

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

Order Instituting Rulemaking Regarding  
Policies and Protocols for Demand Response,  
Load Impact Estimates, Cost-Effectiveness  
Methodologies, Megawatt Goals and  
Alignment with California Independent System  
Operator Market Design Protocols

Rulemaking 07-01-041  
(January 25, 2007)

**POST-WORKSHOP COMMENTS OF THE CALIFORNIA INDEPENDENT  
SYSTEM OPERATOR ON THE AUGUST 10 WORKSHOP REPORT**

The California Independent System Operator (ISO) submits the following comments to the Report of Southern California Edison on Workshop 1 of Phase 3 (Workshop Report).<sup>1</sup>

As the Workshop Report notes, all parties agreed that the mechanism to build the record for Phase 3 would be workshops rather than formal testimony and hearings.<sup>2</sup> The purpose of Phase 3 is “to ensure that DR programs adapt to function within the day-ahead market that was implemented with the ISO Market Redesign and Technology Upgrade (MRTU).”<sup>3</sup>

**I. THE STATE OF THE RECORD AFTER WORKSHOP 1**

Commissioner Chong’s July 8, 2009 Assigned Commissioner Ruling (Ruling) proscribed three workshops to build the record for Phase 3.<sup>4</sup> The Ruling states that:

The first workshop will examine whether there is an optimal size for the Commission’s emergency-triggered DR program, and, if so, what is the optimal size for the program.

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<sup>1</sup> Note that, in this filing, and on a going forward basis, we refer to ourselves as the “ISO” in our writings, rather than the “CAISO.” Where there are references in this document to “CAISO,” this is because we have quoted from a third party document that has referred to us by that term.

<sup>2</sup> Workshop Report at p. 3.

<sup>3</sup> Workshop Report at p. 2, quoting from the Ruling.

<sup>4</sup> Assigned Commissioner’s Ruling Amending the Scoping Memo and Schedule of Phase 3 of this Proceeding. The Ruling is posted on the CPUC Website at <http://docs.cpuc.ca.gov/eFile/RULINGS/104054.pdf>

After the first workshop the Administrative Law Judge (ALJ) will issue a ruling that, in light of the facts and information gained in the first workshop, provides additional direction for the two remaining workshops. However, the second workshop will generally examine alternatives to the current emergency-triggered DR.

The third workshop will address implementation issues – how to transition from the current situation to the one deemed optimal and/or how to implement alternatives to the current emergency-triggered DR.<sup>5</sup>

The Ruling also set out the scope and the obligations of the parties for Workshop 1.

Workshop 1 will build on the CAISO's June 25, 2008 Comments in response to the June 9, 2008 ALJ Ruling requesting information on emergency-triggered DR programs<sup>6</sup>

To enable a productive Workshop 1, parties should submit their proposals as part of preliminary comments on issues in advance of Workshop 1. *Such proposals should include analysis, discussion and methodology to support the recommendations made in the proposals.*

In addition, CAISO is requested to supplement its original recommendation with its estimate of megawatts (MW) reductions that currently could be assigned to each of the specific IOUs.<sup>7</sup>

*If there are no alternatives submitted, then the Commission may assume that the recommendations made by CAISO are valid and proceed towards an emergency-triggered DR that resolves the issues raised by CAISO.*<sup>8</sup>

With the Workshop Report now in hand, the Commission and parties must evaluate the evidence received, for purposes of moving forward under the structure for Phase 3 which the Commissioner laid out in her Ruling. The ISO contends that the workshop did not elicit record evidence on the issue of optimum size of emergency-based

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<sup>5</sup> Section 3.1 [Issues to be Addressed in Workshops] at p. 7.

<sup>6</sup> Ruling at p. 8.

<sup>7</sup> The ISO provided this information in our supplemental recommendation and pre-workshop comments, posted to the CPUC Web site at <http://docs.cpuc.ca.gov/efile/CM/104972.pdf>.

<sup>8</sup> Ruling at pp.8- 9, emphasis added.

programs sufficient to enable any determiner of fact to displace the ISO's size recommendation of 500 to 1,000 MWs per annum<sup>9</sup>. The utilities and CLECA asserted in Workshop 1 that there is no optimal size, arguing several bases for their claims; namely that emergency-based programs have other benefits, such as transmission and distribution (T&D) benefits,<sup>10</sup> and that the programs help satisfy the Planning Reserve Margin (PRM) requirement.<sup>11</sup> These points are only tangentially within the scope of Workshop 1 (optimal size) and most importantly, they were unaccompanied by any "analysis" and "methodology to support," as required by the Ruling.

Indeed, what the other parties brought to Workshop 1 was primarily a discussion of alternatives for program structure (which is within scope of Workshop 2) rather than an intake of evidence to support a determination of optimal size, which was the scope of Workshop 1. Accordingly, as the proceeding moves to Workshop 2, the state of the record at this point as to the issue of optimal size would require a finder of fact to determine that the ISO's recommendation for optimal size prevails because there is no evidence supporting an alternative proposal. While the other parties have differing opinions as to overall program size (i.e. that no size limitation is optimal), those opinions are without foundation. Neither CLECA nor any utility brought any technical expertise or supporting evidence as input to the Commission to make any showing of how emergency-based DR programs have the T&D benefits they assert, or to explain the issue of how emergency-based DR factors into utility procurement either for long term, or day-

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<sup>9</sup> Commissioner Chong restated the ISO's recommendation at page 8 of the Ruling.

<sup>10</sup> See Workshop Report at p. 11 regarding comments of CLECA.

<sup>11</sup> See Workshop Report at p. 8 re comments of SCE.

to day. Thus, while these parties may have inserted an opinion into the record, there is no record evidence to serve as a basis for that opinion.<sup>12</sup>

In the workshop discussion on how emergency-based DR programs factor into utility procurement, the utility representatives indicated that the question is fully dependent on how it is valued—for RA purposes and thus for purposes of meeting the PRM. This approach is completely backwards. What counts for RA towards satisfying the PRM is an accounting issue which was not the point of the question. Optimal size requires a consideration of what the actual resource use is and the value from the system operator or planner’s perspective. The utility response focuses on accounting value, which is the wrong type of value for purposes of Workshop 1. To appropriately respond to the Workshop 1 issue, the inquiry requires a drill down to look at the tangible resource value of the resource that a T&D planner or operator would determine in planning, operating, and maintaining the physical system. The issue must be analyzed from the prospective of how to support and/or build the resources necessary to serve load and satisfy the PRM—which is a planning and O&M perspective. This is not an accounting question. The utility comment signals that that value of currently configured emergency-based DR is an imputed value rather than one that has been the subject of any objective

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<sup>12</sup> See, for example, the discussion of ISO colloquy with panelists on these points at pp17-18 of the Workshop report:

A key theme early in the discussion was the Transmission & Distribution (T&D) relief associated with the BIP and AC Cycling programs. The ISO asked the panel members whether any of them had any analysis or quantification of the degree of T&D benefits to provide to the workshop, as the Ruling had indicated that parties should bring analysis to support their recommendations. CLECA indicated that it did not, but would expect to look to the utilities for such information. The utility panel members indicated that they did not provide quantification or analysis in their pre-workshop comments.

“needs” analysis. If, in fact, that analysis exists, the utilities have not entered that analysis as record evidence in this proceeding.<sup>13</sup>

## II. COMMENTS ON WORKSHOP 1 DISCUSSION POINTS

### A. At this point in the proceeding, the ISO’s opinion of optimal size should prevail

*“Pursuant to the Ruling, the primary purpose of Workshop 1 was to gather information to allow the Commission to determine whether there is an optimal size for the IOU’s interruptible (aka reliability-based DR) programs, and if so, what the optimal size is.”* (Workshop Report, p. 6.)

*“The CAISO asked the panel members whether any of them had any analysis or quantification of the degree of T&D benefits to provide to the workshop, as the Ruling had indicated that parties should bring analysis to support their recommendations.”* (Workshop Report, p. 17.)

*“Both SCE and PG&E eluded that for T&D purposes there is no optimal size; that it is a function of when the IOU builds an upgrade, and it can vary dramatically over a 5-year period.”* (Workshop Report, p. 15.)

These workshop statements beg the question as to how exactly emergency-based DR programs are incorporated into the utilities’ respective T&D planning processes. Tellingly, the Workshop Report notes that “SCE finds that its programs having an increased need for distribution reasons,” and “PG&E contends that determining the amount is ‘squishy,’ however the need for T&D relief will continue to increase.” (pg. 15) These statements, and similar comments at the workshop, were apparently meant to introduce into the record the point that emergency-based DR should not be downscaled because it is important for T&D reasons.

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<sup>13</sup> For instance, PG&E stated that optimal size can be determined at any point in time based on economics from the value of service to customers. (Workshop Report at p. 9.) This might be true to the extent that resource costs will be considered when building a “stack” of resources, but that answer does not link to the planning and O&M function that the workshop is trying to analyze.

However, the ISO suggests that such comments provide insufficient support for the proceeding's finder of fact to accept T&D benefits as a basis for leaving the current size of emergency-based DR in place. The parties need to provide more definitive information regarding these utility programs. In particular, there should be record evidence as to the linkage between emergency-based DR programs and how each utility has historically incorporated these types of programs into their T&D planning processes. Going forward, the Commission should also clearly understand how emergency-based DR programs will support a utility's T&D system and what, if any, specific T&D upgrades and investments will be deferred as a result of the quantity of a utility's DR programs that are maintained above the proposed overall program size of 500 to 1,000 MWs. Relying on the utility's existing T&D planning processes, and considering the effectiveness and usefulness of each of its emergency-based DR programs should, at a minimum, help to reveal to the Commission what quantity of DR is needed to support the utility's T&D system. The Commission cannot accept statements that "there is no optimal size" without first having specific documentation and analysis in the record to support such a conclusion.

**B. Reliance on the California Energy Action Plan (EAP) Loading Order as the basis for "More of the Same" is misplaced. The Loading Order actually supports transitioning DR to price responsiveness**

*"SCE reiterated that the interruptible programs are preferred resources under the Loading Order that allow SCE to cost-effectively defer procuring additional supply-side resources to serve the participating customers' loads, and therefore a cap should not apply." (Workshop Report, p. 7)*

*"SCE made three final points: ...and (3) is the Commission should not cap these programs, because they are cost effective and at the top of the loading order; ..." (Workshop Report, p. 17)*

The EAP Loading Order<sup>14</sup> should not be cited as basis for maintaining the status quo, simply because emergency-based DR Programs are “demand response.” The Loading Order, as specified in EAP II, describes a policy priority for satisfying increasing energy needs in California with DR as a resource, specifically:

EAP II continues the strong support for the loading order – endorsed by Governor Schwarzenegger – that describes the priority sequence for actions to address increasing energy needs. *The loading order identifies energy efficiency and demand response as the State’s preferred means of meeting growing energy needs.* After cost-effective efficiency and demand response, we rely on renewable sources of power and distributed generation, such as combined heat and power applications. To the extent efficiency, demand response, renewable resources, and distributed generation are unable to satisfy increasing energy and capacity needs, we support clean and efficient fossil-fired generation.<sup>15</sup>

We encourage the Commission to look closely at the wording above. It is the ISO’s opinion that the role for DR envisioned in the EAP—that of parity with traditional generation resources as a means of meeting the state’s “growing energy needs”—cannot be achieved with emergency-based DR. The EAP does not promote an irrational pursuit of “any type” of demand response program. The Commission has a responsibility to ensure that investment in DR and EE resources is established in a right and rational manner, so that ratepayers benefit from the “right and appropriate” types of DR and EE. This would be DR that can actually defer alternative and/or traditional generation resources. For example, a rational procurement process would not promote building only peaking plants to satisfy the state’s growing energy needs. Doing so would not be cost-effective and would not be a reasonable approach to satisfying the day-to-day operational

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<sup>14</sup> The CPUC Web page for the EAP is [http://www.energy.ca.gov/energy\\_action\\_plan/index.html](http://www.energy.ca.gov/energy_action_plan/index.html).

<sup>15</sup> Energy Action Plan II, September 21, 2005, pg. 2 (emphasis added). This document is posted to the CPUC’s Web Site at [http://www.energy.ca.gov/energy\\_action\\_plan/2005-09-21\\_EAP2\\_FINAL.PDF](http://www.energy.ca.gov/energy_action_plan/2005-09-21_EAP2_FINAL.PDF).

and reliability needs of the grid. Similarly, the EAP Loading Order outlines a resource priority for meeting future energy needs. Thus, successful discharge of the EAP policy requires having a “right type and right mix” of resources that can reliably meet the state’s future energy needs.

If the EAP is to succeed in substituting alternative and/or traditional generation resources with EE and DR, then EE and DR must be suitable resource replacements capable of maintaining system reliability and integrity under normal (non-emergency), but stressed, system conditions. In the ISO’s opinion, narrowly reading the EAP Loading Order as requiring continued promotion of highly restricted, use-limited emergency-only resources would defeat the intent of the EAP.

Moreover, the most recent EAP update<sup>16</sup> clearly states that a next step is to “[m]odify retail [DR] programs so that they can more fully participate in the California ISO’s new wholesale market structure.”<sup>17</sup> The EAP emphasizes that “...the California Independent System Operator (ISO) can be instrumental in incorporating demand response policies and appropriate operational rules at the wholesale level thereby *allowing aggregated demand-side resources to be scheduled on the system along-side conventional generation.*”<sup>18</sup> Thus, in the ISO’s opinion, the Commission is well advised to closely scrutinize the optimal quantity of emergency-based DR programs, as part of its overall policy to promote DR in accordance with the Loading Order.

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<sup>16</sup> This is the 2008 Energy Action Plan Update, posted to the CEC Web Site at <http://www.energy.ca.gov/2008publications/CEC-100-2008-001/CEC-100-2008-001.PDF>.

<sup>17</sup> 2008 Update Energy Action Plan, February 2008, Pg. 11

<sup>18</sup> Ibid. 10, emphasis added.

**C. Resolution E-4220 did not resolve the emergency nature of BIP, SDP and similarly situated DR programs**

*“With these new “event” triggers in place, the IOUs no longer consider their interruptible programs to be “emergency-only” programs.” (Workshop Report, p. 4.)*

*“SCE explained that emergency-only DR does not currently exist...” (Workshop Report, p. 8.)*

*“PG&E also defined what it considers to be an “emergency-triggered” program, meaning one that is called in an emergency, which was true of BIP before the Stage 1 Imminent triggered was established.” (Workshop Report, p. 9.)*

*“CLECA also explained that the interruptible programs are reliability programs but they are no longer emergency programs in the traditional sense because an emergency is not required to trigger them.” (Workshop Report, p. 11.)*

The utilities and CLECA are mistaken in characterizing interruptible load programs as being no longer “emergency-only” programs based on the modified trigger per Resolution E-4220. What the modified trigger accomplished was to enable the ISO to access these emergency-based programs just prior to the ISO violating WECC/NERC reliability criteria by failing to maintain minimum operating reserves. Lest there be any misunderstanding, these programs remain highly restricted in their use and are only available in emergency situations. To be clear, a “Warning with Stage 1 Imminent” notice is issued under the ISO’s Emergency Operating Procedures.<sup>19</sup> A Warning notice is issued when the ISO is forecasted to be in, or is, experiencing an emergency. At a “Warning with Stage 1 Imminent,” which is where the current set of emergency-based programs can be called, the ISO has taken all available steps to mitigate the possibility of violating its obligation to maintain minimum operating reserves, i.e. avoid a Stage 1 emergency, by dispatching all available resources, including non-Resource Adequacy

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<sup>19</sup> As detailed in the ISO’s Emergency Operating Procedures E-508A, E-511, et al

resources, curtailing available pumping loads (as available), and seeking emergency assistance from other balancing authorities. Once these efforts have been taken, only then can the ISO call on the emergency-based DR programs.

The modification to the emergency-based DR program trigger approved in Resolution E-4220 was marginally beneficial. The modification allows these DR programs to be called just prior to the ISO violating its minimum operating reserve requirements. However, these programs are only available to the ISO once the ISO is operating under its Emergency Operating Procedures, therefore, to characterize E-4220 as having resolved the “emergency nature” of these programs is incorrect.

**D. Emergency-based DR programs should be reconfigured**

*“Emergency-only programs would provide additional reliability beyond the PRM. Such an emergency-only program would be targeted at a pool of customers who are on firm service (i.e. not interruptible) but who would be willing to be interrupted first in an effort to avoid a rotating outage.” (Workshop Report, p. 8.)*

The ISO does not understand the distinction that workshop participants drew in the quote above between “firm service customers,” and other customers, for example customers enrolled in the BIP. BIP customers are classified as non-firm, which seems to be a distinction without difference based on the above description; *i.e.*, a pool of customers who are on firm service but who would be willing to be interrupted first in an effort to avoid a rotating outage. This seems to effectively describe a majority of BIP customers. Both customer types--firm and non-firm--as the case is described, are involved for effectively the same reason; *i.e.* for remuneration, these customers are willing to be interrupted to prevent a wider disturbance on the grid. Some customers may be willing to be interrupted sooner than others (for example, at a Warning Notice), others

at a Stage 3, but all are cooperating and engaged for the purpose of avoiding a deeper emergency.

In the ISO's opinion, there seems to be little distinction between what is currently classified as non-firm customers and the "firm" customers described in the above comment. Remuneration for a customer's participation could be graduated based on at what stage the customer is interrupted, similar to how the BIP incentive is different for a 15-minute versus 30-minute responsive customer. Again, the ISO does not see a bright line between this type of emergency, non-RA program and, for example, BIP. Compensation for interruptions should be an energy-only payment on an event-basis, not a monthly or periodic capacity payment. Capacity payments should be reserved for customers that are more flexible, who are integrated into the market, and who are willing to act as a demand resource. As generally conveyed, customers on emergency-based programs are only willing to be interrupted on a very infrequent basis and only if absolutely necessary to help resolve a system or local transmission emergency. More frequent interruptions may cause customers to leave the program. Thus, a more appropriate remuneration paradigm for customers that wish to remain emergency responsive with very infrequent dispatches is a high energy payment for load curtailment that they provide when an emergency event does occur.

**E. Incompatibility between the CT valuation process and emergency-based DR programs goes beyond the ability of the emergency-based DR programs to maintain operating reserves**

*"SCE explained that the move to the Imminent Stage 1 trigger was an acknowledgement by the IOUs that the valuation process for BIP, SDP, and AP-I was incompatible with the incentive because the incentive was CT-based yet the programs couldn't be called on to maintain operating reserves. Now with*

*the Imminent Stage 1 trigger, they can be called on to maintain operating reserves.” (Workshop Report, p. 16.)*

There remain significant other “incompatibilities” between emergency-based DR programs and a CT. These distinct differences will continue to challenge the valuation process, and therefore, the cost-effectiveness of emergency-based DR programs like BIP, SDP, and AP-I. For example, like emergency-based DR programs, a CT can help maintain operating reserves during a system emergency and can address a local transmission emergency. However, unlike emergency-based DR programs, a CT can also participate in the energy and ancillary service markets, will be able to prevent scarcity pricing, can defer T&D investments, and, to the benefit of all consumers, would add depth and competitiveness to the wholesale electricity markets.<sup>20</sup> Given that a CT is the basis resource for valuation of emergency-based DR programs, a CT’s diverse capabilities and flexibility add to the list of “incompatibilities” between a CT and emergency-based DR programs. These other incompatibilities, which extend beyond helping to maintain minimum operating reserves, should be similarly assessed as part of the valuation process and incentive for emergency-based DR programs.

### **III. CONCLUSIONS AND RECOMMENDATIONS**

Based on the state of the Workshop 1 record, the ISO concludes that:

- From a system operations standpoint there is an over-abundance of emergency-based programs.
- Much of the functionality that the Commission has outlined for DR and for Phase 3 are not part of an emergency-based DR program structure:

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<sup>20</sup> Other incompatibilities in favor of DR programs would be certain other externalities such as environmental benefits; however, emergency-based DR programs are used so infrequently that these benefits would likely be de minimus.

- Ability to mitigate or prevent scarcity pricing conditions
  - Providing ancillary services
  - Integrating greater amounts of intermittent resources to achieve RPS goals
  - Adding depth to the markets and helping prevent market power
- The Commission’s decision in the DR Applications proceeding<sup>21</sup> to cap emergency-based DR programs was appropriate and clearly serves both the purposes and spirit of the EAP, particularly as the Commission resolves how to get greater integration and participation from DR resources. The ISO was the only party to provide a DR optimal size proposal that was supported with reliability and grid operations information.
  - The state of the record at this point requires a finder of fact to determine that the ISO’s recommendation for optimal size should prevail because no counter evidence has been provided.

Respectfully submitted,

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Dated: August 27, 2009

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<sup>21</sup> Decision 09-08-027, issued August 24, 2009 in Applications A.08-006-001/002/003.

## CERTIFICATE OF SERVICE

I hereby certify that on August 27, 2009 I served, on the Service List for Proceeding R.07-01-041, by electronic and United States mail, a copy of the foregoing Post-workshop Comments of the California Independent System Operator on the August 10 Workshop Report.

Executed on August 27, 2009 at  
Folsom, California

*/s/ Anna Pascuzzo*

Anna Pascuzzo,  
An employee of the  
California Independent System Operator