BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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| 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<br>(Filed September 19, 2013) |

**JOINT RESPONSE OF ENERNOC, INC., JOHNSON CONTROLS, INC., AND COMVERGE, INC. ("JOINT DR PARTIES") ON PHASE 2 FOUNDATIONAL QUESTIONS**


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EnerNOC, Inc., Johnson Controls, Inc., and Comverge, Inc. ("Joint DR Parties") respectfully submit this Joint Response to the Phase 2 Foundational Questions posed in Attachment One of the Joint Assigned Commissioner and Administrative Law Judge Ruling and Scoping Memo issued in this proceeding on November 14, 2013 ("Scoping Memo"). This Response is filed and served pursuant to the Commission's Rules of Practice and Procedure and the Scoping Memo.

# I. INTRODUCTION

The Joint DR Parties include the following companies that currently aggregate utility customers to participate in DR programs managed by grid operators and utilities across the country, including California, and participate in DR programs offered by Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas and Electric Company (SDG&E) (collectively, the Investor-Owned Utilities ("IOUs")):

- **EnerNOC, Inc**. (NASDAQ: ENOC) is a publicly traded corporation that is a leading developer and provider of clean and intelligent power solutions to commercial, institutional, and industrial customers, as well as electric power grid operators and utilities. EnerNOC's technology-enabled demand response and energy management solutions help optimize the balance of electric supply and demand. EnerNOC provides nearly 8,500 MW of dispatchable capacity reductions and energy management services across the United States, as well as in Canada, Australia, New Zealand, and the United Kingdom. EnerNOC currently supplies in excess of 300 MW of demand response services in California.

- **Johnson Controls (EnergyConnect Inc.) (**NYSE: JCI) Johnson Controls is a global diversified technology and industrial leader serving customers in more than 150 countries. The JCI Building Efficiency business unit is a leading provider of equipment, controls and services for heating, ventilating, air-conditioning, refrigeration, security systems and demand response.
- **Comverge, Inc.** Comverge delivers a comprehensive suite of intelligent energy management solutions that enable utilities, grid operators, and commercial and industrial organizations to optimize their energy usage in order to reduce costs, meet regulatory requirements, and support sustainability initiatives. With 30 years of experience helping customers implement innovative demand-side management programs, Comverge has deployed more than five and a half million energy management devices, recruited over one million residential customers into mass market demand response programs, and served thousands of commercial and industrial customers.

To date in this proceeding the Joint DR Parties have served a Prehearing Conference Statement (October 14, 2013), filed a Joint Response on questions posed in R.13-09-011 on bridge funding and Staff proposed pilot, and participated at the Prehearing Conference (PHC) held in this proceeding on October 24, 2013. With the filing of this Response, the Joint DR Parties continue that participation by responding here to the Phase 2 Foundational Questions posed in Attachment One of the Scoping Memo. The Joint Parties have sought to present consensus responses to these questions; however, each reserves the right to file individual replies on positions on which consensus could not be reached.

## II.
## JOINT DR PARTIES' RESPONSES TO PHASE 2 FOUNDATIONAL QUESTIONS

Attachment One to the Scoping Memo posed "Foundational Questions" divided into three major topic areas: Bifurcation, Cost Allocation, and Back-Up Generators. The Joint DR Parties offer the following responses to those questions.

### A. Bifurcation

Question A.1: *" In the Order Instituting Rulemaking (OIR), the Commission proposes to bifurcate the current demand response programs into demand-side and supply-side resources. [Reference to Figure 1 (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."*

Before determining whether terminology is appropriate, it is important to understand the purpose of bifurcation and the distinction that is being drawn. All demand response programs, at this point in time, are developed and dispatched by the utilities. These resources contribute toward the utility meeting its resource adequacy requirement. So, at this point in time, all DR programs are retail programs.

In the future, it is possible that some of those retail DR programs or new DR resources will be bid into the California Independent System Operator's (CAISO's) energy or ancillary services markets as a Proxy Demand Resource (PDR). Some existing retail programs will not be bid into the CAISO's energy or ancillary markets. As such, as far as terminology is concerned, there is a natural distinction that could be drawn between wholesale and retail DR resources. This seems to be the most natural way to bifurcate between the programs with the difference being that the wholesale DR resources will be dispatched based upon price and by the CAISO, while the retail programs will be dispatched by the utility based upon the dispatch parameters that describe those programs.

In either the retail or the wholesale context, the resource can be a dispatchable resource. Today, certain DR programs, like the aggregator managed programs (AMP) contracts, are described as supply-side resources because they are dispatchable, even though these resources are dispatched by the utility and are not offered into the wholesale market. However, even though DR resources are dispatchable, that does not mean they will be bid into the CAISO's energy market. There are reasons to maintain certain DR resources for utility dispatch purposes, separate from the economic drivers in the wholesale market. The utilities can experience local distribution reliability concerns separate from the transmission and supply concerns that the CAISO administers. The utilities can dispatch DR resources for reasons other than economics.

Integration into the wholesale market should not be determined to be a "necessary" component of a DR resource's ability to qualify for resource adequacy. To do so would erode the value of the resources that have been developed through the retail utility programs to this point. To date, the CAISO has not accepted DR resources as valid resources for planning or other purposes because they are not dispatched by the CAISO. If all DR resources will not be dispatched by CAISO, it will be important to increase CAISO's confidence with the retail programs.

In short, the Commission, the CAISO, the investor-owned utilities (IOUs), the aggregators and the customers will need to identify the hurdles to the CAISO's acceptance of the retail resources and a means to resolve this difference so that retail programs are recognized for the value they provide, a value that is recognized by the utilities, for reliability purposes. This is important so as not to erode the base of DR resources that has been developed thus far. Rather, integration should provide incremental benefits and opportunity for DR growth beyond those provided by the retail programs.

Without the identification of the policy drivers and the incremental benefits resulting from integration into the wholesale market, whether qualitative or quantitative, the Joint DR Parties must assume that the primary driver is for parties to gain experience with DR in the wholesale market and to increase the confidence of the CAISO. However, at this juncture, based upon the market dynamics, the Joint DR Parties are cautious that the wholesale market will, on its own, create a significant growth opportunity for DR through participation as an energy and ancillary services resource in PDR, if energy market prices remain as low as they are (between $50/MWh on-peak and $30/MWh off-peak).

Energy prices alone, especially low energy prices, will not be an inducement to participate in the wholesale market, just as is the case for other resource types. Nor is it likely that DR resources will be dispatched frequently in the wholesale market as a result of low energy prices. The Joint DR Parties want to ensure that expectations are set appropriately for the likely outcomes of wholesale market integration.

The Joint DR Parties are aware of a potential CAISO initiative to explore a preferred resources capacity auction, which has been delayed until January 2014. The Joint DR Parties will reserve any comments on this initiative until at least a straw proposal has been publicly noticed and issued.

The Joint DR Parties support enabling the ability to participate in the wholesale market and removing obstacles to that participation, but, at the same time, remain wary of mandating participation in a market that is still not fully developed, is untested for DR resources, and has yet to exhibit a market dynamic that would support DR resources. Before defining terms related to "bifurcation," the Joint DR Parties believe it is important to establish the premise to support proceeding down this path, explore the obstacles to a robust wholesale market result and explore the current barriers to DR participation in the retail context. It is important to explore whether this movement toward bifurcation will achieve the results that we seek and, if not, identify the potential barriers to that success. If the parties are not willing to address the obstacles, then there will only be a partial chance at success.

The Joint DR Parties believe the proposed definitions of demand- and supply-side DR do not sufficiently demarcate the differences between the two types of DR to avoid future confusion and inconsistent implementation. For example, while the OIR (R.13-09-011) defines demand-side programs as "customer-focused" programs, most DR programs with potential supply-side characteristics have at least some (often many) customer-focused features. The Joint DR Parties agree there is a distinction between dispatchable DR programs, such as those listed as "supply-side" resources in Figure 1, and pricing tariffs, such as CPP and PDP. It is also the Joint DR Parties' understanding that the utilities do not intend to bid CPP and PDP tariffs into the wholesale market in the near term. However, the use of the term "customer-focused" programs does not describe the difference between load-modifying and supply-side resources or retail and wholesale DR resources.

The Joint DR Parties believe that a clear methodology-driven framework to establish the supply- or demand-side nature of a program is necessary if the Commission wishes to bifurcate DR resources without reducing the effectiveness of existing DR or the opportunity to develop future DR resources. The Joint DR Parties believe that such an approach will improve transparency for DR providers and customers moving forward in addition to improving our ability to attract new customers to DR programs. While the Joint DR Parties remain open to other proposals for developing a decision-making framework based on clear and concise distinctions between supply- and demand-side DR, participation in CAISO markets provides a reasonable definition of supply-side or wholesale DR, with resources not participating in CAISO markets being considered demand-side, retail or load-modifying DR.

*Question A.2. 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?*

While the Joint DR Parties appreciate the OIR's determination to bifurcate DR offerings in California in order to improve effectiveness and increase participation levels, the Joint DR Parties believe it is important to note that regardless of how resources are ultimately defined/ bifurcated, there will still be many common elements across all DR resources. Specifically the Joint DR Parties note that demand-side DR, as defined in the OIR or in our answer above, provides substantial RA benefits and should continue to count toward a utility's RA obligations, if only on the demand-side of the equation.

*Question A.3. 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*

The Joint DR Parties take issue with the OIR's assertion that DR resources should be held to the same requirements as generation resources for system reliability and economic efficiency. Several markets throughout the U.S. have recognized the need to develop an efficient market around a diverse set of resources with varying characteristics. This recognition has allowed for the development of different characteristics for different resources while retaining a necessary level of comparability among resources as a best practice with regards to market development.

As an example, Texas, which has the largest non-hydro renewable energy output of any state in the U.S., recognizes that the nature of wind energy requires a new set of requirements for participation in markets and for the provision of resource adequacy. In Texas, DR provides vital support for system reliability as has been noted by ERCOT, the Public Utilities Commission, and Legislators. DR resources are able to provide this reliability service as a result of capacity payments through ERCOT's Emergency Response Service (ERS). This is a unique arrangement for DR resources, as ERCOT is an energy-only market.

Similarly, PJM has recognized that demand response provides valuable resources for system reliability and economic efficiency. Through the use of their Reliability Pricing Model (RPM), PJM has developed unique resource requirement in order for DR resources to be recognized as capacity resources and to enable DR participation in the auction. PJM has recognized that different resources have different operating characteristics.[1] The integration of various resource types into PJM's market has lead to a substantial reduction in the cost of maintaining reliability in the region.[2]

While this recognition of the diversity of energy resource characteristics is difficult to incorporate into a market context, it is necessary in order to effectively integrate and value diverse resources and is common practice nationally. By requiring DR to meet the same standards that were designed to meet the needs of existing generation, the Commission and the

[1] PJM Manual 18: PJM Capacity Market at 39-55, found at: http://www.pjm.com/~/media/documents/manuals/m18.ashx

[2] Monitoring Analytics, The Independent Market Monitor for PJM, Analysis of the 2013/2014 RPM Base Residual Auction Revised and Updated, 9/20/10 at 52. Located at: http://www.monitoringanalytics.com/reports/Reports/2010/Analysis_of_2013_2014_RPM_Base_Residual_Auction_20090920.pdf

CAISO effectively restrict access to the market to only those resources that can act like a generator. Such an approach is likely to derail participation of DR resources in California's wholesale market.

The Joint DR Parties, therefore, encourage the Commission to revisit this requirement with an eye toward identifying resource needs and the resource characteristics necessary to meet those needs, rather than the current rigid interpretation that seems to be based on preferences for generation with the appearance of equal treatment. In fact, building resource requirements based upon the characteristics of gas-fired generation is discriminatory to all other resource types.

<u>Question A.4</u>. *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?*

The Commission adopted the load impact protocols (LoIPs) in order to calculate the capacity contributions of retail demand response programs. The LoIP methodology assesses DR contributions adjusting for weather conditions and other factors.

At present, to the best of the Joint DR Parties' knowledge, only the IOUs have experience with this complicated model. EnerNOC has, in the previous Resource Adequacy Docket (R.09-10-032), requested a simpler methodology for determining qualifying capacity (QC) for resources that participate in the wholesale market that is comparable to the methods used in other markets. EnerNOC's proposal was to use the registered, or registered and tested, capacity that DR provider (DRP) registers with the CAISO as the QC. This makes sense for several reasons:

1. It is simple.
2. It is consistent with the manner in which other markets ascribe qualified capacity.
3. It is consistent with the manner in which other generation resource's QC is determined.
4. It provides the right incentive for the DRP to register capacity under which it is capable of providing performance or face market penalties for its inability to do so.

In short, the Commission should *not* adopt LoIP for wholesale market participation. It should also not adopt the Electric Load Carrying Capacity (ELCC) methodology, which is even more complex than the LoIP.

**B. Cost Allocation**

*Question B.1: 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 cost allocation and why?*

The Joint DR Parties offer no comments at this time on cost allocation issues, but, reserve the opportunity to file comments in reply.

*Question B.2: 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?*

See response to Question B.1.

*Question B.3: 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?*

See response to Question B.1.

**C. Back-Up Generators**

*Question C.1: 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.*

This question fails to reflect the full statement in Conclusion of Law No.5 as follows:

> "It is reasonable to adopt **as a policy statement** that fossil-fuel emergency back-up generation resources should not be allowed as part of a demand response program for RA purposes, **subject to rules adopted in future RA proceedings**."[3]

[3] D.11-10-003, at p. 33; emphasis added.

By failing to include two phrases, this question has, in turn, failed to apply or put Conclusion of Law 5 in its proper context. First, the referenced Conclusion of Law puts forth a policy statement, and then, second, makes that policy subject to rules adopted in future RA proceedings. Those rules have not been promulgated, and, therefore, the policy position has not been implemented.

In fact, the discussion in D.11-10-003 supporting this conclusion recognizes that further action and review by the IOUs and Energy Division are necessary before any new rules are implemented.

> "At this time, we will not make any change to the RA rules to implement our policy statement regarding RA treatment of back up generation. We recognize parties' concerns regarding lack of data or analysis to the extent that customers use their BUGs for DR and enforcement related issues. Therefore, we will defer the RA rule change to a future RA proceeding when further studies or analysis become available.
>
> "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. We will defer the details on the process evaluation to the IOUs' 2012-2014 DR applications.[4] We will also direct our Energy Division to make recommendations regarding ways to implement our policy statement consistent with overall Commission policies.
>
> "It appears that there was some confusion among parties in their comments that Energy Division's proposed rule would apply to all fossil-fueled BUGs used for emergency DR programs. That is not correct. We clarify that our policy statement applies only to fossil-fueled emergency BUGs as stated in our Vision Statement in D.03-06-032 used for any DR programs. In general, the definition of emergency BUG should be consistent with the definition by the US Environmental Protection Agency (USEPA) or state or local air regulation agencies."[5]

[4] A.11-03-001, et al.
[5] D.11-10-003, at pp. 30-31.

The Joint DR Parties are not aware of any effort between the IOUs and Energy Division to identify data associated with BUGs nor have any recommendations occurred in the 2012-2014 DR applications. Therefore, counting BUGs for RA is status quo at this point in time.

It is important to appreciate that utility tariffs certainly identify BUGs as eligible to participate in those programs. Further, it is also important to acknowledge that D.11-10-003 did not make a blanket pronouncement that BUGs were prohibited for DR, but rather, if the funds are specifically for retrofitting a BUG for the sole purpose of participating in a DR Program, that "explicit" use of a BUG was prohibited.[6] An "implicit" use of a BUG, as incidental to DR performance, was not prohibited.[7]

From an aggregator perspective, BUGs are not a significant part of the DR services, and the focus on BUGs seems misaligned with the scale of their impact relative to other fossil-fueled resources. In general, BUGs are rarely, if ever, installed to provide DR capacity to a customer. Instead, BUGs participate in DR because they are an asset that is already in place, providing back-up generation for critical customer operations.

As a result, BUG installation and use are unlikely to expand as a consequence of any policy decision associated with DR, because of existing air quality requirements. Rather, a new policy designed to limit BUG use as a DR resource is likely to lead to the need for replacement resources, the most likely candidate being natural gas-fired generation.

In allowing BUGs to participate in DR programs and provide RA capacity, the Commission takes advantage of existing resources and avoids the need to develop new, green-field, fossil fuel resources. Such new potential resources, while they may be developed to meet a more narrow need, may eventually see their operations expand to meet other operational needs,

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[6] D.11-10-003, at p. 29.
[7] Id.

thereby locking the State into a much greater potential GHG emission profile than would be the case by simply continuing the status quo and allowing the use of BUGs to provide RA.

Lastly, it is important to put BUG use into context. If, as the Joint DR Aggregators attest, there is a relatively low percentage of the DR capacity that is coming from BUGs from aggregator-managed programs, then it is not clear that this issue needs to be a top priority in the DR OIR relative to other issues. In order for BUGs to operate, it must meet federal, state, and local air regulations and be permitted to run up to a maximum number of hours.

In this regard, the Environmental Protection Agency (EPA) recently revised its engine regulations, including changes that address engines participating in DR programs. Under EPA regulations, in order for a BUG to qualify as an emergency generator, it must be dispatched in response to a system operator's energy emergency alert level 2 (EEA)-2 declaration or where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

EPA defines these conditions as emergency DR and allows up to 100 hours per calendar year of this use including testing and maintenance. A Stage 2 Emergency is when CAISO predicts its operating reserve margin to go below 5%.[8] The CAISO has not had a Stage 2 Emergency since 2006, where there was one occurrence.[9] The largest incidence of emergency alerts occurred during the Energy Crisis in 2000 and 2001. Since that time, Stage 2 Emergencies have been infrequent and are not likely to exceed the 100 hours per year for emergency dispatch contained in the EPA rules.

In addition, EPA allows up to 50 of the 100 hours for what EPA calls "non-emergency situations" but what should be called "transmission or distribution-level emergencies." This use

[8] http://www.caiso.com/Documents/EmergencyFactSheet.pdf
[9] http://www.caiso.com/Documents/Alert_WarningandEmergenciesRecord.pdf

is limited to dispatches that are intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

In addition to EPA requirements, the California Air Resources Board regulations for engines operating outside of blackouts require engines to meet the Airborne Toxic Control Measures which requires a diesel particulate filer (DPF) to control particulate matter. On top of state and federal requirements, local air resources boards must provide an operating permit for each BUG. BUGs operating outside of the above-referenced EPA criteria specifications would necessitate the BUGs to upgrade its generator to meet the non-emergency RICE NESHAP (Reciprocating Internal Combustion Engine National Emission Standards for Hazard Air Pollutants) requirements.

In light of the potential for a capacity shortfall in Southern California as a result of the San Onofre Nuclear Generating Station (SONGS) closure, BUG operation could be a last line of defense to maintain the stability of the grid. The EPA recognized the importance of BUGs for system protection in its position reflected in the Federal Register Notice (January 30, 2013):

> "The EPA believes that the emergency demand response programs that exist across the country are important programs that protect the reliability and stability of the national electric service grid.
>
> "The use of stationary emergency engines as part of emergency demand response programs can help prevent grid failure or blackouts, by allowing these engines to be used for limited hours in specific circumstances of grid instability prior to the occurrence of blackouts.
>
> "A standard that requires owners and operators of stationary emergency engines that participate in emergency demand response programs to apply after treatment could make it economically infeasible for these engines to participate in these programs, impairing the ability of regional transmission organizations and independent system operators to use these relatively small, quick-starting and reliable sources of energy to protect the reliability of their systems in times of critical need."

In addition, parties may argue that use of BUGs is likely to occur on hot summer days when ozone levels are already high, further contributing to the deterioration of air quality. However, EPA responded to those concerns by stating the following:

> "While EPA acknowledges that emergency DR may be called during HEDD in the summer when days are especially warm and ozone is problematic, the use of emergency DR at such times cannot be directly correlated as causing or contributing to the ozone exceedances. Also, the fact is that many DR events occur on days when ozone standards were not exceeded and in many cases ozone levels are high or higher on days before a DR event, according to available data."[10]

<u>Question C.2</u>: *If the Commission bifurcates demand response programs, how should the Commission develop rules that are consistent with the D.11-10-003 policy statement?*

The Commission would first have to investigate the use of BUGs, as discussed above and in D.11-10-003, and make a determination to change DR RA counting rules for all DR services, retail or wholesale. The issue is not exacerbated by bifurcation, although some may make that argument. Bifurcation reflects that some DR will remain at a retail level and some will participate in the wholesale market. In order to participate in the wholesale market, a demand response provider (DRP), upon adoption of the advice letters implementing the Direct Participation Decision (D.) 12-11-025, as modified by D.13-12-029, will have to enter into an agreement with an IOU to abide by the Direct Participation Tariff (Rule 24) and will have to register with the Commission, among other things.

If the Commission decides that BUGs will not count for RA, then any aggregator with a contract with an IOU will be responsible for attesting that the MW it provides under contract will comply with the RA Rules, as may change from time to time. That is squarely the responsibility of the DR aggregator to ensure its delivered capacity will meet the RA criteria or else it will not get paid for that capacity.

[10] EPA RICE NESHAP Response Comments, January 14, 2013.

Further, if a DRP participates in the wholesale market, it must find a load-serving entity (LSE) to buy its capacity, which will only have value if that capacity is RA-eligible. LSEs will not buy capacity from an aggregator that will create risk for it to receive resource adequacy and therefore crease risk of non-payment to the DRP for those MW that are not RA-eligible. There are economic reasons why an aggregator or a DRP, providing either retail or wholesale DR services, will want to ensure that its capacity meets the RA eligibility criteria.

Question C.3: *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?*

Joint DR Parties have not done an exhaustive analysis relative to current laws and regulations regarding back-up generation other than those referenced in the response to Question 1 in this section. However, Joint DR Parties reserve the opportunity to reply to other parties' responses on this question.

## III.
## CONCLUSION

The Joint DR Parties welcome this opportunity to offer their Responses to the Phase 2 Foundational Questions. Consistent with those responses, the Joint DR Parties recommend as follows:

- Bifurcation should be the result of a policy directive that will result in increased DR opportunities and incremental benefits beyond those provided by the current retail programs.
- The Commission should acknowledge that energy market revenues, alone, will not be enough to encourage wholesale market participation, much less result in an expansion of DR beyond the current retail programs.
- If the Commission proceeds with bifurcation, bifurcation between wholesale and retail programs probably makes the most sense.
- Not all retail programs will be bid into the wholesale market; however, maintenance of the value of retail DR for resource adequacy purposes is critical.

- Differences in operating characteristics of different resources must be reflected in the resource adequacy requirements, relative to generation, or risk collapse of other resource types.
- Back-up generators (BUGs) are subject to federal, state and local air emissions regulations.
- BUGs do not represent a large percentage of the Joint DR Parties' services.
- BUGs are not dispatched frequently; but, may provide protection against outages.
- Because aggregators will incur the risk of non-payment for any capacity that will not meet an LSE's resource adequacy obligation, bifurcation does not increase the likelihood that aggregators will increase BUG use.

Respectfully submitted,

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