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 (Filed September 19, 2013)

INITIAL BRIEF OF THE SIERRA CLUB AND THE NATURAL RESOURCES DEFENSE COUNCIL

Susan Stevens Miller
Earthjustice
1625 Massachusetts Ave., N. W
Suite 702
Washington, DC 20036
202.797.5246
smiller@earthjustice.org

COUNSEL FOR SIERRA CLUB

Lisa Xue
Sustainable Energy Fellow
Natural Resources Defense Council
111 Sutter Street, 20th Floor,
San Francisco, CA 941014
415.875.8211
lxue@nrdc.org

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I. Introduction

The Sierra Club and the Natural Resources Defense Council (NRDC) respectfully submit the following initial brief in response to the California Public Utilities Commission's (Commission) "E-mail Ruling Revising Schedule," R.13-09-011, issued on July 31, 2014. This initial brief addresses the participation of stationary fossil-fueled back-up generators (BUGs), a phase 2 "foundational" issue identified by the Commission.[1]

In order to scale demand response (DR) in an environmentally responsible manner, the Commission must ensure that the necessary safeguards are in place to maintain truly clean DR programs. As a preferred resource in California's loading order,[2] DR should be capable of not only helping to balance supply and demand, but doing so in an efficient and clean manner. The participation of stationary fossil-fueled BUGs as a potential demand response resource is thus rightly determined by the Commission to be a foundational issue.[3] This brief focuses on the

[1] Joint Assigned Commissioner and Administrative Law Judge Ruling and Scoping Memo, R.13-09-011 (issued November 14, 2013) ("Scoping Ruling").
[2] *See* State of California, *Energy Action Plan, 2008 Update*, at 1 (Feb. 2008), http://www.cpuc.ca.gov/NR/rdonlyres/58ADCD6A-7FE6-4B32-8C70-7C85CB31EBE7/0/2008_EAP_UPDATE.PDF ("Loading Order").
[3] Scoping Ruling at 9.

initial step necessary to achieve the Commission's long standing intent, as more fully described below, of limiting or ending the use of BUGs as a part of any DR program.

The Sierra Club and the NRDC recommend that the Commission adopt a rule requiring utility contracts governing DR resources to simply state whether the potential DR provider has a fossil-fueled back-up generator and to provide the make, model and location of that BUG if they do own or operate this type of generator. The contract should also provide that if the demand response customer currently does not own or operate a BUG but obtains one during the contract period, it will notify the utility. With regard to aggregators or third parties, they should be directed to provide this information to the utility. The third parties or aggregators may collect this information in any reasonable manner, including the contractual provisions described above. By acting to gather this baseline information, the Commission will be better equipped to understand and act on BUGs as they relate to DR, in a manner consistent with the Commission's long standing policy position.

II. Procedural Background

On September 19, 2013, the Commission initiated Rulemaking (R.) 13-09-011 to enhance the role of DR in meeting California's resource planning needs and operational requirements.[4] The Commission initiated the rulemaking in large part to determine whether and how to bifurcate current utility-administered, ratepayer-funded DR programs into demand-side and supply-side resources in order to aid DR as a utility-procured resource, competitively bid into the California Independent System Operator (CAISO) wholesale electricity market.

On November 14, 2013, the assigned Commissioner and Administrative Law Judge (ALJ) jointly issued the Scoping Ruling that set forth the procedural schedule and scope of

[4] Role of Demand Response in Meeting the State's Resource Planning Needs and Operational Requirements, R. 13-09-011 at 14 (issued Sept. 19, 2013)("DR OIR").

issues. The Scoping Ruling established a four-phased approach with Phase One dealing with bridge funding issues, Phase Two addressing foundational issues, Phase Three covering future demand response program design, and Phase Four developing a DR road map.[5] The scope of issues for Phases Three and Four were left to be determined in a later ruling.

On March 27, 2014, the Commission issued a decision on the Phase Two foundational issues.[6] By that decision, the Commission determined that DR programs should be bifurcated into load modifying resources and supply resources, that a proposal for a demand response auction mechanism (DRAM) would be provided in a future ruling, and that other foundational issues including BUGs would be addressed in future decisions.[7]

On April 2, 2014, the Assigned Commissioner and ALJ issued their joint ruling providing a Revised Scoping Memo for Phases Two and Three (April 2 ACR).[8] The April 2 ACR identified the scope of the remaining Phase Two ("foundational") issues and the scope of Phase Three. The remaining Phase Two issues included: a review of cost allocation/cost recovery, the use of fossil-fueled back-up generation for demand response, and revisions to the cost-effectiveness protocols.[9] Parties were directed to address the issues identified in their testimony

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[5] *Id.*
[6] Decision Addressing Foundational Issue of the Bifurcation of Demand Response Programs, D.14-03-026 (issued March 27, 2014).
[7] *Id.* at p. 2, 23-25.
[8] Joint Assigned Commissioner and Administrative Law Judge Ruling and Revised Scoping Memo Defining Scope and Schedule for Phase Three, Revising Schedule for Phase Two, and Providing Guidance for Testimony and Hearings, R.13-09-011 (issued April 2, 2014).
[9] April 2 ACR, at p. 3, 6. The Phase Three issues were divided into the following topic areas: Goals for Demand Response, Resource Adequacy Concerns, CAISO Market Integration Costs, Supply Resources Issues, Load Modifying Resources Issues, and Program Budget Application Process. April 2 ACR, at p. 4-6. In addition, the April 2 ACR included the proposed DRAM in Attachment B to that ruling.

to be served in May 2014.[10] The questions posed in the Scoping Ruling included the following questions regarding back-up generators:[11]

3. BACK-UP GENERATORS

a. In D.11-10-003, Conclusion of Law No. 5 states, "fossil-fueled emergency back-up generation resources should not be allowed as part of a demand response program for resource adequacy purposes." The decision required the utilities to work with Commission staff to identify data regarding the use of back-up generators. The Utilities shall provide a description of data they have on customer back-up generator usage in demand response programs. We request other parties to share this information as well.

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?

Several parties, including the Sierra Club and the NRDC, filed comments on the BUGs issues.

Prior to the start of the evidentiary hearing, the ALJ determined, in response to input from the parties, that a portion of that week should be devoted to workshops on certain topics, rather than hearings. On June 9, 2014, the ALJ conducted a limited evidentiary hearing. The evidentiary hearing was then recessed to commence workshops that continued through June 11, 2014. The topics addressed at the workshops included BUGs, CAISO integration costs, characteristics of load modifying versus supply resources, demand response goals, DRAM, and the interplay of DRAM with Resource Adequacy (RA).

On June 12, 2014, after a second brief evidentiary hearing, a settlement discussion, pursuant to Rule 12, commenced. On August 4, 2014, a motion for adoption of settlement agreement was filed by nineteen parties.[12] While the settlement agreement resolved many of the

[10] Attachment A of the April 2 ACR provided guidance for that testimony in the form of questions on each Phase Two and Phase Three issue.
[11] Scoping Ruling at Attachment 1, p. 3.
[12] Sierra Club is a party to the settlement agreement. Motion For Adoption Of Settlement Agreement Between And Among Pacific Gas And Electric Company, Southern California Edison Company, San

remaining issues, the three remaining Phase Two issues, including the issue of the use of fossil-fueled back-up generators,[13] were not included in the settlement agreement.

III. Argument

In the last decade, the deployment of BUGs has increased throughout the state. A study completed in 2002 estimated that there were more than 16,000 diesel generators in California, of which roughly 11,300 were stationary BUGs. A more recent BUG "census" completed in 2012 by the California Air Resources Board (CARB) estimated that over 20,000 BUGs (stationary and mobile engines) were in existence.[14]

Diesel exhaust contains or creates nitrogen oxides (NOX) and volatile organic compounds, both precursors to ground-level ozone, or smog; carbon monoxide (CO); particulate matter (PM) and carbon dioxide (CO2).[15] A 2013 study that compared criteria pollutant emissions scenarios of BUGs versus peaker plants during times of peak load in the Bay Area showed that even a miniscule number of BUGs used to meet DR load reductions could result in DR being far dirtier than the peaking resources it is meant to avoid. A typical Bay Area BUG emits about 4 times as much CO2; 8 times as much PM; 12 times as much CO; 94 times as much NOX; and 286 times as much SOX as a typical ultra-marginal California natural gas peaker plants per unit of energy. Put another way, if less than a fraction of a percent (0.35%) of peak

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Diego Gas & Electric Company, California Independent System Operator Corporation, Office Of Ratepayer Advocates, The Utility ReForm Network, California Large Energy Consumers Association, Consumer Federation Of California, Alliance For Retail Energy Markets, Direct Access Customer Coalition, Marin Clean Energy, Enernoc, Inc., Comverge, Inc., Johnson Controls, Inc., Olivine, Inc., Energyhub/Alarm.Com, Sierra Club, Environmental Defense Fund, and Clean Coalition On Phase 3 Issues, R.13-09-011 (filed August 4, 2014).

[13] April 2 ACR, at p. 6.

[14] Response by the NRDC to Phase Two Foundational Questions, R.13-09-011 at p.3 (filed December 13, 2013), *citing* Huffaker, E. (2013) Not All DR Created Equal: Assessing the Role of Backup Generation in Demand Response. UC Berkeley.

[15] Response by the NRDC to Phase Two Foundational Questions, R.13-09-011 at p.3-4 (filed December 13, 2013), *citing* Ryan, N., Kate M. Larsen, Peter C. Black (2002) Smaller, Closer, Dirtier: Diesel Backup Generators in California. Environmental Defense Fund. Available at http://www.edf.org/sites/default/files/2272_BUGsreport_0.pdf.

load generation were displaced by BUGs, the resulting emissions of SOX would be worse than the peak load generation fleet.[16] According to the most recent comprehensive study on BUGs in California, 45% of respondents who represented enrolled participants in utility emergency DR programs, e.g., Critical Peak Pricing and Base Interruptible Programs, reported having a BUG on-site. About one third of the customer respondents of the study said they had used a BUG for a demand response event.[17]

For over ten years, the Commission has consistently held it is inappropriate to use fossil-fueled back-up generation for DR. In a 2002 DR rulemaking, the Commission developed a vision statement with the California Energy Commission (CEC) and the Consumer Power and Conservation Financing Authority.[18] The vision statement listed three main objectives for DR, one of which was environmental protection,[19] and expressly states: "(t)he Agencies' definition of demand response does not include or encourage switching to use of fossil-fueled emergency backup generation, but high-efficiency, clean distributed generation may be used to supply on-site loads."[20] In 2003, these agencies adopted an Energy Action Plan[21] that proposed specific actions to ensure that adequate, reliable, and reasonably priced electrical power and natural gas supplies are achieved and provided through policies, strategies, and actions that are cost-effective and environmentally sound.

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[16] Response by the NRDC to Phase Two Foundational Questions, R.13-09-011 at p. 3-4 (filed December 13, 2013), *citing* Huffaker, E. (2013) Not All DR Created Equal: Assessing the Role of Backup Generation in Demand Response. UC Berkeley.

[17] Opening Testimony of the Natural Resources Defense Council on Phase Two Remaining Issues and Questions at p. 2 (filed May 6, 2014), *citing* KEMA (2010) *California Statewide Process Evaluation of Selected Demand Response Programs*. Prepared for the Demand Response Measurement and Evaluation Committee (DRMEC) on behalf of San Diego Gas & Electric Company, study ID: CPU0025.01.

[18] R.02-06-001. This vision statement is entitled California Demand Response: A Vision for the Future (2002-2007).

[19] The other two main objectives were: reliability and lower power costs.

[20] D.03-06-032, Attachment A at 2 (Emphasis in original).

[21] State of California, Energy Action Plan, available at http://docs.cpuc.ca.gov/published/REPORT/28715.htm.

In D.05-01-056 (approving the IOUs 2005 DR programs and budgets), the Commission addressed two back-up generation-related DR programs for which Pacific Gas & Electric (PG&E) and San Diego Gas & Electric (SDG&E) requested funding. With regard to the proposed programs the Commission stated:

> These two programs are extremely troubling because they are not true demand reduction programs. Instead, they reduce demand on the utility system by shifting load to an onsite generation source. Thus, although they do result in a short term reduction to the grid, there is no net demand reduction occurring as a result of them… We continue to fail to see how a program that increases generation can be characterized as demand response, so we make no changes.[22]

The Commission rejected PG&E's 2005 plan for the back-up generation program "because it promotes reliance on diesel generators as part of California's resource mix, in contrast to the Energy Action Plan's loading order preference."[23]

Similarly, in D.06-11-049, the Commission denied PG&E's request for demand response funding to retrofit existing customer-owned diesel back-up generators. This decision states:

> Our objective in funding demand response programs is to reduce system demand, not to substitute system electricity with electricity generated by off-grid natural gas facilities. We previously found in D.05-01-056 that back-up generation is not a true demand response resource. As TURN states, counting a [Back-up Generation] program as demand response would 'turn the Commission's preferred resource loading order on its head.' We, therefore, deny PG&E's request to initiate a [Back-up Generation] program.[24]

The 2008 Updated Energy Action Plan[25] established a Loading Order, which in part ranks preferred energy resources for California. DR is one of the highest priority resources (with

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[22] D. 05-01-056, pp. 47-48.

[23] See D.05-01-056 at 48-49. While the Commission approved SDG&E's program for 2005, it affirmed that such programs should not be funded through the demand response budget in future years. *Id.* at 48.

[24] See D.06-11-049 at 58, citing TURN Opening Comments in A.05-06-006 et al. at 15.

[25] State of California, *Energy Action Plan, 2008 Update* (Feb. 2008).

energy efficiency) in the Loading Order "followed by renewable resources, and only then in clean conventional electricity supply."[26]

In D.09-08-027, the Commission once again determined it was not appropriate to use DR allocated funding for back-up generation programs, stating that "[a]s a policy matter, we have already found that subsidizing backup generation with demand response funds is not appropriate; we prefer to reserve these funds for activities that reduce total energy use."[27]

More recently, in D.11-10-003, the Commission determined that "we do not want to allow fossil-fueled emergency back-up generation to receive system or local RA credit as demand response resources...we have consistently stated that demand response programs that rely on using back-up generation were contradictory to our vision for demand response and the Loading Order."[28]

The Commission found that disallowing the use of back-up generation as part of a DR program for RA purposes was consistent with the Loading Order of the Energy Action Plan. The Commission expressly noted that back-up generation typically uses high emitting fossil fuels, which is far below DR according to the Loading Order, which "established that the state, in meeting its energy needs, would invest first in energy efficiency and demand-side resources, followed by renewable resources, and only then in clean conventional electricity supply."[29]

The Commission adopted a policy that any DR program, whether operated by an IOU or non-IOU, that uses back-up generation for demand reduction should not count towards RA obligations for any Commission-jurisdictional LSEs. According to the Commission, this policy is consistent with the Commission's Vision Statement, as well as in prior decisions in the last

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[26] See *Id.* at 1.
[27] See D.09-08-027 at 164 - 166. The Commission reached its determination in rejecting a proposal by BluePoint Energy to recognize back-up generation as demand response.
[28] D.11-10-003.
[29] See D.11-03-001, citing 2008 Updated Energy Action Plan at 1.

three-DR budget cycle proceedings. The Commission found that this policy should apply to both the explicit and implicit use of back-up generation for DR to provide RA capacity.[30]

However, the Commission recognized certain parties' concerns regarding lack of data or analysis to the extent that customers use their BUGs for DR. Therefore, the Commission deferred the RA rule change to a future RA proceeding when further studies or analysis become available.

Importantly, the Commission specifically directed the IOUs to work with Energy Division to identify data on how customers intend to use BUGs, and to identify the amount of DR provided by BUGs when enrolling new customers in the DR programs or renewing DR contracts. The Commission stated that it would defer the details on the process evaluation to the IOUs' 2012-2014 DR applications.[31]

This litany of previous decisions clearly demonstrates the Commission's rejection of BUGs as a DR resource. The intent of the Commission in *D.*11-10-003 was to define DR programs as a preferred, clean resource, consistent with the state's loading order. To date, the Commission's policy has not been implemented due to a perceived lack of information. In response to the scoping memo, the environmental groups demonstrated the need to focus on the tens of thousands of older, dirtier BUGs still in operation, which are contributing a disproportionate share of the most damaging public health air pollutants, namely particulate matter and ozone precursor NOX emissions. None of the arguments put forth by other parties supports the Commission's abandonment of this policy. Rather, parties put forth assertions that

[30]The Commission clarified that "explicit use" referred to any demand response programs that provide financial incentives for customers to retrofit their on-site back-up generation and use it exclusively or mostly to provide demand reduction during a demand response event. The Commission also noted that an example of the "implicit use" would be that the customers signed up for a demand response program and own a back-up generation on site which they may or may use it to provide demand reduction during a demand response event. D. 11-10-003 at p. 29.

[31] D.11-10-003 at p. 30, referring to A.11-03-001 et al.

characterize a decision as to BUGs to be outside the scope of this docket, contrary to the scoping memo and OIR initiating this proceeding.

For example, several parties contend that the use of BUGs is outside of the Commission's jurisdiction and instead the direct responsibility of the California Air Resources Board (CARB) and local air quality management districts.[32] Contrary to these assertions, the Commission's policy is not designed to infringe on other agencies jurisdiction over air emissions. California's DR programs are clearly within the jurisdiction of this Commission. The Commission has the authority to create a DR program designed to meet the criteria set forth in the policy statement and is authorized to determine who should receive payments under that program. The Commission is not restricting when an owner can operate a BUG, the Commission is simply setting forth a policy that the owner will not be paid for operating that BUG under its jurisdictional demand response programs. Although air pollution regulations lie under the authority of other agencies, the Commission has the authority and responsibility to enforce *D.11-10-003* and the Loading Order, and should follow through on implementing this policy with enforceable measures aimed at ensuring that DR in California remains clean.[33] A claim that the Commission has limited jurisdiction as to the DR programs it oversees stands counter to well established law, policy, and decisions noted above.

Despite the Commission's explicit directive that the utilities should determine how to collect the information necessary to implement this policy and begin to collect that information prior to submission of the IOUs' 2012-2014 demand response applications, no sufficient tracking was established to determine the extent to which BUGs are currently being used, either directly

[32] See, for example, CCEC Response, p. 6; CLECA Response, p. 18; SCE Response, p. A-9.
[33] The parties' objections actually are against the policy statement and the myriad of decisions issued by the Commission regarding this policy. Parties' objections should be viewed as out of time requests for rehearing of that policy statement and its implementing decisions.

or indirectly, as part of the DR programs. The utilities contend that maintaining records of BUGs and their usage is not directly within a utility's mandate.[34] However, this Commission, in D.11-10-003, placed the collection of that information squarely with the utilities' mandate and the utilities ignored that directive.[35]

Only by following through on its commitment to collect information on BUGs can the Commission determine the extent of the problem and the best methods to implement its policy. When the customer enrolls in a utility DR program a simple provision could be added to any contract or agreement by which the program participant informs the utility that the participant owns or operates a BUG. If the participant does own or operate a BUG, the participant would simply need to provide the make and model of the generator, as well as its location on the same form. The contract also should provide that if the demand response participant currently does not own or operate a BUG but obtains one during the contract period, it will notify the utility. Aggregators or third parties should be directed to provide the information regarding participants BUG ownership to the uitility. These entites may collect the information in any reasonable manner, including using the same contract provisions that the utilities are directed to use. This information, along with which program the participant is enrolled in, could then be provided by the utility or third party to the Commission. Once the Commission has this information, the Commission and stakeholders will have an informed basis to determine what changes, if any, are needed to the DR program implement the Commission's BUG policy.

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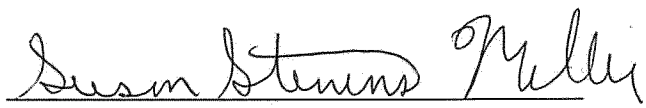
[34] *See, e.g.,* PG&E Comments at 17; SCE Comments, at A9; and SDG&E Comments, at 10. See also Olivine Comments, at 3 ("Maintaining records of BUGs and or their usage is not directly within a utility's mandate").

[35] *See* D.11-10-003 at p. 30. ("We will require the IOUs work with Energy Division to identify data on how customers intend to use BUGs, and to identify the amount of DR provided by BUGs when enrolling new customers in the DR programs or renewing DR contracts").

IV. Conclusion

For over a decade, this Commission's policy has been to prohibit the use of BUGs as a DR resource. However, the Commission thus far has been unable to implement this policy due to a lack of information. To rectify this issue, and better facilitate the achievement of the Commission's long-standing policy goals, the Commission should direct utilities and third parties or aggregators to add a provision to their contracts asking the potential participant if they own or operate a BUG and, if yes, the make and model of that BUG as well as its location. This simple provision will not be burdensome and will enable the Commission to gather the information necessary to begin implementing this important policy and fulfill the goal of scaling DR in an environmentally responsible manner.

Respectfully submitted,



Susan Stevens Miller
Earthjustice
1625 Massachusetts Ave., N. W
Suite 702
Washington, DC 20036
202.797.5246
smiller@earthjustice.org

COUNSEL FOR SIERRA CLUB

VERIFICATION

I am the attorney for Sierra Club in this proceeding. Neither Sierra Club nor the Natural Resources Defense Council is located in Washington, DC, 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 the Natural Resources Defense Council which I am informed and believe to be true. I declare under penalty of perjury that the foregoing is true and correct.

Executed on August 25, 2014, at Washington, DC.

/s/ Susan Stevens Miller
Counsel for Sierra Club