

**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 November 14, 2013)

**RESPONSES OF SAN DIEGO GAS & ELECTRIC COMPANY (U902M) TO PHASE  
TWO FOUNDATIONAL QUESTIONS**

Thomas R. Brill  
Attorney for:  
SAN DIEGO GAS AND ELECTRIC COMPANY  
8330 Century Park Ct.  
San Diego, CA 92123-1530  
Telephone: (858) 654-1601  
Facsimile: (858) 654-1586  
E-mail: TBrill@semprautilities.com

Dated: December 13, 2013

**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 November 14, 2013)

**RESPONSES OF SAN DIEGO GAS & ELECTRIC COMPANY (U902M) TO PHASE  
TWO FOUNDATIONAL QUESTIONS**

San Diego Gas & Electric Company (“SDG&E”) respectfully submits the following Responses to the Phase Two Foundational Questions set forth in Appendix A to the Joint Assigned Commissioner and Administrative Law Judge Ruling and Scoping Memo (“Ruling and Scoping Memo”) that was issued on November 14, 2013 in the above-entitled proceeding.

**I. INTRODUCTION**

SDG&E appreciates the opportunity to respond to the Foundational Questions that are raised in the Ruling and Scoping Memo. Underlying SDG&E’s responses is the belief that the primary driver for Commission policy with respect to supply-side demand response should be system reliability needs. This proceeding should not be designed to push or bias any particular market outcome, but should instead be designed to create meaningful opportunities for Demand Response to serve as an effective supply-side resource. SDG&E recognizes that the burdens associated with supply-side responsibilities may initially appear difficult to meet, but by presenting this opportunity, SDG&E anticipates that the market will respond through innovative technologies and business models to deliver effective demand response that can meet the performance requirements applicable to supply-side resources.

## II. RESPONSES TO PHASE TWO FOUNDATIONAL QUESTIONS

### FOUNDATIONAL QUESTIONS

#### 1. BIFURCATION

- a. **In the Order Instituting Rulemaking (OIR), the Commission proposes to bifurcate the current demand response programs into demand-side and supply-side resources. (See Figure 1 below for the proposed realignment.) The OIR defines the demand-side programs as customer-focused programs and rates, and supply side resources as reliable and flexible demand response that meets local and system resource planning and operational requirements. Please comment on the terms, demand-side and supply-side resources, and the definitions provided. If you disagree with the terms and/or definitions, please provide your recommended changes and explain why your recommendation is more appropriate.**

**SDG&E Response:** SDG&E does not object to the bifurcation of demand response (DR) programs into load-modifying DR and supply-side DR. The term “load-modifying” is preferred to “demand-side” since all DR is related to customers, who are by definition on the “demand-side.” In addition, a more clear definition of supply-side DR would be “DR that qualifies as a Resource Adequacy resource, providing local, flexible, and/or system capacity.” Load-modifying DR would include all other DR. This definition would make it clear that in order to be considered a supply-side resource, the DR supplier (e.g., a firm or aggregator) must meet the RA requirements of the CAISO/CPUC. In order for supply-side DR to be considered for resource planning purposes each program must meet the resource planning statutory requirement of being “cost effective, reliable, and feasible”, (Public Utilities Code 454.5(b)(9)(C).

SDG&E would also note that Figure 1 makes several potentially inaccurate assumptions and should be modified to avoid prejudging the outcome of this proceeding. The following elements of Figure 1 should be determined on the basis of the Commission’s consideration of

proposals and evidence presented in this proceeding, and not assumed to occur in the absence of considering those proposals and that evidence:

- 1) The programs that will migrate to be supply-side DR (the figure should be modified to delete “(e.g. AMP, DBP,CBP, AC, BIP)”);
- 2) The CAISO markets in which supply-side DR would participate (the reference to “Participation in CAISO Energy Market” should be changed to “Participation in CAISO Markets”; and,
- 3) How supply-side DR should be procured (by assuming this to be a “competitive procurement mechanism,” other options, such as a feed-in tariff mechanism, are inadvertently excluded from consideration).

**b. Are there any potential problems or concerns with the proposed bifurcation or realignment of demand response programs into demand-side and supply-side resources? For example, are there any legal issues or other concerns such as missed opportunities for integration?**

**SDG&E Response:** Conceptually, there is no problem with the realignment of DR programs under SDG&E’s proposed definitions of load-modifying and supply-side DR programs. SDG&E generally supports the Commission’s longstanding goal to transition DR to participate in CAISO markets where appropriate. However, numerous questions about the details of the bifurcation remain. For example, it is generally understood that supply-side DR resources will have increased performance and market participation requirements relative to the existing DR framework. It is expected that supply-side DR will need to actively participate in the CAISO’s markets, which will require interconnection/registration according to the CAISO’s tariff’s, revenue metering, telemetry, network modeling, etc., not to mention daily bidding requirements, monthly availability obligations, and exposure to non-performance risks and costs.

However, it is still unclear what the exact combination of increased supply-side requirements will be, and how and when they will be determined. Additionally, it is unclear what impact these additional requirements and performance obligations will have on pricing and valuing supply-side DR going forward. In turn, it is unclear whether the CAISO or load serving entities will be responsible for providing capacity payments for supply-side resources, how the regulatory process will be set up to secure funding for demand response resources after bifurcation, and what procurement mechanisms for load-modifying and supply-side resources will be. Therefore there are many potential problems that are likely to arise as more details are known.

In particular, there are, however, a number of concerns about procurement mechanisms for load-modifying and supply-side DR based on past history. First, cannibalization of load-modifying programs and supply-side programs may occur if the pricing of load-modifying and supply-side DR does not accurately reflect the value of each. It is expected that supply-side DR will have a higher value than load-modifying programs, but also have stiffer performance requirements. If the payment levels vary from year to year for supply-side DR programs in ways that do not reflect actual value, customers may switch back and forth between supply-side and load-modifying DR depending on pay-to-requirements ratio rather than how they can create the greatest value to the grid, or worse they may decide to not participate at all. Hopping back and forth on such a basis would create forecasting issues and inefficient procurement of DR. To the extent transparent incentives are deemed necessary to promote supply-side or load modifying DR, those incentives should be designed to prevent this kind of uncertainty.

SDG&E believes that if a competitive bidding process is adopted, provisions must be adopted to prevent contract failure based on a possible scenario in which each entity assumes it can get the same customers to fill out its portfolio. At the workshop, EnerNOC suggested that

the SDG&E territory was uniquely limited and contract failure a significant probability. The Resource Adequacy (RA) value of supply-side DR will be significantly diminished if there is a large amount of contract failure.

There is equal uncertainty about the impact of bifurcation on load modifying DR, particularly as it relates to load forecasting and RA requirements. The general assumption is that load modifying DR will be “factored into” the load forecast, and will therefore lower overall RA requirements. But exactly how load modifying DR is modeled could significantly impact a DR program or product’s ability to lower the year-ahead forecast, and therefore lower overall RA requirements. For example, will the forecast include *projected* impacts from load modifying DR, or will it only include historical performance? If load modifying DR’s performance is based on lagged performance embedded in historical peak load data, then it will likely have zero ability to lower local RA requirements in the first year (until historical performance is established). Until these modelling questions are addressed, it is unclear what impact bifurcation will have on load modifying DR’s ability to lower overall RA requirements. It should go without saying that any decrease in the ability to lower overall RA procurement relative to today’s framework will impact the value and compensation of load modifying DR going forward.

- c. **The OIR describes an ongoing tension between the supply-side and demand-side requirements for demand response. The OIR states that demand response as resource adequacy resources are held to the same requirements as generation resources for system reliability and economic efficiency. Simultaneously, the needs and technical capabilities of customers and providers should also be considered in program design. How could the proposed bifurcation or realignment of supply-side and demand-side resources be designed to serve both sets of requirements?**

**SDG&E Response:** The simple response is supply-side DR should be “held to the same requirements as generation resources for system reliability and economic efficiency,” while load-modifying DR would be more tailored to what the customer is comfortable providing. But being

“held to the same requirements as generation resources for system reliability and economic efficiency” is actually very complicated. This is because some accommodations have been made for other use-limited RA resources such as hydro. Similar accommodations should be made for DR, which is also use-limited. But the accommodations should not render DR less effective than other alternatives as an RA resource.

- d. What role, if any, will the load impact protocol serve in this realignment? Are revisions required? Should the Commission develop separate sets of evaluation criteria and/or processes for the demand and supply sides?**

**SDG&E Response:** The current demand response load impact protocols include the requirements that must be met by the annual independent load impact evaluations of the demand response resources. Baselines used for settlement purposes are not within the scope of the current protocols. The load impact protocols include a requirement to estimate the hourly load reductions achieved during demand response events for each demand response resource as well a requirement to produce a 5 year demand response forecast. The protocols require that these forecasts be used for all regulatory proceedings including RA. Although the protocols contain high level descriptions of acceptable methodologies they do not require the use of a specific baseline or regression model specification. Instead they allow the evaluator flexibility to use the best possible method and all available information to estimate the load reduction.

One area of the load impact protocols that may require modification as a result of bifurcation is that it may be necessary to add more detail to the protocols about how load modifying demand response should be incorporated into the system load forecast. Whether or not the demand load impact protocols is the correct place to add this level of detail should be a point of discussion since this issue affects system load forecasting as well as demand response forecasting. Regardless of whether this additional detail is included the demand response load

impact protocols or elsewhere, methods for incorporating load modifying demand response into the system load forecast will require discussion and planning because the load forecasting method chosen will directly affect how much capacity value load-modifying demand response resources are assumed to produce and the value to customers. This amount in turn will determine how much utility ratepayers are willing to pay for load modifying demand response programs.

Another load impact issue that will require discussion is the calculation on net qualifying capacity for supply side demand response programs. Currently the calculation of net qualifying capacity for all DR resources is based on the results of the independent load impact evaluation and not on settlement results. The advantage of this approach is that it ensures that the demand response forecast is based on the most accurate possible estimate of historical load reduction. Independent evaluators can change methods whenever doing so improves accuracy whereas changing a settlement methodology requires obtaining regulatory approval and changes to computer systems. Independent evaluators also have access to additional information that has historically not been included in settlement calculations. Examples of additional information available to use for evaluation include energy use of similar customers from a control group, end use data from specific equipment, or data showing whether or not a customer overrode a signal. Eventually this type of information may be incorporated into formal settlement methods but is not current practice.

However, there would be advantages in terms of transparency to tying the capacity for supply side demand response resources more closely to settlement results. The formal measurement evaluation results are not available until the first quarter the year after and this long of a delay may not be appropriate for supply side resources. Differences between the settlement



results from CAISO markets and the independent evaluation results may become a source of confusion. The “10 of 10” baseline with same day adjustments have been very well researched and have been used in actual practice for many years now for medium and large commercial customers. Therefore, for some demand response resources these ex-post results using “10 of 10” settlement baselines could be used as inputs to the expected capacity to be provided without sacrificing accuracy. On the other hand, the “10 of 10” baseline is known to be inaccurate for residential customers and baselines that rely on the customer’s energy usage before the event begins have not been well researched and have not been previously implemented. It may therefore be premature to base the calculation on net qualifying capacity on the results from this type of baseline.

## 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?**

**SDG&E Response:** The Commission should require a showing that the rates used for cost recovery of each program reflect the actual value that the program provides. To the extent that subsidies are incentives are deemed necessary to promote any particular public policy objective with respect to DR, those subsidies or incentives should be transparently identified. If the price signals that trigger market responses by DR providers for either supply-side or load modifying DR fail to reflect the actual value of the DR that could be provided under either, customers will opt for DR programs that maximize compensation to them rather than programs that maximize benefits to the grid.

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

**SDG&E Response:** SDG&E believes that the costs associated with supply-side and load modifying DR should be allocated based on the benefits that are created. When supply-side DR is used to provide a capacity resource, the beneficiaries of that capacity, including ESPs, should pay the associated costs.

- c. In resource adequacy procurement, costs are allocated across the LSE's. 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?**

**SDG&E Response:** SDG&E believes that the costs associated with supply-side DR that provides the same capacity benefit as any other form of RA should be allocated in the same manner as RA provided through other technologies and resources. The allocation of costs should be based on who benefits from the incurrence of those costs. In the case of capacity resources, cost allocation should not vary based on the technology that is used to create the RA, it should be based on who benefits from that RA.

### **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.**

**SDG&E Response:** San Diego Gas & Electric used data provided by the San Diego Air Pollution Control District (SDAPCD) to cross reference against our own internal data to compile

a list of customers who have back up generation in our service territory. This data set includes information regarding the size and efficiency of the generators and the allowed operational hours as per their permit. There are a total of 20.3 MWs of registered capacity with the APCD that are participating in our programs. Of the total MWs and cross referencing the list to our CPPD active list, our CPP-D customers have about 16.8 MW registered capacity of BUGs and our CBP active customers have about 3.5 MW of registered BUGs capacity.

Unfortunately, SDG&E does not have data that would allow SDG&E to determine the extent to which BUGs have been used in the context of DR, and as it stands today, we are not able to answer that question. Besides one customer who had an exception for this year because of contractual issues, we are not in possession of any evidence that would prove the extent to which BUGs were or were not used during DR events.

- 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?**

**SDG&E Response:** Should the bifurcation happen, San Diego Gas & Electric believes that both type of resources should be governed by the same set of rules. Using different rules for supply-side demand response will cannibalize the demand side resources already used for local reliability needs.

- c. What are the current laws and regulations regarding back-up generation, including those by the Air Resources Board, local air quality management districts and/or any other related regulatory body?**

**SDG&E Response:** Following are the primary regulations that govern emissions from internal combustion engines (including those used for emergency back-up generation):

1. San Diego Air Pollution Control District (SDAPCD) Rule 69.4.1 (Stationary Reciprocating Internal Combustion Engines - Best Available Retrofit Control Technology -- BARCT)
2. California Air Resources Board's (CARB) regulation for Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (this regulation specifically applies to diesel fired engines)
3. EPA's regulation for National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, Subpart ZZZZ (aka RICE NESHAP)

### III. CONCLUSION

SDG&E appreciates this opportunity to provide responses to the Foundational Phase 2 Questions that have been posed by the Ruling and Scoping Memo.

DATED at San Diego, California, on this 13th day of December, 2013.

Respectfully submitted,

By: /s/ Thomas R. Brill

Thomas R. Brill

Attorney for:

SAN DIEGO GAS AND ELECTRIC COMPANY

8330 Century Park Ct.

San Diego, CA 92123-1530

Telephone: (858) 654-1601

Facsimile: (858) 654-1586

E-mail: [TBrill@semprautilities.com](mailto:TBrill@semprautilities.com)