BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking To Enhance the Role of Demand Response in Meeting the State's Resource Planning Needs and Operational Requirements.	Rulemaking 13-09-011 (Issued September 25, 2013)

SIERRA CLUB'S REPLY TO DECEMBER 13 RESPONSES TO PHASE TWO FOUNDATIONAL QUESTIONS

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I. INTRODUCTION

The Sierra Club is pleased to submit the following reply comments addressing the parties' December 13 Responses to Foundational Questions presented in Attachment One to the *Joint Assigned Commissioner and Administrative Law Judge Ruling and Scoping Memo* issued November 14, 2013.

Our comments focus primarily on bifurcation and cost allocation. As to bifurcation, we suggest that it may help to distinguish between conceptual issues underlying bifurcation, and semantic issues regarding the terms used to describe bifurcation. As a conceptual matter, we recommend that bifurcation be based on the characteristics of demand response resources, not on conclusions about how the Commission should treat future demand response services – and we caution against deciding important policy issues through any definitions that are adopted at this early stage. As a semantic matter, we favor using terms similar to those offered by ORA that distinguish "load-modifying" resources from "supply-like" resources, characterized further on page 6, below.

Regarding cost allocation, Sierra Club generally concurs with parties who recommend that the cost of any demand response program should be allocated among groups of energy consumers according to the benefits that each receives from that program.

Finally, Sierra Club urges the Commission to consider the recommendations of the Natural Resources Defense Council and Environmental Defense Fund regarding pilot programs to retrofit, retire, or replace the dirtiest, pre-2000 fossil-fueled backup generators, and replace fossil-fueled backup generators with clean energy storage technologies.

II. SIERRA CLUB'S REPLY COMMENTS

1. Bifurcation

The Commission's foundational questions regarding bifurcation elicited a variety of responses. Sierra Club appreciates the opportunity to reply to other parties' responses on this important subject and summarize our recommendations, which were informed by those responses.

a. Conceptual issues relating to bifurcation

While the parties agreed on many of the concepts underlying bifurcation, the responses also revealed some areas of disagreement and even some confusion when all of the comments are read together. The confusion arises from a fundamental question: ***Should the basis of the bifurcation be descriptive or normative?*** In other words, should bifurcation divide demand response resources into two categories based on resource characteristics (descriptive), or based on the way the Commission will treat demand response services in the future (normative)? Most parties took one approach or the other; some combined both.

Commenters using the descriptive approach include, among others, ORA, PG&E, and Sierra Club. These parties recommend defining the bifurcation categories based on the characteristics of each demand response resource. Each party proposes a different basis for bifurcation, but they share the feature that bifurcation does not, ***per se***, determine how the Commission will treat resources in the category. Rather, the treatment of demand response resources in either category will follow from policy decisions made by the Commission based on the record in this proceeding.

The normative approach to bifurcation is exemplified by CAISO's comments. The ISO first maintains that resources should be categorized as either supply-side or demand-side services, based on whether the resource can be dispatched. CAISO then submits that all supply-side services should be bid into its markets; that demand-side resources are those not bid into CAISO markets; that supply-side resources should not be "withheld" from the market or offered by LSEs; and that certain cost allocation principles should apply to demand response offered by LSEs. In so doing, CAISO proposes answers to some of the key policy questions in this case through its bifurcation recommendations.

Sierra Club respectfully recommends that the Commission not settle all policy issues, at this early stage, through the process of defining the bifurcation categories. This four-phased proceeding is intended to explore how and through what combination of entities demand response can best be deployed to enhance its role in energy planning and operations. As the Commission noted in the OIR, non-utility-centric demand response delivery models, such as ISO acquisition of demand response, deserve consideration. (OIR at p. 9). Sierra Club believes that

the degree of integration into ISO markets is one of the most significant issues facing the Commission in this proceeding, and should be carefully considered based on a record which has yet to be fully developed here.

Parties suggesting a normative approach to bifurcation raise at least three allied policy issues: (i) whether all "supply-side" DR resources should be required to be bid into CAISO markets; (ii) whether cost allocation should be determined by the category to which a DR resource is assigned; and (iii) whether all DR resources within a given category should be treated in exactly the same manner.

Sierra Club submits that these are the questions the Commission should endeavor to answer as the record develops in this proceeding, and that it should not decide them through the process of defining terms at the outset. Therefore, Sierra Club urges the Commission to make clear that classifying resources for bifurcation purposes does not determine their final status or regulatory treatment. In particular, classifying a resource as "supply-side" should not (by definition) preclude a utility from offering a related service, at least not until the Commission has decided that question based on facts presented in this docket. This second phase of the proceeding should be dedicated to deciding the "shape of the table," not the outcomes of disputed issues.

PG&E made this point clearly in its comments: [1]

> After the definitions for supply-side and demand-side DR are finalized, the next question to be addressed is what existing programs, if any, should be migrated into the wholesale market. The decision on what DR programs (or parts of programs) are deemed supply side rather than demand-side should not be predetermined by this process . . .꿹□ɳ

With respect to the definition of bifurcation, most of the parties' positions appear to coalesce around a description of resources being either "load-modifying" or "supply-like," although there are many nuances. CAISO offered one of the clearest statements of this concept:

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[1] *Response of Pacific Gas And Electric Company to Joint Assigned Commissioner and Administrative Law Judge Ruling and Scoping Memo* ("PG&E Response"), p. 5. PG&E defines "supply-side" as "bid into CAISO." However, this is not the normative position that all dispatchable DR resources must be bid into the ISO: it merely defines the "supply-side" category. PG&E suggests that the decision whether a resource is "supply-side" (i.e., is bid into the ISO) is a business decision made by the DR provider and others.

> …fundamentally a **demand-side resource** is a resource that reshapes the net load curve.
>
> A **supply-side resource** is a resource that can be scheduled and dispatched when needed, where needed, and for a megawatt amount needed. [ISO at 4, 6; emphasis added.]

ORA offered a near-equivalent formulation:

> **Demand-side DR programs** should be defined as *load modifiers that change the load shape and are embedded in the California Energy Commission's (CEC) load forecast that system operators are required to plan for and meet.*
>
> **Supply-side DR programs** should be defined as *programs that are used as resources to meet the demand forecast and can meet local and system resource planning and operational requirements.* [ORA at 1, 2; emphasis added.]

In its December 13 Response, Sierra Club offered two approaches for bifurcating DR resources. First, we described a scheme that distinguished DR resources used to serve system operations from those that target consumer behavior: essentially the same approach described by the Commission in the OIR. We suggested the terms "DR-C" (customer) and "DR-S" (system) for these categories to avoid confusion that could arise from using the term "demand-side." Our second alternative was similar to the distinction PG&E made: classify resources based on whether they were amenable to acquisition using market mechanisms.

Although we continue to think that either of these approaches is viable, having considered all the parties' responses, Sierra Club recommends that the bifurcation emphasize the "load-modifying" characteristics of some DR resources, as described in ORA's comments: the first category of DR resources consists of load-modifying programs included in the CEC load forecast; the second category consists of resources that can be scheduled and dispatched to meet planning and operational requirements.

b. Semantic issues relating to bifurcation

Several commenters noted the potential confusion created by using the terms "demand-side" and "supply-side" for the bifurcation. They observed that ***all*** DR is demand reduction and emanates from the customer (demand) side of the electric meter. Labeling some DR resources as "demand-side" could imply that other DR resources are somehow not related to customer demand, when all manifestly are related to customer demand. The Joint DR Parties suggested the use of "retail" and "wholesale" to describe DR offered by the LSE, versus DR acquired in the market by

the ISO. CAISO criticized that concept, arguing that wholesale/retail is not meaningful in this context. Several parties, including PG&E, Joint DR Parties and SCE, recommend against using the term "customer-focused" to distinguish types of demand response resources, since all of them directly involve customers.

In its December 13 comments, Sierra Club suggested using the terms "DR-C" (customer) and DR-S (system). We think these labels are still viable names for the categories. However, if the Commission chooses to bifurcate along the lines of ORA's definitions, then Sierra Club recommends using "Load-Modifying DR" and "Supply-Like DR" or similar terms to describe the categories, or simply shortening those to "Load DR" and "Supply DR" for convenience. As discussed above, the definitions of these terms should not determine either the market structure for offering these resources, or the specific cost allocation method used to recover their costs. Nor should bifurcation by itself answer the question of whether all resources within a category must be treated identically.

c. Summary of Bifurcation Recommendations

The following table summarizes Sierra Club's recommendations, based in part on parties' responses to the Commission's foundational questions. The table adopts ORA's definitions of the bifurcation categories, recommends using the names "Load DR" and "Supply DR", and lists some of the characteristics of the resources in each category. Importantly, the "Characteristics" are observed qualities of DR resources in each category, not additional defining terms.

Bifurcation of DR Resources		
Category Name:	**Load DR**	**Supply DR**
Definition:	Load modifiers that change the load shape and are embedded in the CEC load forecast	Resources used to meet local and system resource planning and operational requirements
Characteristics:	Typically not dispatchable	Dispatchable
	Affects the net load forecast	Used to meet actual load in real time on day of operation
	Not offered through ISO	May be offered at either system (ISO) level or utility level
	Cost allocation to be determined	Cost allocation to be determined
	CPUC jurisdictional	Either CPUC or FERC jurisdictional
	Acquired by utilities from customers or aggregators and deployed at the utility level	Either acquired and deployed by utilities at the utility level or acquired and deployed at the system level by the ISO through market operation

d. Value of Moving DR to CAISO

In addition to bifurcation, another, closely related issue arose in many of the comments: What are the advantages and possible disadvantages of moving many of today's demand response programs from utility provision to acquisition in an ISO wholesale market? This is an important question that should be decided in this proceeding.

At the most general level, Sierra Club agrees with TURN's view that the purpose of bifurcation should be to lower total capacity procurement costs and improve the performance of demand response programs. The goal should not be market competition ***per se***; the goal should be to identify regulatory and market changes that maximize the amount of cost-effective DR deployed in California, and that ensure appropriate compensation for all types of DR. Moving programs to the CAISO ***may*** be the best vehicle for this optimization, but we expect some trade-offs. As TURN expressed it, "[t]he benefits of CAISO market participation must be weighed against potential reductions in available demand response capacity that cannot participate in CAISO markets but might still provide value in displacing generation capacity."[2]

Several parties identified some of the often-cited benefits that may accrue from moving "supply-like" DR resources to the CAISO-administered market. These include: 1) improved CAISO operation, given the improved "visibility" of DR; 2) an increase in efficiency of DR use given CAISO's view into the entire grid; [3] 3) "price discovery" for DR, resulting from an explicit bidding system; and 4) head-to-head competition between some DR products and generation resources.

Several parties also identified the risks of moving "supply-like" DR resources to the CAISO-administered market. These risks include: 1) loss of DR resources that are unable to meet ISO requirements[4]; 2) reduced customer options for providing DR; 3) reduced focus on "load-modifying" DR; 4) loss of local grid benefits associated with DR resources; and 5) loss of CPUC jurisdiction over DR resources.[5] Barriers to fully-functioning CAISO DR markets

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[2] *Responses of the Utility Reform Network to Phase Two Foundational Questions Concerning Bifurcation and Cost Allocation* ("TURN Response"), at p. 5.

[3] *Response of the California Independent System Operator Corporation to the Phase 2 Foundational Questions* ("CAISO Response"), at p. 10.

[4] TURN Response, at p. 5.

[5] PG&E Response, at p. 10.

were also identified, including: 1) the energy-only structure of CAISO payments[6]; 2) the need for improved market design; 3) the need for consumer education[7]; and 4) the development of aggregators.[8]

To determine whether these potential advantages, disadvantages and barriers are real and how to address them, the Commission will need to draw on empirical evidence offered in this proceeding. Sierra Club recommends strongly that the Commission consider the experience with wholesale DR markets in other ISOs, especially PJM and ERCOT. The Commission must also consider carefully how other ongoing dockets will affect the issues in this rulemaking. These include Rule 24 and the joint CPUC Staff/CAISO efforts to develop the Joint Reliability Framework To Develop Multi-Year Resource Adequacy Obligations.

In sum, Sierra Club recommends that bifurcation be descriptive rather than normative, using descriptions similar to those offered in Table 1 above; that classifying resources for bifurcation purposes should not determine their final status or regulatory treatment; and that the goal of any bifurcation, and of this proceeding overall, should be to identify regulatory and market mechanisms that maximize cost-effective DR and compensate it appropriately, regardless of category.

2. Cost Allocation

a. *Current policy requires the utilities to identify, in their demand response applications, the rates used for cost recovery of each program and the justification for that rate. What, if any, additional information should the Commission require to ensure equitable cost allocation and why?*

Sierra Club generally concurs with SDG&E, ORA and others that the cost of any demand response program should be allocated among groups of energy consumers according to the benefits they receive from that program.[9]

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[6] *Joint DR Parties Response On Phase 2 Foundational Questions* ("Joint DR Parties Response"), at p. 16.

[7] *Southern California Edison Company's Responses to Phase Two Foundational Questions* ("SCE Response"), at p. A-5.

[8] Compare the list of "Curtailment Service Suppliers" identified by PJM at http://www.pjm.com/markets-and-operations/demand-response/csps.aspx.

[9] For cost allocation purposes, we put aside the costs and benefits accruing individually to the customers who deliver demand response services to the utility or the CAISO (whether characterized as demand-side, supply-side, or something else), which arguably involve rate design or competitive considerations rather than the cost allocation considerations that this question raises.

To put this "beneficiaries pay" principle into practice, the Commission should require utilities to provide additional information so that it can more accurately assess the costs and benefits of demand response programs, regardless of how such programs are characterized for bifurcation purposes. Specifically, we agree with PG&E that more information may be necessary to understand the types of costs incurred and recovered via existing balancing accounts; the types of benefits (e.g., peak capacity reduction, local reliability, etc.) conferred; and the value of those benefits realized by different customer groups (e.g., bundled customers versus customers served through direct access or community aggregation).[10] More comprehensive and detailed information on these topics will help the Commission determine whether the projected benefits from demand response programs are realized; ensure that rate recovery accurately reflects the value of those realized benefits; and set appropriate incentive levels for utilities.[11]

In their December 13 responses, some parties suggested that program costs should be allocated only to the IOUs' *bundled customers* or to customers *eligible for* or *participating in* specific demand response programs, rather than to all customers who *realized benefits* from those programs.[12] We respectfully disagree. To be sure, demand response programs provide significant benefits to participants by offsetting their electricity costs. However, offsetting participants' costs is not the programs' primary purpose, nor their only impact. Demand response programs reduce peak system demand and wholesale energy procurement costs, and increase local system reliability. As others have pointed out, these critical benefits accrue not only to program participants or to the IOUs' bundled customers, but to all consumers who use transmission and distribution services. Reduced capacity prices in the wholesale market, for example, benefit all customers who receive power from resources procured in the market. The value of this and other benefits may vary depending on the type of demand response program, the customer's location in the system, the conditions for dispatch, and other factors – but these variables go to the question of *how* costs should be allocated, not *whether* they should be allocated to non-participating customers.

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[10] PG&E, p. 15.

[11] As urged by EDF (p. 13) and SDG&E (p.8).

[12] *See, e.g.*, AReM/DACC (pp. 5-,9), SCE (p. A-7), MEA (p. 9).

b. *If the Commission bifurcates the demand response programs into demand-side and supply-side, does it need to revise its cost allocation requirements in order to ensure equitable allocation? How and why?*

As the above discussion suggests, the Commission might need to revise its cost allocation requirements based on the information it collects about the kinds of costs and benefits associated with particular demand response programs, and how their value flows to differently situated grid users. Such revisions will not necessarily result from bifurcation (however implemented), but from the factors described above.

In their December 13 responses to the foundational questions, CAISO and AReM/DACC maintained that the proposed bifurcation into supply- and demand-side programs would dictate revised cost allocation requirements.[13] CAISO proposed one alternative that would limit cost allocation to IOU program participants or bundled customers. AReM/DACC similarly argued that the costs of both "supply-side" and "demand-side" DR programs must be recovered through the IOUs' generation rates – i.e., from bundled customers and not from direct access or community aggregation customers – because supply-side market participation is "equivalent" to that of generation resources, and demand-side DR programs are available only to bundled customers. Because we believe that costs imposed should reflect benefits received, rather than "generation equivalence" or program eligibility, Sierra Club respectfully disagrees with this approach.[14]

c. *In resource adequacy procurement, costs are allocated across the LSEs. If the Commission bifurcates demand response programs into demand side and supply side, should costs for supply-side procurement be allocated in the same fashion as resource adequacy procurement? If not, recommend other frameworks?*

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[13] CAISO (pp. 11-14), AReM/DACC (p. 6-10).

[14] We must also disagree with AReM/DACC's assertion (*id*, at p. 10) that "[t]he Commission has … already determined that proper cost allocation for demand -side DR programs requires the associated costs to be recovered through utility generation rates," citing D.12-12-004. In that decision the Commission found it unreasonable to assign costs related to SDG&E's dynamic pricing tariffs to direct access customers not eligible for those tariffs *"based solely on indirect societal benefits."* (p.52). Here, the benefits at issue (e.g., peak demand reduction, reduced wholesale prices, local reliability, etc.) accrue directly to some or all transmission and distribution customers in their capacity as such. Moreover, D.12-12-004 found that SDG&E's tariff costs "do not significantly benefit" other LSEs' customers (p.53), a factual question on which no evidence has yet been produced here. Finally, D.12-12-004 distinguished another case on which SDG&E relied because it involved "the costs of demand response programs rather than dynamic rates" (p.54), implying that different treatment might be appropriate for demand response programs.

In our December 13 response, Sierra Club suggested that absent clear reasons to do otherwise, the Commission should treat the costs of demand response measures the same way it treats the cost of generation supply. With the benefit of other parties' responses to the Commission's foundational questions, it appears that there may in fact be clear reasons to treat the cost of the measures differently in some cases. Specifically, in cases where treating supply-side demand response procurement costs (however defined or labeled) the same way as generation costs would enable customers who receive demonstrable benefit from those demand response program expenditures to avoid paying a roughly proportionate share of the cost, the principle that cost allocation should reflect the benefits realized would be undermined. Therefore, a different treatment of supply-side procurement costs would be justified.

3. Back-up Generators

b. If the Commission bifurcates demand response programs, how should the Commission develop rules that are consistent with the D.11-10-003 policy statement?

As discussed in our December 13 response comments, Sierra Club maintains that the Commission's policy against the use of fossil-fueled back-up generation as part of demand response programs for resource adequacy purposes, as announced in D.11-10-003, should apply regardless of whether the Commission bifurcates demand response resources to ensure consistent treatment for loading order and resource adequacy purposes. In their respective comments, the Natural Resources Defense Council proposes a "retrofit, retire or replace" pilot program aimed at the dirtiest, pre-2000 BUGs, which includes replacement with storage technologies, and Environmental Defense Fund recommends a pilot to examine replacing fossil-fueled back-up generation with clean energy storage, networked into the grid. Sierra Club supports the consideration of these pilots.

III. CONCLUSION

Like other commenters, Sierra Club strongly supports the Commission's efforts to more fully develop the demand response resources of California electricity consumers. The loading order wisely lists these resources as preferred, and the Commission is correct to look at a

spectrum of ways to optimize them. Sierra Club hopes that its December 13 Response and the foregoing Reply are helpful to the Commission in preparing its February decision in this phase of the rulemaking. By carefully setting the parameters of the proceeding in its decision on foundational questions, the Commission will focus the parties' efforts on the significant issues in this case. We look forward to providing input on those issues as th is important case proceeds.

Respectfully submitted,

/s/ *John Nimmons*
COUNSEL FOR SIERRA CLUB

VERIFICATION

I am the attorney for Sierra Club in this proceeding. Sierra Club is not located in the County of Marin, California, where I have my office, so I make this verification for that reason.

The foregoing:

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has been prepared and read by me and its contents are true of my own knowledge and based on information furnished by my client and its expert(s) which I am informed and believe to be true. I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 31, 2013, at Mill Valley, California.

/s/ *John Nimmons*
COUNSEL FOR SIERRA CLUB