



**FILED**

7-28-16

KHY/ek4 7/28/2016

**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)

**ADMINISTRATIVE LAW JUDGE'S RULING ADDRESSING DRAFT REPORT  
ON JANUARY 13, 2016 WORKSHOP**

**Summary**

This ruling incorporates requested changes from parties, as well as revisions from the Administrative Law Judge, into the "Draft Report on Back-Up Generation Workshop Held on January 13, 2016." Parties may review for final corrections. Requests for corrections should be filed no later than ten days from the issuance of this ruling. If no party files for corrections by the deadline, the attached, "January 13, 2016 Workshop Report: Proposals Regarding Prohibited Resources in Demand Response Programs," dated July 26, 2016, will be the final workshop report.

**Background**

On September 29, 2015, the Administrative Law Judge issued a ruling introducing a proposal from the Commission's Energy Division that laid out a program to prohibit certain resources from participating in the Commission's demand response programs (Staff Proposal). Parties provided comments to the Staff Proposal and requested that the Commission schedule a workshop for parties to discuss the proposal and alternatives.

On January 13, 2016, the Administrative Law Judge held a workshop, during which time the Staff Proposal as well as other alternatives were presented and discussed. In compliance with a December 4, 2016 Administrative Law Judge Ruling, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (SCE) filed a draft workshop report entitled, “*Draft Report on Back-Up Generation Workshop Held on January 13, 2016*” (Draft January 2016 Workshop Report). On January 25, 2016, the following parties requested corrections to the Draft January 2016 Workshop Report: California Large Energy Consumers Association (CLECA), Joint Demand Response Parties, Office of Ratepayer Advocates (ORA), and SCE; no party formally objected to the changes requested by these parties.

### **Discussion**

Accordingly, this ruling incorporates the corrections requested by CLECA, Joint Demand Response Parties, ORA, and SCE into the Draft January 2016 Workshop Report. Other additions and revisions have also been made to ensure a complete capture of the workshop dialogue.

Parties shall have the opportunity to review the additional changes. No later than ten days from the issuance of this ruling, parties may file corrections to the attached, “*January 13, 2016 Workshop Report: Proposals Regarding Prohibited Resources in Demand Response Programs,*” dated July 26, 2016.

If no corrections are filed, the attached, “*January 13, 2016 Workshop Report: Proposals Regarding Prohibited Resources in Demand Response Programs,*” dated July 26, 2016, will be deemed final.

### **IT IS RULED that:**

1. Parties shall file any final requested changes to the attached “*January 13, 2016 Workshop Report: Proposals Regarding Prohibited Resources in*”



**ATTACHMENT 1**

**January 13, 2016 Workshop Report:  
Proposals Regarding Prohibited Resources in  
Demand Response Programs**

**July 26, 2016**

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**  
**DEMAND RESPONSE RULEMAKING (R.13-09-011)**

**JANUARY 13, 2016 WORKSHOP REPORT:**  
**PROPOSALS REGARDING PROHIBITED RESOURCES IN DEMAND**  
**RESPONSE PROGRAMS**

**JULY 26, 2016**

## **Welcome and Overview**

Administrative Law Judge (ALJ) Hymes provided an overview of the steps leading up to the workshop. In a September 29, 2015 Ruling, stakeholders were asked to respond to the Energy Division Staff Proposal (Staff Proposal); parties responded in comments in October 2015. Parties asked for an evidentiary hearing or a workshop to discuss the Staff Proposal. On December 4, ALJ Hymes issued a ruling scheduling this workshop. Parties also had new proposals and asked for an opportunity to present. The October filings were the opportunity to present this, but ALJ Hymes allowed them to be discussed at the workshop. There were multiple proposals submitted in advance of the workshop and/or discussed during the workshop in addition to the Energy Division's proposal:

- Southern California Edison (SCE) Proposal
- Pacific Gas and Electric Company (PG&E)-San Diego Gas & Electric Company (SDG&E) Joint Proposal
- IPKeys Proposal<sup>1</sup>
- Joint Demand Response Parties (JDRP) (presented in October 2015 comments)
- California Large Energy Consumers Association (CLECA) Proposal (also presented in October 2015 comments)

CLECA and the JDRP both stated that, while they did not offer new proposals in advance of the workshop, both wished to address the proposals each had made in comments filed in R. 13-09-011 on October 15, 2015, in response to the Staff Proposal attached to the September 29, 2015 ALJ Ruling.

The JDRPs started the discussion by saying that they are participating in this workshop as an information exchange process, but are not waiving their objections to the overall process, especially since, they contend that the Staff Proposal required modifications to ordering paragraphs in D.14-12-024, which had not been adopted by the Commission and had not been requested in any pending petition for modification. CLECA affirmed that they are in a similar position and have similar concerns to those raised by the JDRPs.

## **Defining Prohibition**

### **Staff Proposal on Prohibited Resources**

Energy Division (ED) staff reviewed Commission policy and found that there has been a clear signal since 2003, in the wake of the energy crisis, for the exclusion of fossil-fueled back-up generation (BUGs) from DR programs. Senate Bill (SB) 1414 from 2014 signals the legislative intent for demand response to reduce greenhouse gases and other pollutants. There are also other issues around double payment and other proceedings that cross over into this issue. The Self-Generation Incentive Program (SGIP) proceeding is currently looking at the dual participation of DR and SGIP resources. There is also SCE's LCR RFO procurement application with its recent decision, where the issue of fossil-fueled Distributed Energy Resources came up. The ED took a broad approach looking at possible proposed prohibited resources, and wanted to look at the

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<sup>1</sup> Though IPKeys was not a party to this proceeding at the time of the workshop, they were permitted to present their proposal during this workshop.

broadest footprint around this problem to understand it clearly, and they provided a matrix in their PowerPoint presentation.

ED staff stated that there has been confusion about the use of the term “BUGs” throughout this proceeding and that might stem from the Commission’s own use of this term. To lay out this clarifying point, initially, ED staff explained that backup generation (hence the term BUG) is a particular form of distributed generation (DG). There are also other fossil-fueled resources that are used in non-backup configuration. According to ED, the term BUGs has been used as shorthand for the resources that are being deemed as prohibited by the Commission rather than just resources that are technically used in emergency configurations.

In Slide 5 of its presentation, ED has taken a layered approach to propose which resources should be prohibited, using a number of criteria. Initially, there was a set of three environmental criteria. ED states the first is the State’s Energy Action Plan Loading Order (and Public Utility Code Section 454.5) which puts energy efficiency and “demand reduction” as first in the loading order and as a preferred resource for IOU’s procurement (under Assembly Bill (AB)57). ED defines DR as a reduction in demand that is not supported by a fossil-fueled resource and contend that the California Public Utilities Commission’s (Commission) policy decisions are clear in that regard. The second environmental criterion is greenhouse gas (GHG) reduction, where again SB 1414 states that DR is intended to reduce GHGs. Third, on public health, SB 1414 discusses “other pollutants” and local area pollutants. Finally, ED staff looked at the extent to which these resources may be getting incentivized by other programs outside DR and the issues around double payment.

Given the criteria laid out, ED proposes to have all fossil-fueled resources prohibited from providing DR (all resources, with the exception of storage, in Quadrants A and C in the matrix on Slides 5 and 5A). These “proposed prohibited resources” include distributed generation technologies using diesel, natural gas, gasoline, propane, or liquefied petroleum gas, in CHP or non-CHP configuration.<sup>2</sup> The reason for this prohibition being that first and foremost the Loading Order, as ED understands it, intends for DR to be an actual reduction in demand, not supported by a fossil-fueled resource. ED also noted that CHP configurations obviously have to be permitted by local air authorities to meet local regulations but there is the possibility that those resources are not being properly permitted.

Energy storage is considered a strategic resource to meet AB2514 storage target and renewable integration, so ED proposes to allow stand- alone storage and storage coupled with renewable generation, but the storage must meet the relevant GHG emissions factor thresholds adopted for the SGIP program.

#### Eligibility of Customers with Proposed Prohibited Resources to Participate in DR Programs

EnerNOC asked for clarification as to whether the ED proposal prohibits DR customers from owning proposed prohibited resources or if the prohibition is on the use of prohibited resources during curtailment events. The ED answered that owning a proposed prohibited resource

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<sup>2</sup> Conventional CHP (Internal Combustion Engine, Micro-Turbine, Gas Turbine, Steam Turbine), Advanced CHP (Waste Heat to Power, Pressure Reduction Turbine)

would not render a customer ineligible to participate in a DR program; using those resources for the purposes of load reduction in DR would be prohibited by the ED proposal.

### Storage

The ED confirmed that to meet AB2514 storage target and renewable integration, stand-alone storage and storage coupled with renewable generation would be allowed, but must meet the relevant GHG emissions factor thresholds adopted for the SGIP program. Stand-alone storage and storage coupled with renewables would be permitted within DR (given they comply with certain GHG standards) because they are an important resource for state policymakers for meeting renewable integration needs and AB – 2514 storage procurement targets. The ED is trying to be as permissive as possible and create market opportunities; however, as mentioned before, they must meet SGIP GHG standards.

SCE asked why grid connected storage is being exempted and how it is different from other fossil fueled resources. ED responded that although the grid currently has some mix of fossil fuel resources, as CA integrates more renewables into the grid, the electricity from the grid becomes cleaner and cleaner, and so stand-alone storage is on a trajectory of becoming cleaner as time goes on. Also, the use of grid power for storing energy does not entail the issue of localized criteria air pollutant like it does for fossil fuel fired DG, because it is being charged from grid power.

Johnson Controls, Inc. (JCI) requested confirmation that storage that received SGIP incentives would be an eligible DR resource. ED responded that all storage systems that meet SGIP GHG standards and are either stand alone or coupled with renewables are permitted in the ED staff proposal. Storage that is coupled with fossil fuel resources is not permitted. The GHG standards are established in the SGIP program. JCI asks if there is a reference point for the SGIP GHG emission standards if they happened to change during the years. ED responded that it has not been specified.

### Waste Heat to Power (Bottom Cycle Combined Heat to Power (CHP))

CLECA claims waste heat to power does not use fossil fuels to convert to power, rather, it is bottom cycle and uses residual heat from very high temperature industrial processes that generate waste heat. That heat has energy that can be used with a turbine, vented, or to pre-heat something, for example, to increase the efficiency of a generator. While it is possible that a configuration could use auxiliary gas-fired generation, it is not often used.

Center for Sustainable Energy (CSE) states that the SGIP program considers waste heat to power renewable, and not subject to GHG standards. Those GHG standards are only for conventional CHP Fuel Cell technologies. ED asked the CSE representative on the phone (CSE is an SGIP program administrator) whether pressure reduction turbines are considered renewable resources, and CSE affirmed it is."

ORA asked whether exempting waste heat to power units would incentivize the participants to modify the configuration in a way that more (waste heat?) is used towards procuring electricity.

CLECA explained that the exemption considers waste heat to power as a bottom cycle CHP that uses waste heat from an industrial process. It is completely different from a topping cycle CHP. These are very capital intensive projects that are only partly paid for with SGIP incentives.

ORA asked whether the exemption on a bottom cycle CHP would incentivize customers to install more of these systems and less of the topping cycle (which would not be exempted). CLECA mentioned that there are limited facilities out there that install waste heat to power technologies and it is because the nature of their industrial process produces waste heat. So it is an inherited nature of the industry.

Southern California Gas Company (SoCalGas) also added that load following is not a viable way to achieve load reduction with the use of waste heat, especially since it is needed for operations and because it is often used to reduce GHGs, so manipulating its use is contrary to that goal.

### CHP

Johnson Controls, Inc. (JCI) commented that cogeneration as well as fuel cells run for many reasons, absent a DR event and with a DR event. Sometimes it is run daily as a part of regular plant operations; DR may be provided from a different part of a facility. The ED responded that basically any regular use of these resources will be factored in the baseline. Per the ED staff proposal, the customer's load drop independent of the prohibited resource generation will be shown as the customer's DR participation and will be compensated. Johnson Controls believes that customers are getting a double hit.

### SGIP

CLECA commented on the limited size of the SGIP program and that it does not cover all fossil fuel resources. SCE asked why the ED is including all other fossil fuel resources (including the resources in the SGIP program). ED responded that the Loading Order has a first tier with EE and DR on an equal footing. Then the second tier has renewable energy and distributed generation. With SGIP we are talking about the "distributed generation" part of the 2<sup>nd</sup> tier resources on the loading order. ED believes that if we are calling something Demand Response we should not be including these second tier resources in DR, which is first in the loading order.

SCE stated that DR is not exactly a technology; it is a participation in the tariff. It is behavioral as opposed to a technology. The ED acknowledged the lack of definition and responded that in the absence of a predefined definition, staff's approach has been to at least define it by what it is not.

### PG&E-SDG&E Proposal

AC cycling and smart thermostat programs should be excluded from enforcement of a prohibition. PG&E's SmartAC<sup>TM</sup> program provides a single payment to a customer that doesn't warrant, economically, any customer to buy their own BUG to bypass the load control technology, assuming there is actually a way to do this. Participants can also opt out of an event or de-enroll from the program without penalty. PG&E has over 150,000 customers (150,000 residential and 5,000 commercial customers) in SmartAC, and it does not look like there is an incentive to do this. SDG&E's AC cycling (Summer Saver) program does not allow customers to bypass it, but customers could drop off the program and their incentive would be disallowed.

The Permanent Load Shifting (PLS) program should be exempt because it has no dispatch instructions – it operates all the time. There is also only marginal participation in the Optional Binding Mandatory Curtailment (OBMC) program, which is triggered when the California Independent System Operator (CAISO) directs the investor owned utilities (IOUs) to drop firm load. At that point, things are going haywire, so any customers that have a BUG should be allowed to use it. PG&E's OBMC program is capped at 10.9 MW and SDG&E terminated its program altogether. The Scheduled Load Reduction Program (SLRP) was legislatively mandated, and neither PG&E nor SDG&E have active customers for this program, so it should be excluded.

The ED stated that it would consider exempting AC cycling programs if it could be verified that bypassing the unit is not possible. In response, PG&E asked that even if it was technically possible and some customers were smart enough to figure it out, whether it was economically worthwhile given the effort involved to enforce and verify the changes ED proposes for so many customers, the small amount of the incentive (\$50 for the residential SmartAC program) relative to a \$300-400 5 kW generator, and the ability to opt-out of an event. SCE concurred, adding that regardless of the financial incentive, people do irrational things at times, such as disconnect the thermostat, but there is still power to the compressor, so such a generator would have no effect on bypassing events. Nest expressed support for the exemption of thermostat control programs.

ED responded that the technical ability of a customer bypassing the utility signal and using a fossil fuel resource to bring the AC unit online depends on how the systems are configured.

#### SCE Proposal

Same as PG&E-SDG&E proposal in terms of the scope of a prohibition.

#### IPKeys Proposal

IPKeys is looking for consistency between the Commission and the CAISO policies for what is considered a clean fuel source, whether it is the use of state-wide or local definitions. It should be done resource by resource, based on fuel source, availability, etc. SB 1414 requires conformance with state and local laws, and requires data collection, because there is still no understanding of the extent of the problem

#### Joint DR Parties and CLECA Proposals

The driving force of the Commission policy is to get at GHG emissions, and the need for the data on what is out there is to determine what the impact is on GHG emissions for BUGs used right now. CLECA believes that data collection process is very important. The Commission should rely on the 2015 EPA data, which will be reported in March 2016, on the use of on-site generation including diesel-fueled BUGs for emergencies, and should use this report as a springboard for further study.

#### General Discussion

ED asked for clarification on the definition of proposed prohibited resources in the alternative proposals, particularly if parties agreed with the staff proposed definition or are they focused on the emergency BUGs only.

SCE's response emphasized the research done on emergency generation resources, and how the ED proposal took them off guard when it was expanded to other distributed energy resources (DERs), particularly as it affected their LCR RFO. SCE stated that it believes that this new definition is beyond the scope of the existing proceeding. ED stated that in the recent SCE LCR RFO, SCE stated that it was initially characterizing the NRG bids as demand response and then subsequently later in the proceeding SCE began referring to those bid as distributed generation and not demand response. ED asked why SCE's position on the use of fossil fuel resources in DR is different today from their position in the LCR RFO. ED stated that this is an inconsistency in SCE's position on this issue. SCE responded that people who worked on the LCR RFO were not present to address this issue. SCE noted that it supports complying with local and federal rules for not running engines during DR events.

PG&E is concerned about the prohibition against behind-the-meter baseload units, generally speaking, regardless of how they are funded, because they show up in the DR baseline, which causes PG&E to question how worthwhile it would be to include these units in a prohibition. CLECA could not think of a situation where this type of manipulation is a rational choice for a business whose core focus is on making a widget, especially as they may face other business impacts and standby charges.

ED staff asked whether there was the possibility of fossil-fueled CHP baseload units, particularly those that can be ramped up for use during a DR event. CLECA responded that it cannot think of a situation where that would be a rational choice for a business entity to do this. CLECA continued that one needs to factor in that if they have a CHP that is a baseload unit (which most of them are), then they would have to get standby electricity from the utility if they were to use their CHP unit for DR load reduction. CLECA does not see that as a rational choice for the customer to make. ED responded that it's true that these baseload units often run continually, however, what is missing here is that they are not being run at 100% capacity factor all the time. In fact, they often run at a much lower capacity factor; so, in case of a DR event, ED contends it is possible to use the un-used capacity for load curtailment during DR.

### **Enforcement: Staff Proposal to Require Attestation for Residential Customers**

#### Energy Division Proposal for Residential Customers

Residential DR customers would be asked to specify whether they possess a proposed prohibited resource. Those indicating that they do not would take no further action. Those indicating that they do would be required to commit to not using the proposed prohibited resource during a DR event. The staff proposal does not propose any verification or site visits as part of this process for the residential customers. The question of whether the attestation should be repeated for residential customers during their DR enrollment period was not addressed in the staff proposal.

ED is looking for the parties to put forward suggestion on the implementation details of attestation; whether it should be a wet or signature, etc.

#### Assumptions

CLECA questioned the assumption that the emissions resulting from residential customers' use of a proposed prohibited resource during a DR event would be quite low, particularly as it can be expected there will be more frequent DR calls in the future. ED responded that it is unlikely that very many residential customers have these prohibited resources on their premises. CLECA asked for the basis of that assumption. ED responded that it has been repeated many times in this proceeding by the parties and demand response providers in the residential sector. ED then asked the parties whether they had data on the prohibited resources being widely present in the residential sector. CLECA said they don't think there is data available on this.

CLECA also questioned the assumption of the low GHG impact in the residential sector because of the anticipated more frequent DR events in the residential sector. ED responded that it is true that residential customers are often being called more frequently. However ED believes these customers own far less of the proposed prohibited resources.<sup>3</sup> Therefore, the number of residential customers owning these prohibited resources are much smaller but also the capacity of those resources are much smaller compared to the resources in the non-residential sector. ED staff stated they are not suggesting that there is no impact or that it is OK for residential customers to use these prohibited resources in DR. But, they believe that the number of the existing resources and their capacities are small enough to be overlooked for now. CLECA responded that the SGIP program targets manufacturers, not residential customers; thus the residential customers would not be aware of resources eligible for SGIP incentives as opposed to those that may have higher GHG emissions.

### Residential Attestation

In reflecting the discussion on attestation and the remainder of the Staff Proposal addressing proration methodologies on Commercial and Industrial sites, JCI posited that this process assumed that customers and their DR providers would be guilty of using proposed prohibited resources despite any prohibitions. JCI wanted to know if this is the position from which the Staff Proposal intended to start. EnerNOC explained how certain members of the JDRP serve residential customers and these customers are very sensitive to additional burdens being placed upon them in order to participate in DR programs. Going back to the customer to receive multiple endorsements (first to participate in the program and second to attest to the agreement not to utilize prohibited resources during DR events or dispatches) could significantly reduce participation in those programs. The preferred method would be to incorporate the prohibition in tariff and contract language.

SCE reiterated its earlier position that AC cycling programs should be exempted and that all IOUs are aligned to exempt residential customers overall. SCE highlighted the burden of a multi-step process for the attestation. EnerNOC explained how paper forms would discourage participation in DR. SCE said that a declaration of the type proposed drives a lot of complexity and cost (approximately \$1.3 million to ask existing and new customers to sign a piece of paper), that the process is redundant and unnecessary with no legal assurance, and a non-response from a customer is not addressed. SCE suggested that updating the tariffs and bilateral contacts is a much simpler way to enforce attestation.

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<sup>3</sup> For example, the SGIP program has less than 1% participation from residential customers, and that's even with the widespread adoption of storage systems.

The assigned Commissioner's advisor asked whether the \$1.3 million is for reaching every participant in the residential sector or is it for reaching those who respond that they do own a prohibited resource. SCE responded that the estimate concerns all residential customers including AC cycling participants.

PG&E asked the ED what they have in mind should a customer misrepresent whether they have a proposed prohibited resource – would the customer be banned from participating in DR? The ED responded that for residential customers, once they testify that they either do not own a prohibited resource or will not use the prohibited resource during DR, the staff proposal did not propose a utility follow up to verify the attestation

ED staff queried that if attestation becomes a part of the tariff as suggested by the utilities and the utility finds out that there is a prohibited resource on site that has not been reported, then the customer is in conflict with the terms and conditions of their tariff and the utility has to reconcile that. Nest supported the comments made by EnerNOC on behalf of the JDRP.

EnerNOC requested that the parties discuss the non-residential compliance proposals before discussing the ED's flow chart. EnerNOC described the JDRPs' proposal. First the JDRP supported the use of tariff language and contracts as the means to communicate the prohibition of use of prohibited resources. The contract prohibition would be in place for the duration of the contractual relationship between the aggregator and the customer. If that was not adopted, the JDRP suggested that an attestation would be a distant second choice. It was a distant second choice because it requires a second interaction and signature from commercial and industrial customers. While additional paper work for residential customers can be a deal killer, it is also a significant concern from the commercial and industrial customers' perspective. Signatures must be obtained from the person within the organization with that authority and those folks are not always easy to track down or available. In addition, the attestation would have no greater force or effect on that contract.

EnerNOC went on to say that the JDRP do not support biennial on-site visits as this would require additional staffing and costs to aggregators. In addition, EnerNOC contends that the Staff proposal would require commercial and industrial customers that have prohibited resources on site, even if those resources are not used for DR events, to choose between two negative options: either to derate the capacity the customer provides by the nameplate of the prohibited resources capacity or to install expensive metering on prohibited resources. Again, according to EnerNOC, the customer would have to choose between these unattractive economic choices even if the customer's curtailment plan relies exclusively on load reductions. The JDRP allege that this will have negative implications for existing customer participation in DR as well as any attraction to DR or growth in participation.

The assigned Commissioner's advisor invited parties to suggest their view for non-adherence to tariff conditions. ED is concerned that updating the tariff would bury a prohibition in fine print, while an attestation that is front and center advises customers on program rules upfront. ED staff also asked the utilities that if attestation is made part of the tariff (as suggested by the utilities) what do the utilities envision as an after the fact evaluation to verify the extent to which the customer is in compliance with the tariff provision.

### Consequences for Non Responders and False Responders

SCE asked the ED what consequences residential customers would face if they did not respond to an attestation request. The ED stated that they had not thought about the consequences for residential customers.

SCE noted that the ED left out the consequences for non-residential customers in their PowerPoint summary slides at the workshop. The ED's original proposal, filed on September 29, 2015, included a recommendation to remove non-residential DR participants from their respective DR programs if they did not respond or falsely responded to the attestation (see Staff Proposal at 9). SCE asked the other parties what they thought about this aspect of the proposal. Joint DR Parties and CLECA did not support this part of the proposal.

### SCE Proposal

SCE proposed to update its DR tariffs, communicate with customers about the prohibition, and get a third party certification of a selective audit, such that with every year, a larger portion of the population is audited and that builds on the body of evidence. AC cycling would be exempt from this policy.

Nest supports the exemption of AC cycling programs, but says that if the program cannot be exempt, then it should be listed as another provision in the AC cycling tariff.

### PG&E-SDG&E Proposal

PG&E and SDG&E propose to include an exemption for AC cycling programs, and should the Commission decide to adopt a prohibition for tariffed IOU DR programs, it should be another provision in a program tariff. PG&E stated that the only residential customers they envision to be included in the prohibition policy are the residential customers participating in DRAM. Those customers are subject to a pro-forma contract with the DR provider (DRP), and then it's the DRPs' responsibility to do the enforcement.

JCI added that nobody is allowed to use BUGs in DRAM, but there are several ways to enforce this prohibition, one of which is contractually prohibiting the DR customer from using a BUG.

### IPKeys Proposal

IPKeys considers their proposal consistent with what is already on the record by the JDRPs.

## **Enforcement: Staff Proposal to Require Proration for Commercial Customers**

### Energy Division Proposal for non-residential Customers

The staff proposal for the non-residential class has a different enforcement mechanism using proration with a couple of options: Default Adjustment or a Metered Adjustment. Non-residential customers provide the bulk of DR and ED assumes that they are more likely to have a prohibited resource. ED considered how to design an enforcement mechanism that is appropriate and allow for the use of a proposed prohibited resource when necessary while not compensating for its use during a DR event.

EnerNOC said the proposal looks at the ownership of a proposed prohibited resource, not the use of it during a DR event. Asking a customer if they own a prohibited resource will result in a lot of yes responses, but not for curtailment, and the process assumes there is a problem without data. SDG&E explained how the ownership of a proposed prohibited resource assumes that it is used, even encouraging a customer to use it. SCE described the policy as having a police officer sit in each driver's car, and building an entire system around what the majority of customers never intended to do, requiring a change to the entire billing infrastructure. ED responded that the policy is more similar to requiring a driver's license for all drivers so their age could be verified in accordance with the age requirements for driving.

### Data

The JDRPs objected to a 2010 study referenced in the staff proposal. The study shows that 60% of the participants in the BIP program have admitted to using a BUG during DR events. PG&E believes that the 2010 study being used was voluntary, only done for the Base Interruptible Program (BIP) and critical peak pricing (CPP), and not an exhaustive survey to be used as evidence. CLECA said that the study is very problematic for CLECA. It relies on 2008 data collected in early 2009 for just some BIP and CPP customers, and the CPP data is entirely irrelevant. It is problematic to extrapolate 132 BIP customer responses to two questions, with answers limited to yes/no/don't know to all DR customers, with no definition of what back-up generation entailed. Moreover, in 2008, there was no prohibition on the use of back-up generation for DR. CLECA stated that because of these flaws, the 2010 report simply could not be a basis for a reasonable decision on BUG policy.

EnerNOC, on behalf of the Joint DR Parties, stated that it supported CLECA's concerns that reliance on the DNV KEMA study was inappropriate because it focused on only two programs and then extrapolated those results to all other DR programs without any evidence to support whether that assumption was reasonable. EnerNOC also opposed the use of the study as a basis for prohibiting BUGS, as that study's assumption was that BUGs were run for 8,760 hours per year and were all located in urban areas. EnerNOC stated that those assumptions are not consistent with the current, permitted use of BUGs nor is there any evidence that all BUGs are located in urban areas.

PG&E stated that this policy entails a lot of cost. ED responded that they did not have cost data prior to the staff proposal, but finds the IOUs cost estimates very helpful if they were willing to provide such data. ED also clarified that it is only customers who state they do not have a prohibited resource who would need site visits, which could be supplemented with air quality

management district (AQMD) and SGIP data. PG&E expressed concern over the use of AQMD data, which has not been determined to be accurate, and how to use that data if the customer says otherwise.

### Site Visits

EnerNOC finds the separate attestation and the addition of regular site visits to be problematic for non-residential customers. The man-hours required to achieve this for every location is costly and would require the addition of several full-time employees just to visit the existing customers. Timing and customer adoption rates can fall quickly with any signature, and that is still true for non-residential customers. EnerNOC questioned the reason for taking an inventory of proposed prohibited resources, pointing out that they do not have access to a customer's entire site, often due to security concerns. CPower and JCI concurred, stating that their visits are not that exhaustive. JCI stated that a contract containing the prohibition would be effective.

ED clarified that the staff proposal does not recommend attestation for non-residential customers.

### JDRP Proposal

EnerNOC, on behalf of the JDRP supports tariff modifications and contract amendments instead, and for this process to occur during the contracting process, which would be a one-stop shop and more efficient. An attestation would be a second fallback, as it is important to create a simple process. Site visits are not supported. CLECA stated it supported this option if it was in addition to the pro-ration/metering options in the ED Proposal.

ORA asked how this proposal would allow the aggregator or utility to know if a prohibited resource is used. For example would they know if new prohibited resources are added after the contract is signed? JCI responded that there are annual contract renewals, and they would discuss prohibited resources at that time. EnerNOC stated that the customer would be subject to the terms of that contract, and not complying would be a contract violation and grounds for cancellation of their contract. In addition, their regular communication with customers makes the addition of a proposed prohibited resource for DR without their knowledge unusual.

ORA also asked about how the information provided by the customer would be verified, to which JCI responded that the use of proposed prohibited resources could likely be seen in the customer's load curtailment during the event.

## **Enforcement: Metered Adjustment versus Default Adjustment**

### Energy Division Proposal

Prorated customers would be given the choice to be prorated by a Default Adjustment or a Metered Adjustment. The Default Adjustment would be based on the nameplate capacity of the prohibited resource while a Metered Adjustment would be based on the output of the prohibited resource during each DR event. The Default Adjustment would be lower cost, easier to implement, and less accurate, whereas the Metered Adjustment would be higher cost, more complex to implement, and more accurate.

Residential customers would not be subject to verification of its possession of a prohibited resource; non-residential customers would be subject to a site visit verification. It is an open question as to whether the production data of a prohibited resource is proprietary. DR participants would bear the cost of the meter if the Metered Adjustment is selected.

Third-party DR providers (DRP) would be responsible for administering the prohibition for their DR contracts. Administration would include site/resource verification, collection of resource nameplate data, metering system inspection and verification that the metering equipment complies with the proposed prohibition policy, and calculation of adjustments to incentives. The IOUs would similarly be responsible for administering the prohibition for IOU-operated DR programs and ensure contracted DRPs are administering the prohibition. Record keeping of the prohibited resource inventory would also be the IOUs' responsibility. The Commission may also direct the IOUs to provide these data.

### Size of the Prohibited Resource

SCE pointed out that it would be possible, under the Default Adjustment, to “zero out” a DR customer's load reduction if the nameplate capacity of the prohibited resource was equal to or greater than the actual load reduction. IPKeys noted that it is important to understand how emergency generators are sized and what they are being used for. It is their experience that back-up generators are typically sized more than 50% larger than the load they are meant to support. The ED agreed that the generator is often oversized, but in the absence of other meter data, they have to assume that it has been run at full capacity. If a DR customer with a relatively large load reduction has a 30 kW prohibited resource, the Default Adjustment may not make much of a difference to the overall compensation of the DR customer. However, if the DR customer has a 400 kW prohibited resource, or if the Default Adjustment would zero out a DR customer's load reduction, it may make more sense for the customer to elect the Metered Adjustment approach. CLECA cited a hypothetical example in which the Default Adjustment would be practical: a large industrial customer that is required by regulation to have a small backup generator to operate during a power outage for health and safety reasons (e.g. to prevent an electromagnet from falling).

### Customer Incentives of Default Adjustment

SDG&E said that the Default Adjustment can provide an incentive for the owner of a prohibited resource to operate during a DR event. For example, a DR customer can provide 200 kW of real load reduction but it has a 100 kW prohibited resource. It has selected the Default Adjustment so the most load reduction it can be compensated for is 100 kW if it does not run its prohibited resource during an event. However, to maximize the load reduction credit, the DR customer will have an incentive to run its prohibited resource. JCI agreed with SDG&E and pointed out that if the prohibited resource is not running during a DR event, the DR customer may not be paid enough for the load reduction. ED replied that if parties believe that the Default Adjustment creates an incentive to run a prohibited resource during a DR event, that prorating option could be considered for elimination. CLECA disagreed, as the adjustment means that the customer's incentive would not be compensating for the generator because the nameplate capacity of the generator would be subtracted.

### Metering Costs

SCE and JCI stated that if the cost of meters for the Metered Adjustment approach is too high, it might not be economic for customers to participate in DR programs.

PG&E stated that costs of revenue grade metering can be high. In terms of the cost of the meter itself and the labor to install it, the cost will vary based on each site and the service. The range for service for 600v self-contained meter with installation is \$405, and \$1,407 for a transformer-rated meter installation; anything beyond that, 5 kV, 15 kV, 25 kV, is \$7,237, \$9,414, and \$14,939, respectively. That includes the cost for an electrician to install the meter. For transmission-interconnected customers, the meter cost could be over \$100,000. If the IOUs are going to be required to manage the data associated with administering a Metered Adjustment, PG&E would want to own the metering infrastructure. However, PG&E would also need to undergo changes to its billing infrastructure to manage that data and questioned whether the cost of the metering infrastructure and data management would justify the Metered Approach.

The ED asked if PG&E's cost estimates are consistent with the costs that customers bear in the Self-Generation Incentive Program (SGIP). PG&E was unsure. Energy Division suggested that the cost is similar to what SGIP customers pay, and these are smaller units, so it might be a better estimate to look at SGIP customer payments. PG&E responded that it is not the case across the board. A lot of non-residential DR customers are rather large. SGIP costs, though they may be accurate for that purpose, may not be applicable to DR customers in this case. CLECA pointed out that it is not so much a question of the size of the generator, but rather the interconnection voltage; there is some confusion regarding the SGIP metering requirements and how they compare to metering costs for large customers. The ED pointed out that SGIP customers can be large, up to a few megawatts. CLECA asked if ED has the SGIP customer size and meter cost data available. The ED did not but stated that it might be a better set of cost data because the SGIP costs are associated with the type of meter the ED has in mind. SCE stated that there is a difference between metering costs embedded during the utility install part of a project versus what a customer pays to add the metering later on.

### Proration

SDG&E stated that if a prohibited resource is run all of the time, it will show up in the baseline so a prorated approach would be like a double punishment. PG&E stated that while it appreciates the ED providing two options for prorating, it does not support a proration method because both options are problematic; the residential method proposed should be applicable to non-residential customers, to the extent that the ED decides to stick with its proration approach in its proposal.

EnerNOC stated that simply having a BUG on site does not mean it is being used during a DR event. The Default Adjustment assumes that it is being operated during a DR event which is a gap in the staff proposal. To eliminate the gap, the Staff Proposal would simply need to ask if the prohibited resource is being used to provide DR reductions. If it is, then the customer could choose from one of the two options that staff is proposing. If the customer is not using the prohibited resource to provide a reduction during DR dispatches, then the customer has no other obligation. The existence of the prohibited resource does not mean that it is being used for DR purposes. In the JDRP proposal, the utility would make a prohibition through the DR program

tariffs and contracts. It is much less costly to enforce a prohibition contractually or through the program tariff. The ED responded that the enforcement mechanism for non-residential customers needs to be supported by a verification process. EnerNOC stated that the requirement of a site visit does not address whether the prohibited resource is used for DR. ED said the only way to know whether a prohibited resource is being used during a DR event is to meter it.

### Audits

SCE agreed with the approach proposed by PG&E and SDG&E to enforce a prohibition via program tariffs and contracts, but would also include audits to add “teeth” to prohibition and help motivate compliance. Once a meaningful data set of audit results can be developed, the Commission could recalibrate its approach to enforcing a prohibition, as necessary. ALJ Hymes and the ED expressed interest in the audit proposal but SCE did not have a detailed audit proposal prepared.

SoCalGas stated that many behind-the-meter generators are permitted by air quality districts and can only run 200 hours per year, and generally not run at all, except for two tests or emergencies, and that the SGIP only requires utility-grade meters, not revenue-grade. The ED pointed out that these permitted resources would only be a subset of proposed prohibited resources. ALJ Hymes asked Energy Division to send a citation of the SGIP meter requirements to the service list. CLECA recommended that any spot checks and audits be driven by air quality considerations based on local areas with problems.

EnerNOC expressed concern for communicating these requirements to existing DR customers for which they have not yet done an extensive site visit because the Default Adjustment and Metered Adjustment methods would either penalize those customers by whatever capacity is on premise, but not utilized for curtailment purposes, and result in reduced capacity for DR and/or increased costs due to requiring additional metering for prohibited resources that are not used in a customer’s curtailment plan. [Unknown party on the phone] stated that data centers have a lot of backup generators for their air conditioning load. Metered Adjustment would incur metering costs for each device. They typically allocate a small subset of their air conditioning to DR so they would incur a disproportionate metering charge for a small DR load drop. [Unknown party on the phone] also noted that some backup generators only work when the power is out so the Default Adjustment is problematic as well. The ED expressed interest in hearing more about these configurations, particularly systems that only turn on when the power is gone. However, [unknown party on the phone] is not confident about California statistics. CLECA also pointed out that for some large customers, it is easier to shut down the entire site and turn on the emergency generators for some small critical pieces of equipment that are required by law to operate.

ORA asked if it is possible for a prohibited resource to be configured in such a way to prevent it from being used for DR, or to show that the prohibited resource is not being used without using a meter. EnerNOC responded that the curtailment plan for their customers indicate whether backup generators are used. ED asked how would the aggregators verify if the customer is adhering to their curtailment plan. No response was provided.

SCE said that there are tariffs in place with large customers, so adding additional requirements could result in consequences to these tariff conditions that need to be analyzed. Also, there are many different customer types and proposed prohibited resource use profiles among them; there

is funding available to study the use of generation in DR. During the energy crisis, there was a lot of portable generation running around, e.g. 500 kW generation on trucks. The Commission should be aware of the scope of what is being considered here.

The JDRPs reviewed the ED proposal and did not see where the ED evaluated the tariff and the contract approach. The DRAM enforces a prohibition by contract and a contract means something, because there is a penalty for violating contract provisions. The same applies for tariff changes. The JDRPs do not see where that was evaluated as not being a sufficient means of regulating the use of proposed prohibited resources. The ED responded that this option was not evaluated closely, but the attestation option was the closest proxy. Current tariff language is even permissive of proposed prohibited resources. It is good that these options are being discussed. The JDRPs suggested that a cost-benefit analysis be done on the enforcement options and the least-cost alternative determined. Sierra Club asked how a tariff- and contract-based enforcement of a prohibition would be verified and what data would be used to demonstrate performance? The JDRPs responded that there is an obligation to the buyer and seller to verify performance, referred to the DRAM, and pointed out that Sierra Club was assuming that DR customers would not comply with a prohibition. SCE said similar approaches used in demand-side management and resource adequacy can be used. The JDRPs stated that they have not seen the proof of how this is an excessive problem with an excessive amount of oversight; the DRAM allows for contract enforcement.

The ED stated that enforcement is the key component of a prohibition and came to the conclusion that they do not have a lot of confidence in the IOUs' proposals for tariff- and contract-based enforcement because this approach does not reveal what proposed prohibited resources will be used during a DR event. It would be productive to talk about a verification system. For example, will random sampling work? If a meter has been installed, does that change the behavior of the DR customer? Is a self-certification survey sufficient? What if the customer does not respond to the survey? Using the CARE program as an example, low-income eligibility is required, and the customer has to demonstrate that. If the customer does not respond they are removed from the program. If a verification plan could be put in place that has merit, and would result in data, then the Commission could have more confidence that prohibited resources are not being run to provide DR.

CLECA stated that the level of enforcement should be driven by air quality considerations because site visits for every DR customer are not feasible. The policy should be guided by reducing emissions and promoting air quality and it needs to be informed by actual data on what is out there now.

JCI stated that it should be kept in mind that the Commission is trying to grow DR and JCI accepts not having generation count for curtailment. But the costs of the ED proposal are high at a time when DR customers are saying that incentives are too low. For many of these customers, the money they earn through DR is not large relative to their primary business. JCI's customers experience customer fatigue, which has impacted their performance. This would likely not be the case if they were aided by generation, so DR customers' poor performance is a good sign that generation is not being used.

EnerNOC stated that the risks associated with using proposed prohibited resources for DR is high. EnerNOC has communicated the backup generator prohibition internally, and it is not a part of

their current recruitment strategy. It is not a significant percentage of EnerNOC's capacity today, as the prohibition has not yet been enacted. The risk of an audit is a real enforcement mechanism and there is precedent for using the threat of an audit as an enforcement mechanism. In the privacy docket, covered entities have to document that the customer has agreed to use the data for a certain purpose. Covered entities are not required to provide customer authorizations to the Commission or IOU, but they are required to maintain these authorizations in its records in the event the Commission decides to audit them. There is an assumption that the DR provider will follow the tariff which EnerNOC takes very seriously. Using tariff- and contract-based enforcement would be a much more efficient solution. The ED agreed that the risk of audit is powerful but questioned what the audit would look like – would it involve installing a meter, using a questionnaire, or is it a site visit? EnerNOC replied that there is no difference to them between an attestation and a contract because one method is no more affirming than another. The ED stated that it matters if it is a new DR customer or an existing one and that it is more “front and center” in an attestation. SCE suggested that an audit focus could be placed on customers that are less likely to comply with a prohibition and stated that contractual and tariff consequences would be very stringent. The ED responded that for these consequences to be incurred, a violation must be demonstrable which is why metering is necessary. SCE proposed a tariff and contract provision that would allow limited inspections; estimated that the ED proposal would cost \$1.1 million and require 18 FTE (assuming each DR customer is inspected once every other year). SCE expressed a willingness to experiment with different approaches.

The ED asked to explore the potential feasibility of the caught “red-handed” audit. For example, a random sample, based on the risk profile of the DR customer, during a DR event, a DR customer has been dispatched and they agreed to respond between 4:00 p.m. and 6:00 p.m., does someone go knock on their door at that time? SCE said that audit approach is probably not feasible. PG&E suggested that the issue of audits would benefit from more time to consider because there are no solid proposals prepared for the workshop. PG&E suggested checking a DR customer's curtailment plan and comparing that to whether it is using a prohibited resource during a DR event. The ED pointed out that this approach would not indicate whether a prohibited resource was used during a DR event; what about a survey to DR customers regarding a prior event? ORA said it does not support this approach because a voluntary survey does not guarantee the customer provides accurate information and it does not constitute actual verification and is not proof; prefers to have metered information. ORA stated that the SCE proposal sounds like the ED proposal with similar required metering to allow for verification but with actual audits on a more limited basis.

The ED stated that the AQMD approach of not necessarily requiring meter data would not work for proposed prohibited resources. CLECA responded that AQMDs do not meter anything too small, and that a similar level of pragmatism is missing in the ED proposal. JCI stated its understanding that the Commission and the State seek to grow DR. JCI continued that, if the Commission wants 100% certainty of compliance with a prohibition and that needs to be achieved by metering each resource, the state should pay for the meters.

Matthew Tisdale asked if the compensation for DR is determined competitively, and everybody has the same requirement, wouldn't metering costs simply be passed through. JCI asked whether the metering costs would be included in the DR cost effectiveness model. Matthew Tisdale said it is not in the model but it is in the DRAM which is competitive. JCI stated that if the Commission wants 100% metering, the cost is \$500-\$100,000 + annual costs per non- residential

DR customer to guarantee that proposed prohibited resources are not used. That seems counter to the stated policy goals. Matthew Tisdale asked whether there is anything built into a competitive procurement that would prevent these costs from being passed through. JCI responded that there is a lot of risk that in a competitive solicitation that they would not guess these costs accurately. EnerNOC stated that metering costs could be substantial for a large industrial customer, and to meter a prohibited resource only because the DR customer might want to use it, is a lot of cost trying to prove a negative. Trying to make that into a positive story to get a customer to participate in a DR program is a tough sell. JCI and EnerNOC agreed that the timing of a metering requirement is very important. EnerNOC suggested that the Commission should not implement the prohibition while current contracts are in place. Program year 2018 would be a good starting point of a prohibition because DR contracts run through 2016, and program year 2017 is going to be a bridge funding year. Data gathered from customer premises about onsite equipment and resources, to the extent this is required, may be considered proprietary and competitively sensitive by some customers. It may be necessary to discuss providing protection from public disclosure of this data.

EnerNOC stated that if each unit needs to be individually metered, then the cost of participating in the DRAM will be higher for industrial customers compared to a retail store which would put the industrial customers at a disadvantage. PG&E stated that if the DRAM is not subject to the Energy Division proposal, then that would give DRAM a competitive advantage relative to other DR programs. ORA stated that how the DRAM enforces a prohibition should not be precedential and that a revenue quality meter is not needed to monitor the use of a prohibited resource, only to provide interval data to calculate proration. ORA pondered whether there are simple meters that could demonstrate the prohibited resources was not online during the date and time of the event so not default or prorated adjustment would be needed.

Unknown commenter stated that costs should be socialized rather than provided by the customer; the cost should be proportionate with the size of the benefit.

PG&E questioned the need for 100% verification of compliance with a prohibition. The Energy Division said that a metering requirement would need to provide, at least, proof of the day and time when the prohibited resource is used.

The JDRPs asserted that the Commission's regulations must be supported by a factual nexus that demonstrates the need for a specifically adopted regulation. The JDRP further assert that there is no evidentiary record in this proceeding that demonstrates the existence or level of the use of proposed prohibited resources in DR programs that would necessitate the regulations being proposed by Staff. There is no out-of-control use of proposed prohibitive resources that requires regulation. The JDRP contend that until such a factual demonstration of the extent or use of such resources in DR programs is made, it will be difficult to determine the right remedy. CLECA concurred.

### **Implementation Plan and Timing**

PG&E asked if the ED plans to send out a revised/clarified draft. ALJ Hymes responded that the workshop report is completed and comments submitted, she will read it and go from there. In terms of timing, there are current contracts in place.

CLECA stated that in its October 2015 comments, it said customers must be given a reasonable amount of time to decide how they will to comply with a prohibition enforcement mechanism. That has to be at least nine months, because it takes a long time to gather information if the Commission goes down that route. PG&E and SCE suggested a prohibition going into effect in 2018. There are IOU DR program applications, and any infrastructure needs we would have to build in.

The ED asked whether PG&E would be able to implement the Energy Division proposal in 2018 or PG&E's proposal for 2017. PG&E responded that if only tariff changes are needed, that could be done in a reasonable period of time but it would be partly dependent on how quickly the ED could approve the tariff revisions.

ALJ Hymes affirmed that the IOUs will issue the draft workshop report by January 20. Comments correcting errors of fact are due by January 25. ALJ Hymes will review the workshop report and file any necessary changes in accordance with the comments and issue a ruling that provides next steps.

(END OF ATTACHMENT 1)