

**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)

**COMMENTS OF
THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR ON THE
ALJ RULING REGARDING THE COST EFFECTIVENESS FRAMEWORK**

The California Independent System Operator Corporation (“CAISO”) submits its comments regarding the ALJ’s Ruling re Comments on the Cost Effectiveness Framework, dated April 4, 2008, (“Ruling”) and Attachment A to the Ruling, “Draft Demand Response Cost Effectiveness Protocols” (“Staff Protocols”).

Introduction

As the Ruling states, the methodology set forth in the Staff Protocols is based largely upon the Cost Effectiveness Framework (aka Consensus Parties Framework) that the Joint Parties submitted in this proceeding in November 2007. (Ruling at pp. 1-2.) The Ruling further notes that party comments should address “the completeness, accuracy, and feasibility of the staff proposal.” (Ruling at p. 2.). The CAISO’s comments herein are intended either (1) to raise points for further refinement of the protocol’s interim methodologies or (2) to raise points that the CAISO believes should be included within the document, so that they are “teed up” for consideration when the

protocols are revised with reformulated criteria intended to replace the interim methodologies¹.

Overall, the CAISO considers the Staff Protocols to be a sound basis for interim review of DR programs that will be presented to the Commission in 2009 for the procurement cycle period of 2009 to 2011. CAISO is particularly appreciative of the “right place” and “right certainty” criteria that have been included in the Staff Protocols (see e.g., Staff Protocols at p. 12), and we offer further points for support and application of the criteria, as set forth below. As an overall point, we recommend that these criteria underscore the entire process by which the Commission undertakes the cost effectiveness (CE) evaluation of specific DR programs that the LSEs present for approval. In this regard, we believe that the criteria should be applied more broadly and universally when evaluating the features of a particular DR program, rather than being applied singularly to specific DR program cost line items.

Re: Section 1: Basic Information, Introduction

In Section 1, Introduction, the Staff Protocols states that:

The purpose of these draft cost-effectiveness protocols is to:

- Address the broad variety of DR resources, including current programs and anticipated future activities;

The CAISO recommends that, following this bullet point, a discussion be included in the document, along the lines of the following:

In this regard, historically, DR has been largely employed as a reliability/emergency-based tool and has been formulated as interruptible programs that substitute for more universal load shedding during emergency events, such as the CAISO declaration of a Stage 2 system emergency, or utility response to a local transmission emergency on the

¹ See Staff Proposals at p.1 [“These draft protocols will also provide a basis for more permanent cost-effectiveness protocols.”]

distribution grid. However, there is wide-spread anticipation that changes are coming in the 2009-2011 time frame, and beyond, such as the roll-out of advanced metering infrastructure (AMI) and other emerging technologies, which will enable DR to have vast end-use customer participation.

Moreover, up until now, a significant portion of DR has been focused on the interruption of large load. As DR is refined, there will be an increasing ability to focus on the shift from load interruption to load reductions (turning down versus turning off powered devices, such as lighting, HVAC, etc.,) so that those end-use customers that are called upon can continue to operate, at the reduced electricity level. CE criteria may include the ability for end-use customer participants to add to their revenue streams or reduce costs through timing decisions—determining at what times they will use electrical power and at what times or on what triggers they will change their consumption and offer that power to the market.

The CAISO submits that adding this language to the Introduction will tee up, for consideration in the next iteration of more permanent protocols, the fact that there is increasing recognition that DR resources should be thought of as 365-day resources, potentially deployed at any hour of the day, in order to provide services to the grid on a basis comparable to generation. This point includes the idea that tailoring customer energy usage presents an opportunity for the provider to lower energy costs and create revenue streams (which can be applied to such things as the funding of capital improvements that enable greater usage of a smart grid).

Section 2; Using the Standard Practice Manual Tests to Determine DR Cost-Effectiveness, Section 2.E.b Avoided costs of supplying electricity

At Section 2.E.b, the Staff Protocols state that “[e]valuations of cost effectiveness of DR programs are better served when avoided capacity costs, avoided energy costs, and deferred transmission and distribution (T&D) costs are distinguished separately rather [than] being aggregated together as ‘all-in’ avoided costs.” (Staff Protocols at p. 9.) The CAISO agrees with this approach. In addition, the CAISO would suggest that the Commission consider applying different weights to these different factors of value, when

evaluating LSE programs, case-by case. This is a logical corollary to the Staff Protocol's "right place" and "right certainty" criteria. For example, avoided capacity costs are appropriately applied when evaluating DR resources that are intended as a generation alternative in geographic areas where new CTs are needed. In contrast, for geographic areas with a surplus of capacity, DR's avoided capacity value may not be as significant, but the avoided energy and avoided ancillary services costs may still be important.² One reference source for determining the underlying capacity needs, for use in this evaluation process, is the CAISO's annual Local Capacity Technical Analysis³. This study identifies ten local areas within the CAISO-controlled grid and identifies the capacity need within each area.

We recognize that this deeper level of evaluation may need to be introduced over time, but the analysis is important in aligning DR resource development with the needs of the power grid.

In addition, further language in the Staff Protocols at page 10 states that:

The capacity value of DR programs without usage or availability constraints will be equivalent to the full annualized and adjusted CT cost. For DR programs with constraints on their availability, utilities will use an hourly stochastic method which matches the availability of the DR program against an hourly allocation of capacity value according to the relative probability of need.

All DR programs, indeed, all resources, have usage and availability constraints. The CAISO is unclear as to whether this paragraph is an attempt to distinguish between emergency and economic DR resources or to draw some other distinction. It would be useful to all parties for the Staff Protocols to be clarified here, to better elucidate what dichotomy the protocol is trying to make, for purposes of applying a different treatment, and why different treatment is warranted.

² We acknowledge that these three components are not the only points of valuation, and that the other components (i.e. avoided T&D costs) mentioned in the Staff Protocols must also be considered.

³ The CAISO Local Capacity Technical Study Analysis and Report contains the results of CAISO's annual Local Capacity Technical (LCT) Study. The 2009 Draft Report can be accessed on the CAISO web site at <http://www.aiso.com/1f9d/1f9d844965c20.pdf>.

In the discussion regarding avoided energy costs, the Staff Protocols state that:

Avoided Energy Costs: For both event-based and non-event based DR programs, the value of avoided electricity generation may be based on wholesale energy prices averaged over the highest-price hours of an hourly price forecast.

The CAISO believes that a distinction needs to be drawn between the day-ahead (DA) and day-of, (aka real time, (RT)) markets. In this regard, it would be beneficial to be more specific as to which wholesale market price (DA market price or RT price) is to be applied to which program. Programs triggered on a DA basis should likely use the DA forward energy price for evaluation. RT (or day-of) dispatchable resources should likely rely on a RT market clearing price.

At page eleven the Staff Protocol discusses CAISO implementation of LMP prices, stating that:

After the CAISO establishes a system of locational marginal prices (LMP) as part of MRTU, and after sufficient LMP price data have been accumulated, it will be possible to incorporate the value of DR programs in avoiding transmission congestion costs by calculating avoided energy costs on a locational basis. (This will also incorporate the local value of reducing transmission losses.) Utilities should plan to incorporate any such locational value beginning with the 2012-2014 DR program cycle, presuming adequate information exists by that time.

The CAISO supports and appreciates this statement. However, rather than merely accumulating data, the CAISO urges the Commission to be proactive and recommend that the IOUs actively explore, in 2009, how to incorporate locational pricing into the CE evaluation into the next DR program cycle. Next year is a good starting point for this discussion, as MRTU will be underway, and we anticipate that meaningful data will be available for use in this evaluation.

Section 2.E.h Market benefits

At page 15 of the Staff Protocols, the discussion of market benefits states that:

For the interim DR protocols, however, we are directing utilities to base capacity benefits on the cost of a simple cycle CT unit, and not the market price of capacity. (Staff Protocols at p. 15.)

The CAISO repeats its concern voiced in the Reply Comments filed November 19, 2007 on CE Issues, that discussion of the CT proxy is not sufficiently detailed:

First, the CAISO does not have a full understanding of what the “proxy CT” is supposed to be. What will its configuration be? For example, is the proxy CT an LM6000 or a GE Frame 7? What about the other underlying attributes, such as the heat rate of the resource? What is the process for vetting and deciding on the properties of the proxy resource (or resources, if there is a different one for each IOU)?⁴

The Framework Proposal recommends use of “utility specific data” and also talks about an apparent standard CT proxy. These concepts seem contradictory or, at minimum, indicate that the parties need to further clarify the Framework proposal on these issues. For instance, would the utilities use a single standard CT as a proxy, or would each utility “construct” a model CT “best suited” to its service territory? What CT attributes or cost components will be a standard value that is the same for all utilities and what CT attributes or cost components will be utility specific.⁵

The CAISO suggests that the Staff Protocols specify further detail for the proxy CT or state that it is the obligation of the IOU to set forth such details in any proposed application for DR program approval when the application is presented to the Commission.

⁴Reply Comments of the California Independent System Operator Re Additional Cost-Effectiveness Issues for Phase 1, filed December 7, 2008, at p. 5.

⁵ *Id.*

Dated: April 25, 2008

Respectfully submitted,

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CERTIFICATE OF SERVICE

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Executed on April 25, 2008 at Folsom,
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//s// Susan L. Montana

Susan L. Montana,
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