



**PUBLIC UTILITIES COMMISSION**

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SAN FRANCISCO, CA 94102-3298

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TO PARTIES OF RECORD IN APPLICATION 11-06-003:

This is the proposed decision of Administrative Law Judge Roscow. Until and unless the Commission hears the item and votes to approve it, the proposed decision has no legal effect. This item may be heard, at the earliest, at the Commission's May 7, 2015 Business Meeting. To confirm when the item will be heard, please see the Business Meeting agenda, which is posted on the Commission's website 10 days before each Business Meeting.

Parties of record may file comments on the proposed decision as provided in Rule 14.3 of the Commission's Rules of Practice and Procedure.

/s/ KAREN V. CLOPTON  
Karen V. Clopton  
Chief Administrative Law Judge

KVC:vm2

Attachment

Decision **PROPOSED DECISION OF ALJ ROSCOW** (Mailed 4/2/15)

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

Application of San Diego Gas & Electric Company (U902E) for Approval of:  
(i) Contract Administration, Least Cost Dispatch and Power Procurement Activities in 2010, (ii) Costs Related to those Activities Recorded to the Energy Resource Recovery Account and Transition Cost Balancing Account in 2010 and (iii) Costs Recorded in Related Regulatory Accounts in 2010.

Application 11-06-003  
(Filed June 1, 2011)

**DECISION ADOPTING METHODOLOGY AND CLOSING PROCEEDING**

**Summary**

This decision addresses the sole outstanding issue in this proceeding by establishing the methodology that San Diego Gas and Electric Company (SDG&E) must follow in future Energy Resource Recovery Account (ERRA) Compliance proceedings in order to make a showing that quantifies the degree to which it achieved or did not achieve least-cost dispatch of its portfolio. The "Proposal for the Demonstration of Least-cost Dispatch" submitted by SDG&E, Pacific Gas and Electric Company and Southern California Edison Company is adopted, with modifications as described herein. SDG&E shall use the adopted methodology beginning with its 2016 ERRA compliance application covering procurement activities for the 2015 record period.

This proceeding is closed.

**1. Background**

Public Utilities (Pub. Util.) Code § 454.5(d)(2) provides for a procurement plan that would accomplish, among others, the following objective:

Eliminate the need for after-the-fact reasonableness reviews of an electrical corporation's actions in compliance with an approved procurement plan, including resulting electricity procurement contracts, practices, and related expenses. However, the commission may establish a regulatory process to verify and ensure that each contract was administered in accordance with the terms of the contract, and contract disputes that may arise are reasonably resolved.

In Decision (D.) 02-10-062, the California Public Utilities Commission (Commission) implemented Section 454.5(d) by establishing Energy Resource Recovery Account (ERRA) balancing accounts for Pacific Gas and Electric Company (PG&E), Southern California Edison (SCE) and SDG&E, and requiring them to track fuel and purchased power revenues against actual recorded costs. D.02-10-062 also established procedures whereby the Commission conducts an annual ERRA "forecast" proceeding that adopts utility forecasts of fuel and purchased power revenue requirements for each upcoming year, to be followed by annual ERRA compliance review proceedings that provide a subsequent opportunity for the Commission to examine recorded activity for the previously-approved forecast year.

In adopting this regulatory framework, D.02-10-062 ordered that the utilities comply with minimum "standards of conduct" in fulfilling their procurement responsibilities, including Standard of Conduct (SOC) 4, which states:

The utilities shall prudently administer all contracts and generation resources and dispatch the energy in a least-cost

manner. Our definitions of prudent contract administration and least cost dispatch are the same as our existing standard.<sup>1</sup>

In elaborating on SOC 4, we stated that:

Prudent contract administration includes administration of all contracts within the terms and conditions of those contracts, to include dispatching dispatchable contracts when it is most economical to do so. In administering contracts, the utilities have the responsibility to dispose of economic long power and to purchase economic short power in a manner that minimizes ratepayer costs.

Least-cost dispatch refers to a situation in which the most cost-effective mix of total resources is used, thereby minimizing the cost of delivering electric services.... The utility bears the burden of proving compliance with the standard set forth in its plan.<sup>2</sup>

Once we established and clarified SOC 4 in D.02-10-062 and D.02-12-074, we implemented the ERRA compliance review process in a series of decisions that addressed applications filed by each utility. Our decision on SCE's first compliance review application, D.05-01-054 in Application (A.) 03-10-022, provided extensive guidance to SCE and other parties:<sup>3</sup>

Therefore, in the compliance review there are no ranges of possible outcomes. **The outcome or standard for review has been predetermined -- that is the lowest cost.** Southern

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<sup>1</sup> D.02-10-062, Conclusion of Law 11.

<sup>2</sup> D.02-12-074, Ordering Paragraph 24b, emphasis added. The ellipsis indicates language deleted by D.03-06-076, at 27 and Ordering Paragraph 16.

<sup>3</sup> In D.05-04-036 and A.03-08-004, we found and concluded that the same scope of review of least-cost dispatch that was adopted in A.03-10-022 for SCE should also apply to PG&E's ERRA proceeding. See D.05-04-036 Finding of Fact and Conclusion of Law 4.

California Edison Company (SCE) must demonstrate that it has complied with this standard, by providing sufficient information and/or analysis in order for the California Public Utilities Commission to verify that SCE's dispatch resulted in the most cost-effective mix of total resources, thereby minimizing the cost of delivering electric services. Based on analyses of SCE's showing and subsequent discovery, Office of the Ratepayer Advocates or any other party may take the position that SCE did not fully comply with Standard of Conduct 4. In such cases, we will judge the merits of the parties' positions and may impose disallowances and/or penalties, up to the maximum penalty cap.<sup>4</sup>

## 2. Procedural History

In the ERRA Compliance proceedings that reviewed each Investor Owned Utility's (IOUs) activity for the 2010 record period, Office of the Ratepayer Advocates (ORA) reviewed and analyzed each IOU's least-cost dispatch testimony and concluded that the IOU had not achieved least-cost dispatch. In each case, ORA recommended a monetary disallowance.

After reviewing the record in the instant proceeding, we issued D.14-07-006. In that decision, we found that, although SDG&E's least-cost dispatch showing was consistent with its showing for previous Record Periods, and the Commission had not imposed disallowances in response to previous least-cost dispatch showings, SDG&E's showing was nevertheless not fully consistent with Commission direction regarding the showing necessary to demonstrate successful least-cost dispatch. Faced with this discrepancy between our own past actions and the incomplete nature of SDG&E's showing for the 2010 Record Period, we concluded that we should accept SDG&E's least-cost dispatch

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<sup>4</sup> D.05-01-054 at 14, *emphasis added*.

showing for that record period as adequate but clarify our expectations for future showings.

Based on the guidance we provided in our earliest decisions on the IOU's ERRRA compliance showings, we found that a complete showing of least-cost dispatch by each IOU should include precise numerical calculations that either demonstrate that each IOU achieved least-cost dispatch during the Record Period, or quantify the amount of overspending by each IOU. We left each of the 2010 proceedings open and directed the Commission's Energy Division to facilitate a workshop in each proceeding where the IOU and other interested parties could work together to develop proposed criteria that should be used to determine what constitutes least-cost dispatch compliance, and the resulting methodology each IOU should follow to assemble a showing to meet its burden to prove such compliance. Following the workshop, each IOU was directed to file and serve a report in its docket for our consideration. We stated that we intended to review the results in time to enable each IOU to implement the methodology to quantify the degree to which it achieved, or did not achieve, least-cost dispatch during the 2014 Record Period and include that showing in its ERRRA Compliance application in 2015. Each proceeding was left open for the purpose of reviewing each IOU'S post-workshop report.

### **2.1. Workshops on Least-Cost Dispatch**

PG&E's Least-Cost Dispatch (LCD) workshop took place on January 22, 2014. PG&E filed its post-workshop report on February 21, 2014. ORA filed comments on PG&E's post-workshop report on March 25, 2014.

SCE's LCD workshop took place on February 25, 2014. SCE filed its post-workshop report on March 26, 2014. ORA filed comments on SCE's post-workshop report on April 28, 2014.

SDG&E's LCD workshop took place on October 15, 2014. SDG&E filed its post-workshop report on November 13, 2014. At the SDG&E workshop, SDG&E presented and discussed a "Joint Utilities' Proposal for the Demonstration of Least-cost Dispatch" (LCD Proposal). SCE and PG&E subject matter experts participated in the discussion as well. SDG&E explained that its presentation reflected an evolution that took into account the prior presentations by PG&E and SCE at their respective workshops, as well as ORA's comments on those presentations and subsequent conversations that all three utilities have had with ORA in recent months.

Procedurally, by the time the SDG&E workshop was concluded, it was clear that the next step toward closing the proceedings addressing the 2010 record period would be a filing in each proceeding of a finalized "joint proposal" that would enable the Commission to provide unified guidance to all three utilities regarding the components of a showing necessary to satisfy the Commission's directive to each utility regarding the methodology it should follow in order to prepare a showing to quantify the degree to which it achieved, or did not achieve, LCD during future ERRA record periods.

### **2.1.1. Joint Proposal**

On October 21, 2014, the PG&E, SCE, and SDG&E (the Joint Utilities) filed their Motion seeking review and approval of their joint LCD proposal (Joint Proposal), so that it could be used by the Joint Utilities in their respective 2014 ERRA Compliance applications. The Joint Utilities stated that the Joint Proposal reflected consensus among the three utilities. Furthermore, because PG&E's 2014 ERRA Compliance application was to be filed in February 2015, and SCE's and SDG&E's respective applications were to be filed soon thereafter, and the process for preparing each of these applications takes several months or longer,

the Joint Utilities requested a ruling on their Motion to adopt the LCD Proposal by November 30, 2014.

### **2.1.2. ORA Comments**

ORA filed comments on the Joint Proposal on November 5, 2014. In its response, ORA states that the Joint Utilities' Motion is procedurally improper and should be denied because only the Commission can make a final determination on the criteria and methodology to prove compliance with SOC 4. ORA suggests that, since the Commission has not issued final decisions on this subject, it might be appropriate for the utilities to seek an interim ruling from the Administrative Law Judge (ALJ) to use specific criteria and a methodology for preparing their 2014 Record Period ERRA Compliance applications. ORA states that it would have no objection to such an interim ruling.

Substantively, ORA supported the Joint Utilities' efforts to include more information to meet their burden of proof and better demonstrate that they have met the Commission's LCD standard, as described in SOC 4. ORA made several recommendations in response to the Joint Utilities' proposal:

1. ORA accepts that the existing Master Data Request in the area of LCD should be removed and replaced by the showing discussed in this set of proceedings.
2. ORA accepts the LCD Proposal but proposes some minor modifications to the format of testimony and to some of the metrics included in Exhibit A of the Joint Utilities' Motion to approve the LCD Proposal.
3. ORA proposes that a more complete demonstration of demand response (DR) programs that fall under the scope of the LCD standard should be included. In Exhibit A of its Response, ORA provides a range of metrics that it asserts will provide more transparency regarding the dispatch of these resources.



Regarding its recommendations for the utilities' future DR-related showings in the ERRA Compliance proceedings, ORA states that all relevant DR programs should be included for a number of reasons:

- i. The effect of dispatching DR resources has a direct net financial impact on overall dispatch of resources to meet load;
- ii. The LCD compliance review has now been explicitly set up to provide a clear quantitative cost demonstration that utilities are dispatching their resources at the lowest possible cost, so this is the most logical choice of medium to investigate the cost of any dispatchable resources;
- iii. This net financial impact is not considered in any other forum, including the reporting requirement agreed to in D.14-05-025, which focuses on exception reporting when programs' trigger conditions have been met; and
- iv. The Joint Utilities are making discretionary decisions on when and how much energy to call in DR dispatch events, and have final control of the dispatch amounts of the programs in question (rather than CAISO) and there is no consideration of the financial impact of these decisions in any other proceeding.

### **2.1.3. Joint Utilities' Reply Comments**

The Joint Utilities replied to ORA on November 17, 2014. The Joint Utilities agree that the utilities and ORA should communicate and collaborate to discuss potential future "refinements" to the LCD standard when improvements become apparent, but recommend that the final Commission decisions in these proceedings should make clear that they are adopting "the" LCD demonstration standard unless and until it is changed by the Commission. The Joint Utilities make two sets of substantive recommendations in response to ORA.

With regard to ORA's proposed minor modifications to the format of testimony and to some of the metrics, the Joint Utilities agree with three proposals, and oppose a fourth:

1. The Joint Utilities agree with ORA's recommendation that the LCD Proposal be modified to include a background summary table in testimony.
2. The Joint Utilities agree with ORA's recommendation that the utilities should use the 500 instead of 100 highest hourly Locational Marginal Prices in metric 4 of the Joint Proposal.
3. The Joint Utilities agree with ORA's recommendation that the summary reporting of daily self-commitment decisions should be modified to show both "profit positions" and "loss provisions."
4. The Joint Utilities oppose ORA's recommendation that the utilities include a comparison of the accuracy of the utilities' forecast of prices in the day-ahead market compared to actual California Independent System Operator (CAISO) results.

With regard to ORA's more extensive proposal regarding DR metrics, the Joint Utilities recommend that they be rejected because they are procedurally improper, impractical and misguided.

First, the Joint Utilities argue that the Commission already has an open proceeding examining DR issues (R.13-09-011) and in that proceeding the Commission is examining, among other things, utility reporting requirements for DR resources. They recommend that the Commission should not prejudge or duplicate that process in the ERRA compliance proceedings, at least not until the DR proceeding is concluded.

Second, regarding ORA's list of six Proposed DR metrics, the Joint Utilities find fault with each of them.<sup>5</sup> First, the Joint Utilities note that the DR programs that ORA recommends be included in the utilities' LCD showings are mischaracterized by ORA as being based solely on economic triggers, but in fact these programs have (non-economic) reliability triggers as well. Second, the Joint Utilities assert that ORA's second proposed metric (to calculate the number of hours when the utility forecasts that trigger criteria will be reached, as a percentage of hours in which trigger conditions were reached in the same monthly and annual time periods) is "fatally flawed", suggesting that responding to this metric would require the utilities to be capable of foreseeing up to a year in advance when the event triggers for its DR programs will be reached. Third, the Joint Utilities state that ORA's third proposed metric (calculation of total energy actually dispatched as a proportion of maximum available energy for each DR program) calls for information that is already available to ORA and is irrelevant to an LCD compliance assessment. Fourth, the Joint Utilities argue that ORA's fourth proposed metric (explanations of why a DR resource was not dispatched to its maximum available capacity) is not relevant to an LCD demonstration, because in many cases, the decision to dispatch or not to dispatch a DR resource can be based on factors other than economic ones such as weather conditions, transmission, and distribution system reliability. The Joint Utilities also note that there is already a process underway pursuant to D.14-05-025 for the utilities to perform the enhanced reporting

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<sup>5</sup> See Joint Utilities November 17, 2014 Reply to Response of ORA, Section B., "ORA's Proposed DR metrics are impractical and misguided."

covered in this metric. Finally, the Joint Utilities state that ORA's fifth and sixth proposed metrics (providing cost estimates of the net cost impact of not calling DR programs) are unduly burdensome in the level of analysis they envision.

We address this dispute between the Joint Utilities and ORA regarding future DR-related showings in the ERRRA compliance proceedings later in this decision.

#### **2.1.4. Interim Ruling Providing Guidance for 2014 ERRRA Compliance Proceedings**

On December 2, 2014 the assigned Commissioner and the assigned ALJ addressed ORA's concern by issuing an "Interim Ruling Providing Guidance for 2014 ERRRA Compliance Proceedings". The Ruling directed that in their upcoming filings for their 2014 Energy Resource Recovery Account compliance proceedings PG&E, SCE and SDG&E shall provide the information described in the uncontested portions of the "Joint Utilities' Proposal for the Demonstration of Least-cost Dispatch" included as Exhibit A of the October 21, 2014 Joint Motion. The Interim Ruling further directed that each of the ORA's four "minor" suggestions from its November 5, 2014 Response to the Joint Motion shall be incorporated into each utility's 2014 ERRRA Compliance showing:

- i) The LCD Proposal shall be modified to include a background summary table in testimony.
- ii) The utilities shall use the 500 instead of 100 highest hourly Locational Marginal Prices in metric 4 of the Joint Proposal.
- iii) The summary reporting of daily self-commitment decisions shall be modified to show both "profit positions" and "loss provisions."
- iv) The utilities shall include a comparison of the accuracy of the utilities' forecast of prices in the day-ahead market compared to actual California Independent System Operator results.

Finally, regarding the dispute between the Joint Utilities and ORA over the format for the reporting on Demand Response programs, the Interim Ruling directed that PG&E, SCE and SDG&E shall each provide in their 2014 ERRAs Compliance showing the “metrics for Demand Response” proposed by ORA, in the format proposed by ORA in Exhibit A of ORA’s November 5, 2014 Response to the Joint Motion.

The Interim Ruling noted its agreement with ORA that a ruling in each proceeding could not resolve the substance of the open issues in each ERRA proceeding: only a decision of the Commission can do so. Specifically, with respect to the debate between ORA and the utilities regarding the proper showing regarding Demand Response, the Interim Ruling deferred resolution of this matter to the Commission, “either in its decisions in the 2010 proceedings after its consideration of these proposals, or in its decisions on the upcoming 2015 ERRA proceedings, after considering the utility filings and ORA’s response to those filings.”

### **3. Discussion**

We affirm the direction provided in the Interim Ruling: the guidance provided in that Ruling shall serve as the permanent guidance regarding the required showing for least-cost dispatch in SDG&E’s annual ERRA Compliance application, beginning with its 2016 filing, covering the 2015 record period. We repeat that guidance below:

1. SDG&E shall provide the information described in the uncontested portions of the “Joint Utilities’ Proposal for the Demonstration of Least-cost Dispatch” included as Exhibit A of the October 21, 2014 Joint Motion, and reproduced in Appendix A of this Decision.

2. Each of ORA's four "minor" suggestions shall be incorporated into SDG&E's future Energy Resource Recovery Account compliance showing:
  - i) The LCD Proposal shall be modified to include a background summary table in testimony.
  - ii) SDG&E shall use the 500 instead of 100 highest hourly Locational Marginal Prices in metric 4 of the Joint Proposal.
  - iii) The summary reporting of daily self-commitment decisions shall be modified to show both "profit positions" and "loss provisions."
  - iv) SDG&E shall include a comparison of the accuracy of its forecast of prices in the day-ahead market compared to actual CAISO results.
3. SDG&E shall provide the "Metrics for Demand Response" proposed by ORA, in the format proposed by ORA in Exhibit A of ORA's November 5, 2014 Response to the Joint Motion, and reproduced in Appendix B of this Decision.

With respect to the disagreement between the Joint Utilities and ORA regarding the format for the reporting on Demand Response programs, we note that because SDG&E and the other utilities have already been directed to provide the material proposed by ORA as part of the 2015 ERRRA Compliance applications for the 2014 record period, we will soon have the opportunity to hear and evaluate evidence-based arguments from both sides regarding the value of this material. We believe that ORA's assertion that the net financial impact of dispatching DR resources is not considered in any other forum, including the reporting requirement agreed to in D.14-05-025, should be tested in the upcoming 2015 ERRRA proceedings. Therefore, we find that it is prudent to wait for this issue to play out based on solid data, at which time we may decide to refine the detailed requirements we are adopting today. However, the showing outlined above, including ORA's proposed "Metrics for Demand Response", shall be the required showing for SDG&E in its 2016 ERRRA Compliance application for the 2015 record period unless it is changed by a future order of this Commission.

#### **4. Comments on Proposed Decision**

The proposed decision of the assigned ALJ in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on \_\_\_\_\_, and reply comments were filed on \_\_\_\_\_ by \_\_\_\_\_.

#### **5. Assignment of Proceeding**

Michel Peter Florio is the assigned Commissioner and Stephen C. Roscow is the assigned ALJ in this proceeding.

**Findings of Fact**

1. SDG&E assembled its showing on LCD for the 2010 record period based on prior years' applications but the showing assembled by SDG&E was not fully consistent with prior Commission direction regarding the showing necessary to demonstrate successful LCD.

2. In D.14-07-006, the Commission accepted SDG&E's LCD showing for the 2010 record period as adequate but clarified that in future showings, a complete showing of LCD by SDG&E should include precise numerical calculations that either demonstrate that SDG&E achieved LCD during the record period, or quantify the amount of overspending by SDG&E.

3. In D.14-07-006, the Commission concluded that SDG&E should quantify the degree to which it achieved, or did not achieve, LCD during the 2014 record period and include that showing in its ERRR Compliance application in 2015.

4. SDG&E's LCD workshop took place on October 15, 2014. SDG&E filed its post-workshop report on November 13, 2014. ORA filed comments on SDG&E's post-workshop report on December 15, 2014.

5. Following the workshop, PG&E, SCE and SDG&E agreed upon proposed criteria to be used to determine what constitutes LCD compliance, and the resulting methodology they should each follow to assemble a showing to meet their burden to prove such compliance. The utilities submitted a motion for approval of their joint proposal for the demonstration of least-cost-dispatch on October 21, 2014.

6. PG&E, SCE and SDG&E agree with ORA regarding ORA's proposed minor modifications to the joint utility proposal.



7. PG&E, SCE and SDG&E disagree with ORA regarding the format for reporting on Demand Response programs that should be used in ERRA compliance applications.

**Conclusions of Law**

1. On December 2, 2014, a joint ruling of the assigned Commissioner and the Assigned ALJ described the information to be provided by PG&E, SCE and SDG&E in their 2015 applications for their 2014 Energy Resource Recovery Account compliance proceedings.

2. Beginning with the 2016 application for its 2015 Energy Resource Recovery Account compliance proceeding, the showing on least cost dispatch that is outlined in this decision and provided in Appendices A and B of this decision should remain the required showing for SDG&E unless it is changed by a future order of this Commission.

3. ORA's proposed minor modifications should be incorporated into future ERRA compliance applications.

4. The joint proposal for the demonstration of least-cost-dispatch submitted by PG&E, SCE and SDG&E on October 21, 2014 is in compliance with the Commission's direction in D.14-07-006, so this proceeding should be closed.

**O R D E R****IT IS ORDERED** that:

1. Beginning with its 2016 Application for its 2015 Energy Resource Recovery Account (ERRA) compliance review and in all future ERRA compliance applications, San Diego Gas and Electric Company shall provide the information

described in the “Joint Utilities’ Proposal for the Demonstration of Least-cost Dispatch” included as Appendix A of this Decision.

2. Beginning with its 2016 Application for its 2015 Energy Resource Recovery Account (ERRA) compliance review and in all future ERRA compliance applications, San Diego Gas and Electric Company shall incorporate the following minor modifications proposed by the Office of Ratepayer Advocates in its November 5, 2014 Response to the Joint Motion in this proceeding:

- i) The Least-cost Dispatch Proposal shall be modified to include a background summary table in testimony.
- ii) San Diego Gas and Electric Company shall use the 500 instead of 100 highest hourly Locational Marginal Prices in metric 4 of the Joint Proposal.
- iii) The summary reporting of daily self-commitment decisions shall be modified to show both “profit positions” and “loss provisions.”
- iv) San Diego Gas and Electric Company shall include a comparison of the accuracy of the utilities’ forecast of prices in the day-ahead market compared to actual California Independent System Operator results.

3. Beginning with its 2016 Application for its 2015 Energy Resource Recovery Account (ERRA) compliance review and in all future ERRA compliance applications, San Diego Gas and Electric Company shall provide the “Metrics for Demand Response” included as Appendix B of this Decision.

4. Application 11-06-003 is closed.

This order is effective today.

Dated \_\_\_\_\_, at San Francisco, California.

**APPENDIX A**

**JOINT UTILITIES LEAST COST DISPATCH DEMONSTRATION  
PROPOSAL**

**Joint Utilities' Proposal for the Demonstration of Least Cost Dispatch**

In Pacific Gas and Electric Company's, Southern California Edison Company's, and San Diego Gas & Electric Company's (collectively "Joint Utilities") respective 2014 Energy Resource Recovery Account ("ERRA") Compliance applications (which will be filed in 2015) and in all subsequent ERRA Compliance applications, unless and until the requirements are changed by the Commission, the information described herein would be provided by the utility.

Providing this information satisfies the requirement that the Joint Utilities "develop proposed criteria that should be used to determine what constitutes least-cost dispatch compliance, and the resulting methodology [each utility] should follow to assemble a showing to meet its burden to prove such compliance."<sup>1</sup> Providing the material outlined below would satisfy a utility's burden of production regarding what constitutes adequate evidence to allow the Office of Ratepayer Advocates ("ORA") and the Commission to assess whether the utility complied with the Commission's least-cost dispatch ("LCD") requirements. To the extent that there are LCD exceptions (*e.g.*, a unit was not bid in at incremental costs for a specific period(s) of time during the Record Period), the utility would document such exceptions and quantify, where practicable, the cost impacts of such exceptions, or that customers were not otherwise negatively impacted as a result of the exceptions.

**Structure of 2014 ERRA Compliance Testimony****Testimony:**

1. Overview/narrative of LCD in the California Independent System Operator ("CAISO") markets.
2. Description of the utility's bidding and scheduling processes.
3. Summary reports/tables documenting aggregated annual exception rates for:
  - a. Incremental cost bid calculations.
  - b. Self-commitment decisions.
  - c. Master File data changes.
4. Narratives reviewing significant strategy changes, internal software and/or process changes, and CAISO market design changes during the Record Period, including documentation of the utility's review of market changes. Market changes may affect the need for, or content of, specific summary reports or workpapers, and any reports or workpapers added, dropped, or modified due to such market changes will be detailed in this section.

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<sup>1</sup> See Decision ("D.") 13-10-041 at 25-26 (PG&E's 2010 ERRA Compliance decision); D.13-11-005 at 26 (SCE's 2010 ERRA Compliance decision); and D.14-07-006 at 22 (SDG&E's 2010 ERRA Compliance decision).

**Workpapers:**

1. Summary reporting on thermal commitment and minimum load cost submission.<sup>2</sup> Detailed supporting data documents each decision to select proxy or registered cost, and value of registered cost if registered cost is chosen. Narrative explains how proxy and registered costs are calculated, and the reasons for selecting proxy or registered cost. A chart will be provided to indicate the frequency of calculations that differed from values submitted to CAISO, and the cost impacts, by month. For Record Periods 2015 and beyond, comparisons of the annual frequency of calculations that differed from values submitted to CAISO and total cost impacts will be made to previous years.

Monthly and annual tables will include summaries of:

- a. Number of times proxy and registered cost values were selected, and reason for selection.
  - b. Number of times proxy/registered cost calculations differed from values submitted to CAISO, or registered cost values were calculated and submitted to the CAISO incorrectly, based on documented procedure for this calculation.
  - c. Summary of cost impact from calculations that differed from values submitted to CAISO, based on an estimate of bid cost recovery (“BCR”) gains or losses calculated by comparing BCR credits from settlements invoices with calculated BCR using correctly calculated commitment costs.
2. Summary reporting on incremental bid cost calculations for dispatchable thermal resources.<sup>3</sup> Detailed supporting data documents all incremental bid cost calculations, including documentation of the fuel costs, heat rates, greenhouse gas costs, operations and maintenance costs, and any other costs used in this calculation. For Record Periods 2015 and beyond, comparisons of the annual frequency of incorrect calculations and total cost impacts will be made to previous years.

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<sup>2</sup> See ORA’s Comments on PG&E’s workshop report submitted in Application (“A.”) 11-02-011 on March 25, 2014 (“ORA Comments”), at 3.

<sup>3</sup> See ORA Comments, at 10.

Monthly and annual tables will include summaries of:

- a. Verification of source data of all incremental bid cost calculations.
  - b. Number of significant (greater than \$0.10) variances between calculated and actual submitted bids.
  - c. Cost impacts of significant variances.
  - d. Number of times resources were not bid into CAISO markets when available.
  - e. Percentage of times incremental energy was not awarded when incremental bid cost at the awarded megawatt (“MW”) level was lower than the locational marginal price (“LMP”) at the applicable node. Explanation and documentation of CIDI tickets submitted, and subsequent actions taken by the utility.
3. Summary reporting on daily self-commitment decisions for dispatchable thermal resources.<sup>1</sup> Detailed supporting data documents daily forecasts of schedules if bid or self-committed, forecast revenues and bid costs if bid or self-committed, and decision to self-commit or bid.

Monthly and annual tables will include summaries of:

- a. Number of self-commitments and the reasons (using reason codes to be developed by utilities).
- b. Total energy (MWh) self-committed or self-scheduled.
- c. For each day a resource was self-committed, excluding self-schedules for bridging periods and non-discretionary reasons (e.g., for unit testing), provide:
  - i. The utility’s forecast energy schedule, estimated revenues, and estimated costs using the utility’s forecast LMPs and resource bid costs used in making the self-commitment decision.
  - ii. The resulting schedule, estimated revenues, and estimated costs of the self-commitment decision, using the actual LMP and resource bid costs.
  - iii. The estimated schedule, estimated revenues, and estimated costs of the resource had it been bid into the market rather than self-committed, using actual LMPs and resource bid costs.

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<sup>1</sup> See ORA Comments, at 6.

- d. Number of days that each resource's estimated revenues exceeded its estimated bid costs.
4. Summary reporting on bidding and dispatch of dispatchable hydro and pumped storage resources.<sup>2</sup> Detailed supporting data documents daily bid calculations, actual LMPs, and market dispatch results, as well as output from the mid-term hydro planning models, and sorted lists of LMPs, from highest to lowest, relevant to each resource.

Monthly and annual tables will include summaries of:

- a. Total MWh dispatched.
  - b. Average LMPs when each resource was dispatched.
  - c. For the annual table, metric indicating what percentage of the 100 highest LMPs of the year at each resource location that resource, when available, was dispatched for either energy or ancillary services, excluding must take or short term balancing resources. Notes using codes to be developed.
5. A background summary table will be provided laying out baseline annual data,<sup>3</sup> including:
    - a. Total capacity<sup>4</sup> of the dispatchable (bid in) portfolio.
    - b. Total dispatchable capacity lost due to planned or forced outages.<sup>5</sup>
    - c. Total capacity of the non-dispatchable (exclusively self-scheduled) portfolio.
    - d. Total non-dispatchable capacity lost due to planned or forced outages.
    - e. Total energy awards (dispatchable and non-dispatchable) by resource type (hydro, pumped storage, thermal, etc.) and broken down by self-scheduled versus market awards.
  6. Comparison of the utility's awarded day-ahead load and actual day-ahead prices versus actual load. Comparison will be provided annually for the "100 highest energy value days" (based on the average daily distribution load aggregation point ("DLAP") prices for the utility).

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<sup>2</sup> See ORA Comments, at 7.

<sup>3</sup> See ORA Comments, at 10.

<sup>4</sup> Total capacity is defined as the resource's PMAX in MWh.

<sup>5</sup> For purposes of this proposal, "outage" is defined as a unit being off-line and unavailable.

7. Monthly and annual report documenting load bid structure and results (amount of forecast load cleared in day ahead market versus load cleared in real time market).
8. LCD business process and software documentation.

**Demand Response:**

Issues regarding reporting of Demand Response (“DR”) programs will be addressed in the Demand Response proceeding (Rulemaking 13-09-011). However, the Joint Utilities will provide information regarding DR programs that are bid into the CAISO market similar to the information describing supply-side resources that are bid and/or scheduled in the CAISO market.

**Master Data Requests:**

Because the agreed upon methodology and workpapers would constitute adequate evidence to allow ORA and the Commission to assess the utilities’ compliance with LCD principles and Standard of Conduct 4, ORA would cease its Master Data Request process regarding LCD. Follow-up data requests would be to facilitate additional discovery on focused topics.



## **APPENDIX B**

### **ADOPTED METRICS FOR DEMAND RESPONSE RESOURCES**

**ORA EXHIBIT A: - SAMPLE SET OF METRICS FOR DEMAND RESPONSE RESOURCES**

The metrics below should be provided for dispatchable DR programs with an economic trigger:

1. An annual summary of the results of the reporting requirement (related to dispatch of DR resources) recently adopted in D.14-05-025.<sup>14</sup> At a minimum, the utilities should provide a summary of:
  - a. The times and duration that all programs were dispatched;
  - b. All cases where the DR program's trigger conditions were forecast to be met, and all cases where these trigger conditions were actually met;
  - c. A list of occurrences when DR resources should have been dispatched but were not (i.e. a DR resource's economic trigger conditions were forecast by a utility but it was not dispatched). Each occurrence should be accompanied by an explanation detailing the reason for non-dispatch;
2. In addition to the Reporting Requirement in D.14-05-025, a calculation should be provided of the number of hours when the utility forecasts that trigger criteria will be reached, as a percentage of hours in which trigger conditions were reached in the same time period (monthly and annual basis).

***Net cost of underutilizing resources***

3. The total energy actually dispatched as a proportion of maximum available energy for each DR program<sup>15</sup> under scope of the proceeding (monthly and annual breakdowns).<sup>16</sup> This comparison should be provided in both percentage and nominal (MWh) terms. An example of the format is provided below:

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<sup>14</sup> D.14-05-025 at 16.

<sup>15</sup> In cases when trigger criteria were forecast in sufficient hours that these programs could have been dispatched to their maximum available amounts.

<sup>16</sup> If a DR resource is available for 10 hours in a month for 20 MW, its maximum available energy for dispatch in that month would be 100 MWh.

4.

*Example - Metric 3*

- a. In 2014 record Year – utility A’s CBP program dispatched 100 MWh. This compares to a total maximum available dispatch of 200 MWh for that program.<sup>17</sup>
- b. Therefore utility A’s CBP program did not dispatch 100 MWh of its total maximum available energy.
- c. In 2014 record Year, utility A dispatched 50% of the available energy in the CBP program.

5. For each event the full capacity was not dispatched, An explanation should be provided as to why the DR resource was not dispatched to its maximum availability during the record period.

6. If the metrics in 3) above show that available energy was not dispatched for a program, provide an estimate of the net cost impact on overall resource dispatch of not calling DR programs up to their maximum available amounts when the program trigger has been forecast to be reached.<sup>18</sup> This metric should focus on the net cost of dispatching metric (3.)(b.). An example of the format is provided below:

*Example – Metric 5*

- If the non-dispatched energy available to utility A’s CBP program (100 MW in the example above) was actually dispatched this would have led to a net impact of \$X on the overall cost of resource dispatch in Record year 2014.

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<sup>17</sup> Numbers provided in this example are meant for illustrative purposes only.

<sup>18</sup> In cases when trigger criteria were forecast in sufficient hours that these programs could have been dispatched to their maximum available amounts.

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**Selection of dispatch days**

7. Metrics should be provided by the utility to identify whether the selection of DR events called minimized the utility’s overall portfolio costs of dispatching supply resources. This assessment should include the average hourly net cost impact on overall resource dispatch by program:

- a. For events actually dispatched in the record year.
- b. For all time periods when DR program triggers were forecast by the utility (whether dispatched or not)
- c. Comparison of a) and b) in both percentage and nominal (MWh) terms. An example is provided below:

*Example – Metric 6*

(A) Average hourly net cost from actual dispatch events (\$/MWh)	(B) Average hourly potential net cost from all times when trigger conditions were forecast (dispatched or not) (\$/MWh)	\$(A)-(B )	(A)/(B) (%)
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8. An explanation of how opportunity cost analyses are used to make the decision to call, or not call, an event. This should include an explanation of the opportunity cost methodology and a demonstration of its application.

**(END OF APPENDIX B)**