase the value of a bidder’s CRRs. The order acknowledges the potential for affiliates to use convergence bidding to manipulate CRR values for the benefit of a related entity, but finds that this must be addressed on a case by case basis through referrals from the CAISO’s Department of Market Monitoring to FERC.<sup>13</sup>

### **3.2. Record of the Proceeding**

The record for this decision was developed through written comments and proposals by the investor-owned utilities (IOUs). No evidentiary hearings were held. The Division of Ratepayer Advocates (DRA), Californians for Renewable Energy and Solutions for Utilities (CARE), Pacific Energy (PE), The Utility Reform Network (TURN), L Jan Reid (Reid), Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric (SDG&E) filed timely written comments.

A number of parties indicated at a Prehearing Conference (PHC) held on June 12, 2010, and in the PHC comments, that resolving issues about IOU participation in convergence bidding in the CAISO energy markets is important

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<sup>11</sup> Id. at par. 160-195.

<sup>12</sup> Id.

<sup>13</sup> Id. at 135-59

for this proceeding.<sup>14</sup> At least one IOU indicated the intention to seek authorization from the Commission to engage in convergence bidding activities.<sup>15</sup>

On July 1, 2010, Administrative Law Judge (ALJ) Victoria S. Kolakowski issued a ruling (July 1 Ruling) setting a procedural schedule including public workshops, IOU submittal of convergence bidding proposals, party comments, and reply comments. The July 1 Ruling included 20 questions to guide the development of the record, and directed interested parties to file proposals explaining how IOUs might participate in convergence bidding, any constraints or limitations that should be placed on such IOU participation, and how such participation should be considered in the risk management strategies of the IOUs in their bundled procurement plans.

On July 9, 2010, PG&E, SDG&E, TURN and DRA filed a joint motion requesting modification of the schedule set forth in the July 1 Ruling and requested expedited consideration of the motion. In response, ALJ Kolakowski sent an electronic mail message to the Service List on July 9, 2010, stating that the motion for expedited treatment would be granted. The electronic mail message directed parties to respond to the motion by July 12, 2010.

ALJ Kolakowski issued a ruling on July 16, 2010 (July 16 Ruling) granting the motion by PG&E, SDG&E, TURN, and DRA. The July 16 Ruling set a revised schedule for workshops and for parties to file comments.

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<sup>14</sup> DRA June 4<sup>th</sup> 2010 Comments at 11, DRA July 2<sup>nd</sup> 2010 Comments at 3, PG&E June 4<sup>th</sup> Comments at 5, SCE June 4<sup>th</sup> 2010 Comments at 16, TURN June 25<sup>th</sup> 2010 Comments at 7, WPTF June 4<sup>th</sup> 2010 Comments at 7.

<sup>15</sup> SCE June 4<sup>th</sup> 2010 Comments at 16.

On July 19, 2010, the CAISO, CARE, DRA, PG&E, SCE, SDG&E, and the Solution for Utilities, Inc. filed comments responding to the issues and questions raised in the July 1 Ruling. CARE and the Solution for Utilities, Inc. filed comments jointly.

On July 26, 2010, the Commission's Energy Division held a technical session on convergence bidding, with CAISO staff presenting an overview of CAISO's convergence bidding proposal.

On July 30, 2010, DRA, PE, SDG&E, and TURN filed supplemental comments responding to the July 1 Ruling questions.

On August 16, 2010, PG&E, SCE, SDG&E filed proposals regarding their respective participation in convergence bidding. Subsequently, Energy Division staff held a second workshop on August 23, 2010 to allow the IOUs to explain the scope and parameters of their proposals, and allow interested parties to ask clarifying questions.

On August 30, 2010, CARE, DRA, Reid, PE, PG&E, and TURN filed opening comments on the IOUs' convergence bidding proposals. In response to parties' comments, PG&E, SCE, and SDG&E filed reply comments on September 7, 2010.

### **3.3. No Need for Evidentiary Hearings**

The July 16 Ruling ordered that any request for evidentiary hearings on convergence bidding was to be filed and served in writing by August 20, 2010, with response to such requests served by August 25, 2010.

On August 20, 2010, DRA timely served a request for evidentiary hearing. DRA contends that there are six areas of factual investigation necessary for the Commission to decide whether to authorize the IOUs to participate in convergence bidding. DRA was concerned that ratepayers would bear the full

liability for IOU bidding activity, and that experience in other markets with similar systems may not provide adequate information to assess the risks associated with IOU participation in this particular market. DRA further raised questions about scope of IOU participation, limitations on bidding authority, as well as market oversight and monitoring.

On August 25, 2010, PG&E and SCE filed timely responses to DRA's request for evidentiary hearing, and argued that DRA's request be denied. PG&E and SCE each argued that DRA had not raised specific issues of disputed fact, and contended that a combination of discovery and written comments would be adequate to address DRA's concerns regarding the record of the proceeding.

On September 9, 2010, ALJ Kolakowski issued a ruling finding that DRA had not raised specific areas of disputed fact, and therefore denied DRA's request. We affirm that ruling herein.

#### **4. Whether to Allow IOU Participation in Convergence Bidding**

We must first address the threshold question of whether to allow IOU to engage in convergence bidding activities in CAISO's electricity markets. We face a range of options, from not authorizing IOU participation, to authorizing full and unrestricted IOU participation in convergence bidding. An authorization of any pass-through of losses to ratepayers requires the establishment of upfront procurement standards, assessment of this new market's effect on the IOUs' overall procurement risk management, and determination of an appropriate allocation of risks and rewards between ratepayers and shareholders.

#### **4.1. Parties Position**

CAISO, PG&E, Reid, SCE, SDG&E, and TURN agree that the IOUs should be allowed to participate in convergence bidding.<sup>16</sup>

CAISO believes that allowing IOUs to participate will help achieve the market benefits of convergence bidding by providing greater liquidity and increasing market efficiencies.<sup>17</sup> CAISO also states that not allowing the IOUs to participate “will require other market participants to take the positions necessary to converge prices and to counteract potential gaming strategies that may be exercised by suppliers.”<sup>18</sup>

PG&E believes that “utility participation in convergence bidding would benefit ratepayers through lower CAISO market risks and lower procurement costs...”<sup>19</sup> SCE also believes that IOUs should be allowed to participate in convergence bidding as part of their AB 57 procurement plans.<sup>20</sup> SCE argues that “[i]f IOUs are not permitted to participate in convergence bidding, then their customers may potentially face higher costs and risks, including higher costs and risks attributable to the convergence bidding activities of other market participants.”<sup>21</sup> Similarly, SDG&E believes that “[i]f IOUs are prohibited from participating in [convergence bidding], IOUs have a competitive disadvantage to

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<sup>16</sup> CAISO July 19th 2010 Comments at 1; PG&E July 19th 2010 Response at 2; SCE July 19th 2010 Response at 3; SDG&E July 19th 2010 Response at 2; and TURN July 30th 2010 Response at 1.

<sup>17</sup> CAISO July 19th 2010 Comments at 1-2.

<sup>18</sup> *Id.* at 2.

<sup>19</sup> PG&E July 19th 2010 Response at 2.

<sup>20</sup> SCE July 19th 2010 Response at 2.

<sup>21</sup> *Id.* at 3.

other market participants, who would be able to benefit from [convergence bidding].”<sup>22</sup>

On whether the IOUs should be authorized to participate in convergence bidding, TURN submits that “IOUs must be granted such authorization.”<sup>23</sup> While TURN has significant concerns about the entire concept of allowing convergence bidding in CAISO markets, TURN believes that “[a]bsent IOU participation, there is a very real risk that other parties may attempt to use [convergence] bidding to manipulate the market to the disadvantage of consumers.”<sup>24</sup>

DRA believes that the Commission should weigh potential benefits against risks, consider whether adequate safeguards will be in place by FERC approval of the CAISO’s proposal, and consider whether IOU upfront standards will adequately protect ratepayers.<sup>25</sup> DRA further requests that the Commission authorize IOU convergence bidding participation on an *interim basis* only with an assessment after one year.<sup>26</sup> After a year, the Commission would assess whether benefits outweigh costs to IOU ratepayers by convergence bidding participation, relative success and failure of IOU bidding strategies, and whether to extend or modify upfront standards authorized initially. DRA requests that such assessment should not focus on the reasonableness of past bids but whether prospective changes should be made to upfront standards.

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<sup>22</sup> SDG&E July 19th 2010 Response at 4-6.

<sup>23</sup> TURN July 30th 2010 Comments at 1.

<sup>24</sup> *Id.* at 1.

<sup>25</sup> DRA July 30th 2010 Comments at 2.

<sup>26</sup> DRA August 30, 2010 Comments at 6.

PE recommends that procedural protections and a comprehensive convergence bidding impact study are needed, and that the Commission should not authorize IOU participation in the CAISO convergence bidding market before the potential impact has been thoroughly evaluated.<sup>27</sup> PE further suggests that the comprehensive studies should be conducted through a Commission-led stakeholder process that addresses both the intended and unintended consequence of individual convergence bidding strategies and impact on renewable and conventional market.

#### **4.2. Discussion**

We conclude that precluding the IOUs from participating in convergence bidding would prevent them from achieving potential benefits for ratepayers. Therefore we grant each IOU interim authority to participate in convergence bidding in the CAISO markets until a subsequent decision in this or its successor proceeding supersedes or modifies this authority. This interim authority is not unlimited in its scope; we will allow the IOUs to participate in convergence subject to the limitations and clarifications made herein.

We recognize that the outcome of IOU participation in convergence bidding activities is uncertain. However, the authority granted through this decision is only interim authority, and will continue to be reviewed. The ultimate scope of IOU authority, whether in this proceeding or a subsequent proceeding, may increase or decrease the authority granted here based on the experience gained during this interim period. Ultimately, the efficacy of individual convergence bids will be based on cleared prices in CAISO's Day-

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<sup>27</sup> PE July 30th 2010 Comments at 1.

Ahead and Real-Time markets. An after-the-fact assessment of IOU convergence bidding performance may not always reveal whether the hedges were prudent at the time they were executed. Accordingly, our authorization is based upon upfront standards and not post-hoc reasonableness reviews.

## **5. IOU Convergence Bidding Proposals**

PG&E, SDG&E and SCE submitted different bidding proposals on how they intend to participate in convergence bidding. We discuss the IOUs' proposals below.

### **5.1. PG&E's Proposal**

PG&E believes that IOU participation in convergence bidding should reduce exposure to Real-Time market risk associated with unplanned generation outages, and allow improved market dispatches of PG&E's generation facilities.<sup>28</sup>

PG&E's convergence bidding proposal includes five elements:

- 1) A convergence bidding strategy to hedge against Real-Time market risks;
- 2) Meetings with its Procurement Review Group (PRG) to review convergence bidding activities quarterly;
- 3) A quarterly compliance report to record costs and revenues related to convergence bidding in Energy Resource Recovery Account (ERRA);
- 4) Inclusion of the approved convergence bidding proposal in PG&E's conformed 2006 LTPP until a 2010 LTPP is adopted; and
- 5) Emergency convergence bidding authority where PG&E will notify PRG and Energy Division staff about sudden changes in circumstances resulting in extreme adverse consequences. In such a case PG&E would file a Tier 1

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<sup>28</sup> PG&E August 16, 2010 Proposal at 4.

Advice Letter seeking authority for convergence bidding strategies.<sup>29</sup>

## **5.2. SCE's Proposal**

SCE asserts that the CAISO's Market Surveillance Committee has stated that active participation by the IOUs will improve the convergence bidding process, and not having the IOUs participate can reduce the benefit of convergence bidding.<sup>30</sup> Additionally, SCE contends that convergence bidding will help IOUs: a) manage customers' risks associated with load and supply uncertainty; b) "move" the pricing of transactions between Day-Ahead and Real-Time markets to benefit customers; c) better hedge against congestion charges by moving the settlement price of a Congestion Revenue Right (CRR) from the Day-Ahead to the Real-Time market; and d) reduce customer risks associated with the convergence bidding activities of other market participants.<sup>31</sup>

SCE's convergence bidding proposal thus contains the following standards:

- 1) Volume limits of how many megawatts (amount redacted in the public version) of convergence bids it can submit to be demonstrated in the quarterly compliance report (QCR);
- 2) Locational volume limits based on but not limited to:
  - a) nodes from which SCE schedules and settles physical load;
  - b) nodes from which SCE schedules and settles supply resources (including SCE-owned resources, resources

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<sup>29</sup> PG&E August 16, 2010 Proposal at 6.

<sup>30</sup> SCE July 19 2010 Response at 4.

<sup>31</sup> SCE July 19, 2010 Response at 2.

under contract with SCE, and the California Department of Water Resources contracts allocated to SCE's customers);

- c) nodes that are identified in SCE's CRRs;
  - d) nodes that are price-correlated to those nodes in which SCE has physical load or resources; and
  - e) nodes where prices can impact SCE's demand costs and supply revenues.
- 3) PRG consultation, QCR and convene with the PRG and Energy Division when net loss from convergence bidding exceed \$10 million during any rolling 90-day period.<sup>32</sup>

### **5.3. SDG&E's Proposal**

SDG&E argues that convergence bidding will allow SDG&E to shift generation schedules from the Real-Time to the Day-Ahead market, mitigate Day-Ahead award obligation on units returning to service under Day-Ahead awards, lower exposure to Real-Time prices, mitigate load forecast uncertainty, and provide defensive price arbitrage.<sup>33</sup> SDG&E contends that ratepayers would benefit from convergence bidding through cost reductions or operational risk mitigation. SDG&E further contends that the benefits of convergence bidding may be difficult to measure since convergence awards not only generate their own profits or loss but also impact aggregate market clearing prices that may impact part of the portfolio.

SDG&E thus proposes that convergence bidding will provide:

- 1) Operational enhancements such as;

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<sup>32</sup> SCE August 12, 2010 Proposal at 6-9.

<sup>33</sup> SDG&E July 19, 2010 Response at 2-3.

- a) virtual sale in the Day Ahead market of SDG&E's wind generation., SDG&E's wind generation suppliers are not required under CAISO's Participating Intermittent Resource Program (PIRP) protocol or their power purchase agreements (PPAs) with SDG&E to schedule generation in the Day Ahead market;
  - b) mitigation Day-Ahead awards of generation returning to service after an extended period of shutdown; and
  - c) mitigation of bundled load forecast uncertainty.
- 2) Defensive price arbitrage to mitigate harmful effects as price anomalies are identified on a day-to-day basis.

#### **5.4. Parties' Position on IOU Proposals**

##### **5.4.1. TURN**

TURN supports giving broad authority to all three IOUs as requested by SCE.<sup>34</sup> TURN argues that IOUs are bundled customers' only defense against gaming strategies of "convergence players" whose goal is to profit from convergence actions.<sup>35</sup>

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<sup>34</sup> TURN August 30, 2010 Comments at 2.

<sup>35</sup> TURN August 30, 2010 Comments at 6.

TURN asserts that each IOU should have the flexibility to engage or not engage in convergence bidding without fear or retrospective reasonableness review or other cost disallowance. After some experience is gained, TURN suggests the Commission can impose appropriate restrictions or require IOUs to pursue certain beneficial convergence bidding strategies. As a second best strategy, TURN also supports PGE's proposal to allow the filing of a Tier 1 Advice Letter to provide greater convergence bidding authority.

TURN adds that if the Commission is unwilling to grant its recommendations, then TURN would support as an alternative the Commission's granting the IOUs relatively broad authority to pursue any specific strategies that the IOUs have proposed. However, TURN believes that the list of strategies proposed by the IOUs is too short and omits a number of potentially beneficial strategies that could reduce customer costs or risks.

#### **5.4.2. DRA**

DRA contends that SCE's proposal requests too broad an authority and that SCE only gives examples of the kinds of transactions it would engage in without explaining how each strategy serves its ratepayers.<sup>36</sup> DRA requests that the Commission exercise some restraint in granting convergence bidding authority to the IOUs until California has had some experience with convergence bidding implementation. DRA believes that the Commission should direct SCE to adopt a model similar to that of PG&E and SDG&E, including showing of what kinds of bids SCE expects to engage in, conditions when such bids would be submitted, and a description of the strategies that support each bid type.

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<sup>36</sup> DRA August 30, 2010 Comments at 3.

DRA opposes PG&E's proposal that convergence bidding authority be approved through a Tier 1 Advice Letter process when PG&E needs to respond quickly to sudden changes in market conditions that could result in "extremely adverse consequences" for ratepayers.<sup>37</sup> DRA further argues that the Tier 1 Advice Letter process is inconsistent with AB 57 upfront reasonableness standards. DRA contends that the Commission has stated that IOUs may not use Tier 1 Advice Letters to implement controversial matters, and PGE's recommendations for Tier 1 Advice Letter use exceeds the authority the Commission can grant under the law.

DRA further claims that even if the Commission were to find another vehicle consistent with its law to grant PG&E this expedited authority, such authority would still be inconsistent with AB 57's requirements that the Commission approve upfront standards for the IOU procurement decisions to avoid after-the-fact reasonableness review.

DRA notes that each IOU is requesting different authority for convergence bidding participation, and there is no evidence available that explains why one convergence bidding strategy is reasonable for one IOU and not for others.<sup>38</sup>

DRA suggests that each IOU's convergence bidding application should have application name, description, and bid type, conditions when bids are submitted, bid location, bid quantity, bid price, and frequency. Additionally DRA suggests there should be monthly reporting and monthly loss limits similar

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<sup>37</sup> DRA August 30, 2010 Comments at 4.

<sup>38</sup> DRA August 30, 2010 Comments at 11.

to SDG&E's proposal (as discussed under Stop Loss Limit Section 8.1), and a Tier 3 Advice Letter process to change convergence bidding authority as necessary.<sup>39</sup>

#### **5.4.3. Reid**

Reid argues that the ratepayers can only be protected by the IOU participation in convergence bidding trading.<sup>40</sup> Reid believes that the major problem with the PG&E proposal is that it does not address a limit on ratepayer losses. Further, Reid contends that PG&E does not elaborate on how PG&E will determine a change is sudden for Tier 1 Advice Letter filing status.

Reid believes that the SCE has a more complete convergence bidding proposal than do the other IOUs. Reid proposes that each IOU meet with its PRG every two weeks for the first six months of market operation. However Reid sees SCE's net loss limitation proposal as inadequate in protecting ratepayers from adverse circumstances. Reid suggests that PG&E and SCE should have a net rate recovery (total losses - total gains) of \$10 million for the calendar quarter and SDG&E for \$5 million.

Reid supports SDG&E's proposal of using convergence bidding for specific purposes. However, Reid points out that SDG&E's proposal does not mention transactional limits or clarify defensive price arbitrage. Reid also adds that SDG&E's proposal does not explain how "monitoring methods" and "metrics" should be developed or approved.

#### **5.4.4. Pacific Environment**

PE recommends that the IOU data be made available to the public and not just the PRG, as proposed by the IOUs. PE also requests that the Commission

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<sup>39</sup> DRA August 30, 2010 Comments at 8-11.

<sup>40</sup> Reid August 31, 2010 Amended Comments at 7.

re-evaluate the limitations of IOU involvement in the convergence bidding market through a public stakeholder process.

### **5.5. Discussion**

We believe that the strategies described by the IOUs may lower risks and benefit ratepayers in some situations. Therefore, as part of the IOUs interim authority to participate in convergence bidding we approve three specific bidding strategies based upon the different IOU proposals, along with uniform reporting requirements. Together, these three strategies will allow each IOU to engage in convergence bidding to meet its individual ratepayer needs while operating within a common bidding and reporting framework governing all three IOUs. However, we conclude that no single party's proposal adequately addresses the AB 57 upfront standards required for the IOUs to participate in convergence bidding. While PG&E and SDG&E seek narrower authorization of IOU-specific strategies, SCE proposes a broad authorization with certain limitations on how it would participate in convergence bidding.

In terms of the specific IOU proposals, we agree that PG&E's proposed convergence bidding strategy can provide a hedge against Real-Time market risks and can lower wholesale costs to the benefit of ratepayers, yet we reject PG&E proposed emergency convergence bidding authority via a Tier 1 Advice Letter process. We agree with DRA that use of a Tier 1 Advice Letter is inconsistent with the AB 57 upfront standards.

Similarly, while we agree with the convergence bidding application SDG&E proposes, we do not agree with SDG&E's proposed suspension of convergence bidding when losses from defensive convergence bidding exceeds \$.001/kilowatt-hour (kWh) of its ERRA bundled load forecast for any calendar month.

As will be discussed later, we find that SCE's proposal to convene a PRG meeting when net loss reaches \$10 million does not put a sufficient stop to potential loss to ratepayers resulting from IOU convergence bidding positions. We agree with DRA and Reid that some form of net loss limit will protect ratepayers from potentially unlimited financial harm that can result from convergence bidding. Stop loss limits are discussed in Section 8.

## **6. Authorized Convergence Bidding Strategies**

We authorize the IOUs to participate in convergence bidding under three separate strategies. However, convergence bids under all strategies shall be limited to the nodes or locations where the IOU-owned or IOU-contracted resources or load are physically located. The utilities are not required to use any or all of the three bidding strategies and may apply them flexibly to meet their own circumstances, consistent with the other provisions of this Decision. All costs of such participation shall be recoverable in the individual utility's Energy Resource Recovery Account.

### **6.1. Convergence Bidding Strategy 1: Generation Performance Risk and Utility Load Forecast Uncertainty Hedging**

#### **6.1.1. Parties' Position**

PG&E identified two specific justifications for its participation in convergence bidding.<sup>41</sup> PG&E proposes that it will submit convergence bids to reduce exposure to Real-Time market risk associated with unplanned generation risk, e.g., to manage risks from unplanned outages. Similarly, PG&E proposes to submit convergence bids to provide opportunities to improve the quality of

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<sup>41</sup> PG&E August 16, 2010 Proposal at 4.

market dispatches (i.e., lower costs and market efficiencies) for specified generation facilities. PG&E argues that since convergence bidding is new, PG&E's proposal to participate is necessarily limited until PG&E gains experience and monitors the market developments.<sup>42</sup>

SDG&E similarly proposes that the Commission should allow SDG&E to participate in convergence bidding to mitigate specific day-to-day scheduling practices.<sup>43</sup> SDG&E proposes to submit virtual demand bids in the Day-Ahead market for a portion of a unit's expected Day-Ahead market award especially when a generator's performance is uncertain (for example, units returning to service after an extended period). The Day-Ahead virtual demand bid would be offset by a corresponding virtual supply sale in the Real-Time market that would hedge the potential risk of buying back undelivered energy from the unit returning to service.

In addition SDG&E argues that demand forecast uncertainty is an inherent source of financial risk that SDG&E bears in its portfolio.<sup>44</sup> SDG&E notes that under CAISO's redesigned markets, load demand can only be bid in the Day-Ahead market, and the residual demand requirements are settled in Real-Time market. Likewise, we recognize that load will not always perform as forecasted.

### **6.1.2. Discussion**

We recognize that there is always a risk that a generation resource will not perform as scheduled, requiring IOUs to purchase replacement power in the

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<sup>42</sup> *Ibid.*

<sup>43</sup> SDG&E August 16, 2010 Proposal at 5.

<sup>44</sup> SDG&E August 16, 2010 Proposal at 8.

CAISO Real-Time market. IOUs are in the best position to know the extent of that risk and should be able to save ratepayers money through convergence bidding to hedge against generation performance risk.

Therefore, we authorize the IOUs to participate in convergence bidding to manage Real-Time price exposure resulting from unanticipated forced outages, derating of generating units, derating of transmission, or uncertain generation performance for resources scheduled by the IOUs in the CAISO's Day-Ahead Market, and to hedge against load forecast uncertainty, as these strategies address goals that will benefit ratepayers.

We discuss how the IOUs should report compliance on Strategy 1 in the Reporting Section (Section 11) below.

## **6.2. Convergence Bidding Strategy 2: Renewable Resource Schedule and Hedging**

### **6.2.1. Parties' Position**

SDG&E notes that under the new market structure, wind generation suppliers are not required to schedule in the Day-Ahead market through the PIRP.<sup>45</sup> SDG&E notes that its power purchase agreements (PPAs) governing the existing operational wind generation require that all wind suppliers participate in PIRP, but do not require that wind suppliers schedule generation in the Day-Ahead market. SDG&E's contracted wind generation is scheduled only into the CAISO Real-Time market based on PIRP protocols and receives the CAISO Real-Time market prices. As a result, there has been no incentive for suppliers to schedule wind into the Day-Ahead market due to forecast uncertainty and the

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<sup>45</sup> SDG&E August 16, 2010 Proposal at 5.

complexity of the settlement process to account for Day-Ahead supply awards and actual delivery variances.

SDG&E requests authority to submit virtual supply bids in the Day-Ahead market up to, but not exceeding, the amount of the Day-Ahead forecast of wind generation in the Day-Ahead market, and then to buy it back in the Real-Time market. This would offset or hedge the financial exposure for the underlying Real-Time market sale of scheduled physical wind generation.

### **6.2.2. Discussion**

We agree that this is an appropriate use for convergence bidding. We authorize the IOUs to use convergence bidding to hedge all their intermittent generation forecasted schedules.

## **6.3. Convergence Bidding Strategy 3: Defensive Bidding Against Market Dynamics**

### **6.3.1. Parties' Position**

Both SCE and SDG&E have proposed using convergence bidding to defend against either overt market manipulation or aberrant market behaviors due to market failures, both of which could be detrimental to ratepayer interests.

SDG&E notes that convergence bidding will open new trading opportunities to existing and new market participants.<sup>46</sup> SDG&E suggests that convergence bidding will be actively pursued by many market participants and may result in potentially harmful outcomes for SDG&E ratepayers. SDG&E argues, by means of an example, that since convergence and physical bids will compete head-to-head in CAISO's Day-Ahead market, virtual supply bids could

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<sup>46</sup> SDG&E August 16, 2010 Comments at 9

displace physical resources in the Day-Ahead market, and potentially impact CAISO's power flow solution leading to pricing node (Pnode) -specific price divergence.<sup>47</sup> Unlike the convergence bidding Strategies 1 and 2 described above that can be more specifically described upfront, SDG&E argues that defensive convergence bidding on a day-by-day is not possible until a market anomaly is clearly identified.

SDG&E describes several steps for defensive price arbitrage, including reporting to the CAISO if market manipulation is detected.<sup>48</sup> SDG&E offers to monitor market prices to determine whether Pnode prices within its portfolio appear reasonable or exhibit anomalous behavior. SDG&E suggests that if such price distortions are identified, SDG&E could implement defensive price arbitrage convergence bidding to mitigate such distortions.

This activity would be applied at Pnodes within SDG&E's Default Load Aggregation Point (DLAP) or at those nodes that correlate to resources in SDG&E's portfolio. SDG&E does not propose to pursue convergence bidding at other Pnodes within the CAISO system, but represents that it would report such anomalies to the CAISO if detected. SDG&E would establish a quantity limit for this application of convergence bidding at each Pnode corresponding to its perceived exposure.

For tracking purposes, SDG&E would track its defensive convergence bidding activity gain/loss on a weekly basis. SDG&E would report these results to the Commission on a calendar quarter basis in its QCR. If incurred losses

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<sup>47</sup> SDG&E August 16, 2010 Comments at 9.

<sup>48</sup> SDG&E August 16, 2010 Proposal at 10.

exceed \$.001/kWh multiplied by its ERRA bundled load forecast for any calendar month, SDG&E would suspend its defensive convergence bidding until a corrective plan was discussed with the PRG.

Similarly, SCE proposes locational volume limits and locational standards.<sup>49</sup> SCE proposes to submit convergence bids at locations where SCE does not have physical supply, load or transmission exposure but where prices in such locations are highly correlated with the prices at the actual location of SCE's physical supply, load or transmission exposure. In addition SCE suggests that its convergence bidding locations would include, but not necessarily be limited to: (1) nodes from which SCE schedules and settles physical load; (2) nodes from which SCE schedules and settles supply resources (including SCE-owned resources, resources under contract with SCE, and the California Department of Water Resources contracts allocated to SCE's customers); (3) nodes that are identified in SCE's CRRs; (4) nodes that are price-correlated to those nodes in which SCE has physical load or resources; and (5) nodes where prices can impact SCE's demand costs and supply revenues.<sup>50</sup>

### **6.3.2. Discussion**

While there may be instances when IOUs may have to engage in convergence bidding in order to defensively bid against potential price manipulation or other market dynamics, we expect that the IOUs would promptly report to CAISO's Department of Market Monitoring (DMM) on suspected market manipulation. However, we do not expect IOUs to take on the market policing role through convergence bidding.

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<sup>49</sup> SCE August 12, 2010 Proposal at 8.

<sup>50</sup> SCE August 12, 2010 at 8-9.

Nevertheless, IOUs as market participants may have the opportunity to make quick bidding decisions to reduce the negative impacts of market manipulation or other market dynamics to the benefit of ratepayers. It would be imprudent to prevent IOUs from utilizing such a defensive convergence bidding strategy to mitigate real harms.

We will authorize IOUs to utilize Strategy 3 to provide defensive bidding. We require that any such defensive convergence bidding activities must be reported on a case-by-case basis within the reports described in Section 11 herein with actual market data showing how engaging in convergence bidding by the IOU was intended to protect ratepayers.

We emphasize that defensive convergence bidding reporting must contain actual market and settlement data, and not just hypothetical scenarios. The IOU must report how it employed convergence bidding strategies specifically to protect the IOU and its ratepayers from unusual price spikes or other avoidable risks at identified locations. This information will be used for future review of convergence bidding authority, and will not be used for post-hoc reasonableness reviews of IOU bidding activities.

We discuss how the IOUs should report compliance with Strategy 3 under the Reporting Section (Section 11).

## **7. Convergence Bidding Risk and Reward Sharing**

As the Commission has authorized the IOUs to participate in convergence bidding at the CAISO, we must now also determine the appropriate allocation of potential costs and benefits associated with convergence bidding.

### **7.1. Parties' Position**

In response to the July 1, 2010 Ruling, all three IOUs and TURN asserted that a shareholder-ratepayer incentive mechanism is not viable and would create perverse incentives or conflicts of interest.<sup>51</sup>

PG&E argues that all benefits of convergence bidding should flow to ratepayers and thus shareholders will not be included in the benefits or risks.<sup>52</sup> Mixing ratepayer and shareholder benefits and risk will complicate separating out benefits to ratepayers or shareholders. Cost savings can occur due to convergence bidding settlements as well as broader impacts to an IOU portfolio. PG&E believes that estimating portfolio savings will be complex and would require counterfactual assumptions that will likely be disputed.

SCE contends that convergence bidding is not different from other procurement and hedging activities the IOUs currently engage in on behalf of customers under AB 57 procurement plans.<sup>53</sup> SCE opposes a shareholder-ratepayer incentive mechanism. SCE believes that an incentive mechanism for shareholders would render the entire concept of IOU participation in convergence bidding infeasible.

Moreover, SCE argues that a shareholder incentive mechanism for convergence bidding without a broader incentive mechanism that also captures all of the IOUs' other procurement and hedging activities pursuant to AB 57 procurement plans would create an inherent conflict between the IOUs' incentive

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<sup>51</sup> PG&E July 19, 2010 Response at 5, SCE July 19, 2010 Response at 14, SDG&E July 19, 2010 Response at 7, TURN July 30, 2010 Comments at 2.

<sup>52</sup> PG&E July 19, 2010 Response at 5.

<sup>53</sup> SCE July 19, 2010 Response at 14.

to benefit their customers via all procurement activities versus their incentive to benefit their shareholders through convergence bidding.

Additionally, SCE argues that the Commission has already considered and rejected a portfolio-based shareholder incentive mechanism in the context of AB 57 procurement plans for the IOUs in D.06-02-032. According to SCE, an incentive mechanism that does not appropriately balance risk and rewards would violate AB 57, and the Commission should authorize IOU participation in convergence bidding only on behalf of the ratepayers.

SDG&E also discourages the adoption of a shareholder-ratepayer incentive mechanism for convergence bidding based on a potential conflict of interest.<sup>54</sup> SDG&E argues that any such incentive mechanism should address all aspects of portfolio management to ensure shareholder and ratepayer interests are completely aligned.

CARE contends that only IOU shareholders and not ratepayers should bear the cost of participation in the first two years, arguing that this is similar to a situation where new traders participate in on-line trades and make 30-day hypothetical trades as a trial version.<sup>55</sup>

## **7.2. Discussion**

Because our authorization of IOU convergence bidding activities is intended for the benefit of ratepayers, ratepayers shall receive all of the benefits and pay all of the costs of such activities. Such costs shall be recoverable in the IOU's Energy Resource Recovery Account.

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<sup>54</sup> SDG&E July 19, 2010 Response at 7.

<sup>55</sup> CARE July 19, 2010 Response at 3.

Furthermore, no party has provided a compelling rationale for allocating benefits or risks to shareholders. Neither has any party provided a mechanism that would share such risks and rewards between shareholders and ratepayers that would not inappropriately introduce incentives that would pit shareholder interests against ratepayer interests.

However, as described below, we place significant limitations on IOU convergence bidding activities, a stop loss limit that would suspend authorization in cases of excessive losses, and reporting requirements on the IOUs, all to minimize ratepayer risk.

## **8. Stop Loss Limit**

As previously noted, the primary goal of convergence bidding should not be to realize speculative profits or risks, but rather, to manage price risk so as to promote stability in retail ratepayers' electricity rates, and to protect ratepayers against excessive costs.

### **8.1. Parties' Position**

SDG&E states that for defensive price arbitrage, SDG&E will develop a metric that will include magnitude, frequency and persistence that gives rise to price distortion. SDG&E will mitigate such price arbitrage, report price anomalies to CAISO, establish a quantity limit for convergence bidding at each Pnode, and will track gain/loss on a weekly basis and report result to the Commission on a calendar quarter. SDG&E proposes that if SDG&E determines that it has incurred losses exceeding \$.001/kWh of its ERRA-bundled load forecast for any calendar month attributable to its defensive convergence bidding

strategy, then the activity would be suspended until results and a corrective plan were discussed with the PRG.<sup>56</sup>

As noted in Section 5.2 above, SCE proposes to convene a PRG and Energy Division staff meeting within two weeks of the date when the rolling 90-day net loss exceeded the \$10 million trigger.<sup>57</sup> SCE believes that the consultation with the PRG and Energy Division staff will ensure that SCE discusses its convergence bidding results and potential modifications to its strategies going forward. SCE believes that the \$10 million trigger (with a maximum annual amount of potential net losses SCE could incur up to \$40 million a year) is designed to be high enough to avoid the need for frequent PRG and Energy Division staff consultations outside of normally scheduled meetings.<sup>58</sup>

DRA asserts that SCE requests too broad of authority and SCE's proposal would allow it to participate in convergence bidding just like other market participants, subject only to a limitation if it loses a certain dollar limit.<sup>59</sup> DRA believes this latitude cannot afford ratepayers adequate protection. DRA further

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<sup>56</sup> SDG&E August 16, 2010 Proposal at 10.

<sup>57</sup> SCE August 12, 2010 Proposal at 11.

<sup>58</sup> SCE originally proposed a PRG notification trigger of \$10 million in net losses for any rolling 90-day period. SCE explained that this \$10 million trigger value is "designed to be high enough to avoid the need for frequent PRG consultation outside of normal scheduled meetings, while still representing less than a fraction of 1.0% of SCE's overall annual procurement costs." (SCE Proposal filed August 12, 2010, page 11) SCE's proposed rolling 90-day \$10 million trigger threshold amounts to approximately \$40 million in *annual* net losses (\$10 million for each 3-month period in a year) SCE could incur before notification is required.

<sup>59</sup> DRA August 30, 2010 Comments at 3.

requests that the Commission should not grant authority for convergence bidding to the IOUs until California has had some experience with convergence bidding implementation. DRA, however, recommends SDG&E's monthly loss limit of \$.001/kWh can be proportionately applied to the three IOUs.<sup>60</sup>

While PG&E proposes regular meetings with its PRG, PG&E's proposal does not address loss limits as explicitly as the SDG&E and SCE proposals. Reid argues that the PG&E proposal's main problem is that it does not address a limit on ratepayer losses and limits meeting with the PRG only on a quarterly basis.<sup>61</sup> Reid contends that SCE and SDG&E have more complete convergence bidding loss limit proposals. Reid, however, argues that the SCE's loss limitation proposal does not adequately protect ratepayers from adverse circumstances.<sup>62</sup> According to Reid, PG&E and SCE should have a net rate recovery (total losses – total gains) \$10 million for the calendar quarter and \$5 million for SDG&E.

TURN argues that SCE's \$40 million annual net loss trigger can be applied to PG&E and SDG&E, and further that the SCE trigger net loss amount is less than SDG&E's proposed \$.001/kWh times the ERRA-bundled load monthly forecast.<sup>63</sup>

## **8.2. Discussion**

The Commission expects the IOUs will use converge bidding as a risk mitigation tool and that losses attributable to convergence bidding will be minimal. However, to ensure ratepayer protection, we will place an absolute

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<sup>60</sup> August 30, 2010 Comments at 10.

<sup>61</sup> Reid August 31 Amended Comments at 8.

<sup>62</sup> Reid August 31, 2010 Amended Filing at 10.

<sup>63</sup> August 30, 2010 Comments at 4.

limit on the amount of losses an IOU can incur from convergence bidding. Once this limit has been reached, an IOU's authority to participate in convergence bidding will be suspended subject to further Commission review.

We utilize SCE's proposed loss notification methodology to generate annual net loss limits. We recognize that the SCE methodology to arrive at \$10 million/quarter net loss leaves out many variables. For example, the historic Day-Ahead and Real-Time price difference SCE uses does not take into account that with the implementation of convergence bidding, the absolute difference between CAISO's Day-Ahead and Real-Time prices may be lower. Similarly, in SCE's calculation, by taking the absolute difference between Day-Ahead and Real-Time, SCE assumes it will lose money in every single transaction for an entire period.

The SCE analysis presents what appears to be a worst case scenario. The Commission must consider the missing variables noted above in making a determination of the appropriate level at which to set a loss limit. As such, using SCE's methodology would set this limit unnecessarily high. Using the SCE analysis as a base, then adjusting for the missing variables, we place a limit for SCE's annual net loss to \$20 million, PG&E's to \$20 million and SDG&E's to \$5 million as part of the interim authority provided at this time. Once these limits are reached in any rolling 365 day period, an IOU's authority to participate in convergence bidding is suspended, and subject to PRG review. The IOU must then file a Tier 3 Advice Letter requesting authority to resume participation in the convergence bidding market. The Advice Letter must contain, at a minimum: 1) an explanation for why the IOU exceeded the stop-loss limit, 2) an explanation of what actions or changes to its bidding activity the IOU will implement to ensure that future convergence bidding will not continue to lose

ratepayer funds, and 3) an explanation for why the IOU's authority to engage in convergence bidding should be reinstated, in light of the specific facts of the IOU's convergence bidding history and remedial activities to protect ratepayer fund. Unless and until the Commission approves the Advice Letter, with or without conditions, the IOUs shall have no authority to engage in Convergence Bidding regardless of how long the Commission takes to issue a ruling on the Advice Letter. Therefore, the proposed limits grant great latitude to the IOUs to participate in convergence bidding as long as they do not incur significant losses.

We believe this stop loss mechanism is consistent with a prudent IOU risk hedging plan and will provide protection for ratepayers. This stop loss provision is consistent with the use of convergence bidding for hedging to protect ratepayers against excessive loss.

## **9. Uniform versus Utility-specific Upfront Standards**

### **9.1. Parties' Position**

One of the issues in this proceeding is whether, and to what extent, the Commission should establish uniform hedging guidelines and policies for convergence bidding for all three IOUs, or should instead have different standards for each IOU.

PG&E proposes IOU specific convergence bidding - strategies to hedge against unforeseen events.<sup>64</sup> Similarly, SDG&E proposes an IOU specific application to use convergence bidding.<sup>65</sup> SCE points out that the Commission

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<sup>64</sup> PG&E July 19, 2010 Response at 4.

<sup>65</sup> SDG&E July 19, 2010 Response at 3.

does not need to adopt uniform upfront standards for all three IOUs solely for the sake of uniformity.<sup>66</sup>

DRA points out that SCE states that AB 57 does not require the Commission to adopt the same upfront standards for each IOU's procurement practices.<sup>67</sup> DRA agrees with SCE on this point, but also contends that AB 57 does not preclude the same standards, allowing for differences in load and resources. DRA cites that in gas hedging and Time-to-expiration Value at Risk (TEVaR) measuring the gas price volatility, the Commission uses the same standard for all three IOUs. DRA argues that convergence bidding is more like gas hedging and TEVaR than any traditional power transactions by the IOUs. TURN believes that letting each IOU "go its own way" with respect to convergence bidding could prove to be a disservice to the ratepayers and supports giving all three IOUs broad authority as requested by SCE.<sup>68</sup>

## **9.2. Discussion**

The Commission has established standards for the IOUs to propose IOU-specific procurement plans that are approved by the Commission. Thus, the standards we adopt here are designed to promote consistency among the IOUs where applicable. Each IOU faces different operational and market constraints, and we recognize that differences in convergence bidding hedging proposals among the IOUs are based on variations in market and operational factors. We also recognize that a one-size-fits-all approach to convergence

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<sup>66</sup> SCE August 12, 2010 Proposal at 6.

<sup>67</sup> DRA August 30, 2010 Comments at 4.

<sup>68</sup> TURN August 30, 2010 Comments at 1-2.

bidding could unduly limit the IOUs from responding to different conditions or circumstances within their different service territories.

We adopt a uniform set of rules that provide consistency among the IOUs. The standards adopted in this decision take into account that each IOU faces different conditions and circumstances, and allows the flexibility for each IOU to participate in convergence bidding consistently with its own hedging strategies. Each IOU will file detailed hedging strategies in their bundled procurement plans that comply with the standards adopted here.

## **10. Affiliate Rules**

### **10.1. Parties' Position**

The July 1, 2010 ALJ Ruling requested responses to questions regarding the impact of IOU affiliate convergence bidding.

PG&E recommends that the Commission require disclosure of affiliate positions, audit rights and conduct periodic assessments to assure IOU convergence bidding does not unduly benefit IOU affiliates.<sup>69</sup> SCE argues that the Commission has adequate protections in place to ensure that IOU participation in convergence bidding does not benefit the IOU affiliates, because IOUs remain subject to Rule VI.A of the Commission's Affiliate Transactions Rules. SCE argues that IOU participation in the convergence bidding market, like any other procurement activities, must be conducted consistent with the Affiliate Rules. SCE further argues that under SCE's Proposal, the Commission will have the ability to review SCE's convergence bidding transactions as part of the QCR Advice Letter review process to determine the underlying rationale why various convergence bids were submitted and also determine whether

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<sup>69</sup> PG&E July 19, 2010 Response at 10.

SCE's convergence bidding transactions were consistent with the upfront standards adopted by the Commission.<sup>70</sup>

Similarly, SDG&E argues that the current Commission rules regarding affiliate compliance should be sufficient to isolate regulated IOU convergence bidding activities from unregulated affiliate activities.<sup>71</sup>

## **10.2. Discussion**

The Commission's Affiliate Transaction Rules apply to convergence bidding activities and any related resource procurement activities.<sup>72</sup> In particular, the IOUs, their holding companies and their affiliates are reminded to observe the rules regarding: nondiscrimination; restriction of the provision of information, services, facilities, capacity or supply; recordkeeping; and reporting. (See, e.g., Rules III. B.2, III.E.4, IV.B, and V.E.)<sup>73</sup> Moreover, upon the creation of a new affiliate, the IOU must immediately notify the Commission and post notice on its electronic bulletin board; within 60 days, the IOU must file an Advice Letter with Energy Division stating whether the affiliate is subject to the Affiliate Transaction Rules, the purpose and activities of the affiliate, and a compliance plan.<sup>74</sup>

We have two major concerns that may arise with affiliates and IOU convergence bidding activities.

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<sup>70</sup> SCE July 19, 2010 Response at 23.

<sup>71</sup> SDG&E July 19, 2010 Response at 10.

<sup>72</sup> See D.06-12-029 and Appendix A-3.

<sup>73</sup> *Id.*, Appendix A-3, at 5-7, 9 & 12.

<sup>74</sup> *Id.*, Rule VI.B. at 18.

First, convergence bidding might be used to alter the value of CRRs. For example, an IOU's convergence bidding positions in the Day-Ahead market could lose money, but its affiliate, owning CRRs, would profit because the IOU's bidding creates higher congestion costs resulting in higher CRR revenues.

An IOU may lose money taking virtual positions at adjacent nodes A and B. However, these virtual trades can be structured to create price divergence between A and B, creating revenues for the holder of related CRRs that would more than offset the losses from the virtual trades. In order to address this problem, if a market participant incurs losses from convergence bidding while earning significant profits from CRRs, under the CRR "claw back" rule, the CAISO will "claw back" or adjust the market participant's CRR profits.

However, under the proposed tariff when an IOU's convergence bidding benefits its affiliate, the CAISO is not authorized to "claw back" the profit. In that case, the CAISO's DMM can refer this activity to FERC for further investigation (this is discussed further below).

This could result in a loss of IOU ratepayer funds to the benefit of an affiliate, which would potentially benefit IOU shareholders.

Second, convergence bidding could be used to cause the selection of an affiliate's non-Resource Adequacy (RA) generation unit in the CAISO's Residual Unit Commitment (RUC) process under circumstances where the unit would not otherwise be selected.<sup>75</sup> An IOU or its affiliate could submit convergence bids in the Day-Ahead market in order to support clearing a higher megawatt (MW) of virtual supply for the sole purpose of having the affiliate's units selected in the RUC process. RUC is a reliability function for committing resources and procuring capacity not reflected in the Day-Ahead Schedule (as Energy or Ancillary Services capacity). In the RUC selection process, the CAISO will replace the required MW of cleared virtual supply with a physical resource. Manipulation can occur when an IOU's convergence bidding causes the CAISO to select an IOU-affiliate, non-RA, generation units in the RUC process. In those situations CAISO's DMM will mitigate market power arising from convergence bidding.<sup>76</sup> DMM's monitoring and mitigation program includes a review of various market participants including their affiliates' behavior in the CAISO market. If any market manipulation is detected then the DMM will refer the market participants and the affiliate to the FERC for further investigation.

Therefore, as part of our granting interim authority over IOU participation in convergence bidding, we require all IOUs, within one business day of its receipt of notice, to provide written notice to the Commission's Executive Director, the Director of Energy Division and the General Counsel of: (1) notice from the CAISO or DMM that the IOU or its scheduling coordinator is the

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<sup>75</sup> Resource Adequacy generators must bid into the CAISO's RUC market with a bid of zero.

<sup>76</sup> CAISO Tariff Section 37.7 (Prohibition on Market Manipulation).

subject of an investigation pursuant to the CAISO Tariff, including Section 37.8.4; (2) notice from the CAISO that the conduct of the IOU or its scheduling coordinator conduct has been referred to FERC by the CAISO pursuant to the CAISO Tariff, including Section 37.8.2; or (3) notice from the CAISO that the IOU or its scheduling coordinator's convergence bidding trading has been suspended or limited by the CAISO.

## **11. Reporting and Process Requirements**

As discussed in the July 1 Ruling, it is unclear what the eventual effects will be of a utility's convergence bidding participation in the CAISO markets.<sup>77</sup> In order for the Commission to eventually make such an assessment, the IOUs must meet certain reporting and process requirements.

Because we are only granting interim authority for IOU participation in convergence bidding, these reports will provide the Commission with the information necessary to make any changes to IOU convergence bidding authority in any subsequent decision extending or modifying such authority.

### **11.1. Parties' Position**

With regards to the Commission's regulatory oversight, DRA recommends that each IOU be required to provide monthly reports of convergence bidding activities on a common reporting template.<sup>78</sup> In their reply comments, PG&E states no objection this recommendation.<sup>79</sup> Similarly, SCE agrees with DRA that monthly reporting using a common reporting template for the first year was

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<sup>77</sup> July 1 ALJ Ruling at 2.

<sup>78</sup> DRA August 30, 2010 Comments at 9.

<sup>79</sup> PG&E September 7, 2010 Reply Comments at 7.

acceptable.<sup>80</sup> In addition, both PG&E and SDG&E recommend filing these data in the QCR.<sup>81</sup> Specifically, SDG&E proposes tracking gains and losses on a weekly basis, and include the information accordingly in SDG&E's QCR filings.<sup>82</sup>

Regarding PRG consultation, Reid recommends that the IOUs be required to meet with the PRG every two weeks for the first six months of convergence bidding.<sup>83</sup> However, both SCE and SDG&E oppose Reid's recommendation as overly burdensome upon the IOUs and PRG participants.<sup>84</sup> Instead, SCE proposes reviewing convergence bidding with its PRG on a quarterly basis, including information on bid quantity, rationale for the bid, and amount received or paid for each bid.<sup>85</sup>

With regards to public disclosure of the IOUs' convergence bidding activities, PE recommends that convergence bidding data should be presented quarterly, and be made public.<sup>86</sup>

## **11.2. Discussion**

### **11.2.1. Reporting Schedule**

In response to parties' concerns regarding proper Commission oversight of the IOUs' convergence bidding activities, we conclude that it is reasonable to

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<sup>80</sup> SCE September 7, 2010 Reply Comments at 11.

<sup>81</sup> PG&E September 7, 2010 Reply Comments at 7; SDG&E September 7 Reply Comments at 3.

<sup>82</sup> SDG&E September 7 Reply Comments at 3.

<sup>83</sup> Reid August 31, 2010 Comments at 2.

<sup>84</sup> SCE September 7, 2010 Reply Comments at X; SDG&E September 7, 2010 Reply Comments at 8.

<sup>85</sup> SCE September 7, 2010 Reply Comments at 11.

<sup>86</sup> PE August 30, 2010 Comments at 6.

direct the IOUs to provide a set of information for each calendar month, no later than two weeks from the end of each month, to the Energy Division. The IOUs shall provide this information monthly for a period of one year after the CAISO convergence bidding market becomes active. At the end of one year, absent further direction from the Commission, this information shall be reported in the QCR filings beginning with the Q1 2012 filings and presented to the PRGs on a quarterly basis.

In response to parties' concerns regarding proper PRG consultation, we conclude that it is reasonable to direct each IOU to provide to PRG participants review of its convergence bidding strategies, performance, and market analysis in the quarterly PRG meetings, beginning with the first quarter in which convergence bidding activities commence.

#### **11.2.2. Reporting Requirements**

At a minimum, the IOUs shall include in their monthly reports:

- 1) A list of each cleared convergence bid, containing the hour, location, volume, and justification for the transaction;
- 2) A list of the Day-Ahead and Hour Ahead prices corresponding with each convergence bid;
- 3) For each day the gains or losses, in dollars, as a result of convergence bidding;
- 4) For that month, and any past months during the calendar year in which convergence bids were transacted, a monthly total of volume, gains or losses (in dollars), the number of times each strategy was employed, and the number of bids conducted outside of that IOU's service territory;
- 5) The approved convergence bidding strategies utilized during that time period; and
- 6) Qualitative analysis of convergence bidding impacts upon other related products, such as CRRs; and

- 7) A list of any affiliates who have or are registered with the CAISO to participate in convergence bidding.

### **11.2.3. Reporting Template**

In light of parties' comments on the need for a common reporting template, we conclude that it is reasonable to direct the IOUs to use a common template when reporting the summary of convergence bids for each month. The Energy Division is directed to develop the reporting template, with inputs from all parties, and to modify it as appropriate.

## **12. Comments on the Proposed Decision**

The proposed decision (PD) of the ALJ in this matter was mailed to the parties in accordance with Pub. Util. Code Section 311 and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed by DRA, PE, PG&E, Reid, SDG&E, SCE, and TURN by December 6, 2010. Reply comments were filed by DRA, PG&E, Reid and SCE by December 13, 2010.

The PD has been revised in response to these comments, including a number of substantive revisions to clarify the intention of the PD. Such revisions include: clarifying the ratemaking implications of the costs of convergence bidding; clarifying that IOUs do not need to engage in any or all of these convergence bidding strategies; clarifying that Strategy 1 includes locations of load as well as generation resources; that Strategy 2 includes all intermittent resources; and clarifying that under Strategy 3 the information in reports will be used for evaluation of convergence bidding authority and that the Commission will not undertake post-hoc reasonableness reviews of defensive convergence bidding.

The IOUs and TURN requested that the stop loss limits be been increased . Because we are granting only interim authority to participate in an untested market, we decline to increase the stop loss limits at this time,

Both DRA and PE requested clarification regarding subsequent review of the interim authority contained herein. Such questions will be addressed in the normal course of the underlying proceeding.

DRA requested that the Commission clarify that expenses exceeding the stop loss limit would not be recovered from ratepayers. Such a clarification is unnecessary because exceeding the stop loss limit terminates authority to recover these costs. However, we have clarified that the annual stop loss limits apply to a 365 day average to avoid confusion. If an IOU exceeds the annual stop loss limit on a specific day, recovery of costs is suspended the following day, and not subsequent to the next monthly report. However, as PG&E requests in its reply comments, we clarify that bids made by an IOU prior to exceeding the stop loss limit were authorized and shall be recoverable as any other bid.

Minor changes have been made to the PD to resolve typographical, clarifying and other non-substantive matters.

### **13. Assignment of Proceeding**

President Michael R. Peevey is the assigned Commissioner and Victoria S. Kolakowski and Peter V. Allen are the assigned ALJs in these proceedings.

### **Findings of Fact**

1. FERC directed CAISO to file a tariff to authorize convergence bidding in the CAISO Day-Ahead and Real-Time energy markets. CAISO filed such a tariff modification in June 2010, which has been conditionally accepted by FERC.

Convergence bidding activities in the CAISO Day-Ahead and Real-Time energy markets is expected to begin as early as February, 2011.

2. FERC believes that convergence bidding will improve market performance by adding liquidity, increasing the numbers of offers in the Day-Ahead market and minimize the exercise of market power.

3. There is always a risk that a generation resource will not perform as scheduled, requiring IOUs to purchase replacement power in the CAISO Real-Time market. IOUs are in the best position to know the extent of that risk and should be able to save ratepayers money through convergence bidding to hedge against generation performance risk.

4. IOU submission of virtual supply bids in the Day-Ahead market up to, but not exceeding, the amount of the Day-Ahead forecast of intermittent generation in the Day-Ahead market, followed by buying it back in the Real-Time market, would offset or hedge the financial exposure for the underlying Real-Time market sale of scheduled physical intermittent generation.

5. IOUs proposed several defensive convergence bidding strategies to protect against potential price manipulation or other market dynamics.

6. Market manipulation is monitored by the CAISO's DMM, but IOUs as market participants may have the opportunity to make quick bidding decisions to reduce the negative impacts of market manipulation or other market dynamics to the benefit of ratepayers.

7. Convergence bidding can lead to significant financial gains and losses for ratepayers.

### **Conclusions of Law**

1. The Commission should authorize IOU participation in convergence bidding based upon a uniform set of rules limiting convergence bidding to three

specified bidding strategies to be applied by each IOU flexibly to its own circumstances, and subject to stop-loss limits and reporting requirements to minimize ratepayer exposure to financial risk. The IOUs should not be required to engage in convergence bidding or to use all three strategies.

2. The Commission should authorize the IOUs to participate in convergence bidding to manage Real-Time price exposure resulting from unanticipated forced outages, derating of generating units, derating of transmission, or uncertain generation performance for resources scheduled by the IOUs in the CAISO's Day-Ahead Market, and to hedge against load forecast uncertainty, as these strategies pursue objectives that will benefit ratepayers.

3. IOUs should be authorized to submit convergence supply bids in the Day-Ahead market up to, but not exceeding, the amount of the Day-Ahead forecast of intermittent generation in the Day-Ahead market, followed by buying it back through the convergence sale in the Real-Time market.

4. It is prudent to allow IOUs to utilize defensive convergence bidding strategies to mitigate real harms from market manipulation or other unintended market dynamics.

5. IOUs should report the use of defensive convergence bidding on a case-by-case basis using actual market and settlement data, and not just hypothetical scenarios, showing how engaging in convergence bidding by the IOU protected ratepayers. An IOU should report if and how it employed convergence bidding strategies to protect ratepayers from unusual price spikes or other avoidable risks at identified locations. This information should be used for future review of convergence bidding authority, and not for post-hoc reasonableness reviews of IOU bidding activities.

6. Because Commission authorization of IOU convergence bidding activities is intended for the benefit of ratepayers, ratepayers should receive all of the benefits and pay all of the costs of such activities. Such costs shall be recoverable in the IOU's Energy Resource Recovery Account.

7. The Commission should place an absolute stop loss limit on the amount of loss an IOU can incur from participation in convergence bidding. Such stop loss limits should operate on a rolling 365 day basis, and exceeding the limit should suspend IOU authorization to participate in convergence bidding until the IOU files a Tier 3 Advice Letter and gains Commission approval to resume convergence bidding.

8. The Advice Letter must contain, at a minimum: 1) an explanation for why the IOU exceeded the stop-loss limit, 2) an explanation of what actions or changes to its bidding activity the IOU will implement to ensure that future convergence bidding will not continue to lose ratepayer funds, and 3) an explanation for why the IOU's authority to engage in convergence bidding should be reinstated, in light of the specific facts of the IOU's convergence bidding history and remedial activities to protect ratepayer funds.

9. The appropriate stop loss limits are \$20 million for SCE and PG&E and \$5 million for SDG&E.

10. It is appropriate to require that an IOU, within one business day of its receipt of notice, to provide written notice to the Commission's Executive Director, the Director of Energy Division and the General Counsel of: (1) notice from the CAISO or DMM that the IOU or its scheduling coordinator is the subject of an investigation pursuant to the CAISO Tariff, including Section 37.8.4; (2) notice from the CAISO that the conduct of the IOU or its scheduling coordinator conduct has been referred to FERC by the CAISO pursuant to the

CAISO Tariff, including Section 37.8.2; or (3) notice from the CAISO that the IOU or its scheduling coordinator's convergence bidding trading has been suspended or limited by the CAISO.

11. It is reasonable to direct the IOUs to provide a set of information for each calendar month, no later than two weeks days from the end of each month to the Energy Division. The IOUs shall provide this information monthly for a period of one year after the CAISO convergence bidding market becomes active. At the end of one year, absent further direction from the Commission, this information shall be reported in the QCR filings beginning with the Q1 2012 filings and presented to the PRGs on a quarterly basis.

At a minimum, the IOUs shall include in their monthly reports:

- 1) A list of each cleared convergence bid, containing the hour, location, volume, and justification for the transaction;
- 2) A list of the Day-Ahead and Hour Ahead prices corresponding with each convergence bid;
- 3) For each day the gains or losses, in dollars, as a result of convergence bidding;
- 4) For that month, and any past months during the calendar year in which convergence bids were transacted, a monthly total of volume, gains or losses (in dollars), the number of times each strategy was employed, and the number of bids conducted outside of that IOU's service territory;
- 5) The approved convergence bidding strategies utilized during that time period; and
- 6) Qualitative analysis of convergence bidding impacts upon other related products, such as CRRs; and
- 7) A list of any affiliates who have or are registered with the CAISO to participate in convergence bidding.

12. It is reasonable to direct each IOU to provide to PRG participants review of its convergence bidding strategies, performance, and market analysis in the

quarterly PRG meetings, beginning with the first quarter in which convergence bidding activities commence.

13. It is reasonable to direct the IOUs to use a common template when reporting the summary of convergence bids for each month. The Energy Division should develop the reporting template, with inputs from all parties, and to modify it as appropriate.

14. Application 10-05-006 should remain open.

## **O R D E R**

**IT IS ORDERED** that:

1. The investor owned utilities Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison are authorized to participate in convergence bidding in the California Independent System Operator's Day-Ahead and Real-Time energy markets based upon a uniform set of rules limiting convergence bidding to three specified bidding strategies set forth in this decision, and subject to stop loss limits and reporting requirements. The utilities are not required to use any or all of the three bidding strategies and may apply them flexibly to meet their own circumstances, consistent with the other provisions of this Decision. All costs of such participation shall be recoverable in the individual utility's Energy Resource Recovery Account.

2. The investor owned utilities Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison are authorized to participate in convergence bidding in the California Independent System Operator's Day-Ahead and Real-Time energy markets to manage Real-Time price exposure resulting from unanticipated forced outages, derating of generating units, derating of transmission, or uncertain generation performance

for resources scheduled by the IOUs in the California Independent System Operator's Day-Ahead Market.

3. The investor owned utilities Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison are authorized to submit virtual supply bids in the California Independent System Operator's Day-Ahead market up to, but not exceeding, the amount of the Day-Ahead forecast of intermittent generation in the Day-Ahead market, followed by buying it back through the convergence sale in the CAISO Real-Time market.

4. The investor owned utilities Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison are authorized to participate in defensive convergence bidding in the California Independent System Operator's Day-Ahead and Real-Time energy markets to mitigate real harms from market manipulation or other unintended market dynamics. Any investor owned utility using defensive convergence bidding must report such use on a case-by-case basis with actual market and settlement data, and not just hypothetical scenarios showing how engaging in convergence bidding by the investor owned utilities protected ratepayers. Each investor owned utility must report if and how it employed convergence bidding strategies intended to protect the investor owned utility's ratepayers from avoidable risks at identified locations. This information will be used for future review of convergence bidding authority and not for post-hoc reasonableness reviews of utility bidding activities.

5. The investor owned utilities Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison shall, within one business day of its receipt of notice, provide written notice to the Commission's Executive Director, the Director of Energy Division and the General Counsel of:

1) notice from the California Independent System Operator or its Department of Market Monitoring that the investor owned utilities or its scheduling coordinator is the subject of an investigation pursuant to the California Independent System Operator Tariff, including Section 37.8.4; 2) notice from the California Independent System Operator that the conduct of the investor owned utilities or its scheduling coordinator conduct has been referred to the Federal Energy Regulatory Commission by the California Independent System Operator pursuant to the California Independent System Operator Tariff, including Section 37.8.2; or 3) notice from the California Independent System Operator that the investor owned utilities or its scheduling coordinator's convergence bidding trading has been suspended or limited by the California Independent System Operator.

6. The investor owned utilities Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison convergence bidding in the California Independent System Operator's Day-Ahead and Real-Time energy markets shall be subject to an absolute stop loss limit on the amount of loss an investor owned utilities can incur from convergence bidding activities in the California Independent System Operator's Day-Ahead and Real-Time energy markets. Such stop loss limits shall operate on a rolling 365 day basis, and exceeding the limit will suspend investor owned utilities authorization to participate in convergence bidding until the investor owned utility files a Tier 3 Advice Letter and gains Commission approval to resume convergence bidding. The Advice Letter must contain, at a minimum: 1) an explanation for why the investor-owned utilities exceeded the stop-loss limit, 2) an explanation of what actions or changes to its bidding activity the investor-owned utilities will implement to ensure that future convergence bidding will not continue to lose

ratepayer funds, and 3) an explanation for why the investor-owned utilities' authority to engage in convergence bidding should be reinstated, in light of the specific facts of the investor owned utility's convergence bidding history and remedial activities to protect ratepayer funds. Unless and until the Commission approves the Advice Letter with or without conditions, the investor-owned utility shall have no authority to engage in convergence bidding regardless of how long the Commission takes to issue a ruling on the Advice Letter. The stop loss limits are \$20 million for Southern California Edison, \$20 million for Pacific Gas and Electric Company and \$5 million for San Diego Gas & Electric Company.

7. The investor owned utilities Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison shall provide a set of information regarding convergence bidding activities in the California Independent System Operator's Day-Ahead and Real-Time energy markets for each calendar month, no later than two weeks days from the end of each month to the Energy Division. At a minimum, the IOUs shall include in their monthly reports:

- 1) A list of each cleared convergence bid, containing the hour, location, volume, and justification for the transaction;
- 2) A list of the Day-Ahead and Hour Ahead prices corresponding with each convergence bid;
- 3) For each day the gains or losses, in dollars, as a result of convergence bidding;
- 4) For that month, and any past months during the calendar year in which convergence bids were transacted, a monthly total of volume, gains or losses (in dollars), the number of times each strategy was employed, and the number of bids conducted outside of that IOU's service territory;

- 5) The approved convergence bidding strategies utilized during that time period; and
- 6) Qualitative analysis of convergence bidding impacts upon other related products, such as CRRs; and
- 7) A list of any affiliates who have or are registered with the CAISO to participate in convergence bidding.

Each investor owned utility shall provide this information monthly for a period of one year after the California Independent System Operator convergence bidding market becomes active. At the end of one year, absent further direction from the Commission, this information shall be reported in the Quarterly Compliance Report filings beginning with the Q1 2012 filings and presented to the Procurement Review Groups on a quarterly basis.

8. Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison shall provide to their Procurement Review Group participants review of their convergence bidding strategies, performance, and market analysis in the quarterly PRG meetings, beginning with the first quarter in which convergence bidding activities commence.

9. Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison shall use a common template when reporting the summary of convergence bids for each month made in the California Independent System Operator's Day-Ahead and Real-Time energy markets. The Energy Division shall develop the reporting template, with inputs from all parties, and to modify it as appropriate.

10. Rulemaking 10-05-006 remains open.

This order is effective today.

Dated December 16, 2010, at San Francisco, California.

MICHAEL R. PEEVEY  
President  
DIAN M. GRUENEICH  
JOHN A. BOHN  
TIMOTHY ALAN SIMON  
NANCY E. RYAN  
Commissioners

