



MEMORANDUM

To: LGSEC Distributed Generation Committee

From: Jody London and Nathan Wyeth, Regulatory Consultants

SUBJECT: Reply Comments in Distribution Resources Plan Proceeding

DATE: October 25, 2014

Earlier this month we provided a summary of Opening Comments submitted to the California Public Utilities Commission ("CPUC") in its Distribution Resources Plan proceeding (R. 14-08-013). This memo summarizes Reply Comments submitted on October 6.

The LGSEC submitted Reply Comments that focus on the importance of local government involvement in developing and implementing distribution resources plans ("DRPs") and the importance of DRPs to work in concert with locally adopted climate action and energy plans. We call for DRPs to recognize distribution areas where local governments are facilitating energy projects, for example, microgrids, distributed generation installations, energy efficiency projects. And we suggest that as the Commission reviews a utility's DRP, the Commission should see evidence that the utility has consulted with local jurisdictions on these matters.

The CPUC has indicated that the next steps in this proceeding will be the issuance in November of a staff proposal on guidance for developing DRPs, and a workshop on the proposal (if parties so request). The CPUC expects to issue a ruling in January with guidance for the utilities on what their DRP proposals should include, so that the utilities can submit them in July. Final approval of the DRPs is expected in March 2016.

Overview of Comments

Over twenty parties submitted Reply Comments. The Replies delve further into a subset of issues raised in initial comments. A handful of the overarching topics and a set of key smaller topics raised in reply comments are discussed here.

- *Scope of Proceeding*
There is a great deal of back and forth in reply comments concerning what the Commission should take into account at this stage of the Rulemaking on DRPs and for DRPs in general. The investor-owned utilities ("IOUs") are generally seeking to focus the proceeding to exclude discussion of such topics as customer data sharing and

discussion of ownership models for the grid. Some commenters have previously suggested interconnection processes as an example of a 'barrier' to distributed energy resources ("DERs") of the sort that statute intends the rulemaking address. The IOUs have responded here that addressing interconnection processes in this proceeding would be both outside of appropriate scope and would distract from the tight focus needed to meet the July 2015 deadline for DRPs.

IOUs like SCE are suggesting a tight focus on defining what constitutes an 'optimal location' for a DER to enable them to focus on mapping this in their service territories, leaving other topics to other proceedings. It seems that this is ultimately a question of whether the proceeding looks at DERs holistically from a technical perspective (looking at multiple technologies *vis a vis* the grid) or from a policy perspective (comprehensively identifying support mechanisms and barriers for DERs to be implemented in other proceedings).

- *Determination of Value and Customer Choice as Value*
With the expectation that cost-benefit analysis of DERs will drive what is considered an "optimal location" for them and then how much they are worth in these places, commenters such as the Center for Sustainable Energy focus on whether public value can be encapsulated as least-cost for ratepayers or whether there are other measurements of the public interest to which the Commission should look in this case. While acknowledging the need to respond to customer desire for DERs, the IOUs focus implicitly and explicitly on maximizing value to ratepayers based on least-cost approaches for the grid. DER providers, policy organizations, and environmental groups are arguing for broadening this in the sense that environmental values should be reflected in valuation of DERs and that members of the public may decide that they are best served through DERs above and beyond their impact on the grid.

DER providers also are advancing arguments that customer choice to adopt DERs is a value in and of itself. This could be perceived as outside the scope of a technical cost-benefit analysis and so the orientation of the proceeding could hinge on the extent to which the Commission agrees with this.

- *Locational Issues*
Local governments request that the utilities coordinate with local governments as they develop their DRPs, and the DRPs coordinate with local government planning activities. The Joint Bioenergy Parties argue that proximity to load cannot be the biggest or only factor in evaluating locational benefits of a DER. They point out that some facilities must locate near their fuel source, for example wastewater treatment, dairies, landfills. Sustainable Conservation reminds the CPUC of this as well, and links State goals for greenhouse gas reduction and bioenergy deployment to the DRP mandate.
- *Current Grid Moving Forward or Desired End State Moving Backwards*
The Green Power Institute ("GPI") suggests another way to frame this, which is whether

or not the Commission assumes that a future with high DER penetration is the desired outcome (whether desired by the Commission or based on deferring to anticipated consumer choice for DERs) and then works backward to facilitate this via DRPs. This in contrast to IOU approaches, in which DER deployment is implicitly considered a possibility contingent on individual DERs providing net-positive benefits. If the Commission assumes that a high DER future is what the public wants or will demand, it would suggest the need for a more expansive proceeding gathering up any barrier to DERs and driving other proceedings. If the Commission assumes that the public wants DERs only where they are the least-cost option when priced for their value to the grid as a whole, then a more technical evaluation of locations where they are most economic would follow.

A number of more specific issues of contention arose in reply comments:

- *Ownership*
While IOUs including Pacific Gas & Electric (“PG&E”) and Southern California Edison (“SCE”) urge that questions of ownership of the distribution grid be considered beyond the scope of this proceeding, others including California Energy Storage Association (“CESA”) and the Office of the Ratepayer Advocate (“ORA”) suggest that the Commission offer guidance on ownership questions to inform DRPs. Several commenters, including Solar City and Marin Clean Energy (“MCE”), urge that ownership of behind-the-meter assets only be allowed by unregulated affiliates of IOUs under Affiliate Transaction Rule.
- *Reliability and Physical Assurance*
Many DER providers responded to San Diego Gas & Electric (“SDG&E”)’s initial comments suggesting that DERs providing reliability services to the grid should be held to the same standards of availability or ‘physical assurance’ as IOU-owned equipment. Commenters such as the Clean Coalition, Solar City, and Environmental Defense Fund (“EDF”) argued that multiple resources that can be reliably aggregated should not be held to such a standard, which has previously precluded them from being included in ‘Resource Adequacy’ requirements.
- *Location/Time Specific Value vs. Stability in Price Signals*
Echoing initial comments, several commenters including Clean Coalition support SDG&E in calling for time- and location-specific tariffs but suggest that these must remain stable enough that DER providers can deploy their long-term assets around them.
- *Standardization*
Several commenters including the Environmental Defense Fund voiced support for initial comments by Mission:Data and Qado on the importance of standardizing approaches to DRPs across IOUs.

Summary of Replies by Parties

The following parties submitted replies.

1. Bloom Energy
2. California Small and Multi-Jurisdictional Utilities ("CASMU")
3. California Independent System Operator ("CAISO")
4. California Energy Storage Association ("CESA")
5. Clean Coalition
6. Center for Sustainable Energy ("CSE")
7. Environmental Defense Fund ("EDF")
8. Green Power Institute ("GPI")
9. Interstate Renewable Energy Coalition ("IREC")
10. Joint Bioenergy Parties (California Association of Sanitation Agencies, Bioenergy Association of California, Waste Management)
11. Marin Clean Energy ("MCE")
12. NRG Energy ("NRG")
13. Petra Systems
14. Office of the Ratepayer Advocate ("ORA")
15. Pacific Gas & Electric ("PG&E")
16. San Diego Gas & Electric ("SDG&E")
17. Southern California Edison ("SCE")
18. Solar City
19. Sustainable Conservation
20. Vote Solar
21. World Business Academy

CASMU

CASMU simply notes that no commenters asserted any reasons why small utilities should have to submit full DRP plans rather than simplified narrative responses.

Bloom Energy

Bloom wades into the debate on whether high DER penetration creates unreliability by pointing out that some DERs are non-intermittent, such as the fuel cells that Bloom manufactures. Bloom urges that the proceeding include consideration of *all* DERs, including combined heat and power, fuel cells, and expansion of the Self-Generation Incentive Program.

Bloom also points out that DER penetration under DRPs should be easily tracked over time within the DRPs, a criteria for evaluation that had not been widely mentioned in initial comments.

CAISO

In suggesting a short- and long-term DRP planning cycle, CAISO suggests that the longer-term cycle (a ten year time horizon in line with Long Term Procurement) incorporate such broader measures of 'optimal locations' for DERs as resource availability, customer base indicative of high DER uptake and local jurisdiction intentions as expressed in Climate Action Plans.

CAISO tends to side with DER providers in suggesting planning against expectations of high DER penetration, noting that this is a bottom-up process driving change (unlike top-down energy market reform) and that DRPs should not constrain innovation.

CESA

CESA is one of the organizations that disagrees with SCE's narrow interpretation of an optimal location for a DER, suggesting looking at system-wide benefits. CESA suggests reviewing DRPs according to system-level outcomes that can be tracked before and after implementation. CESA also disagrees with SCE's recommendation that IOUs should 'backstop' DER projects for reliability, in lieu of traditional investments but still requiring capital expenditure, and instead urges assuming that DERs can deliver on reliability where they have demonstrated ability to do so.

CESA urges that ownership questions be included in the proceeding, because Public Utilities Code 353.5 specifically calls on IOUs to purchase services for distribution reliability from third parties. Recognizing the fast timeline for the proceeding, CESA does not want ownership questions to derail the process but urges the Commission not to adopt outcomes that *presume* ownership solely by IOUs, such as PG&E's suggestion that all distribution investments be evaluated through general rate cases.

Finally, CESA (along with EDF, below) agrees with SDG&E that rate reform to ensure that both DERs and IOUs are compensated for the respective value they provide is warranted, and that long-term contractual mechanisms can also be created for behind-the-meter DERs for services to the distribution grid.

Clean Coalition

The Clean Coalition suggests approaching different types of value with a layered approach, starting with direct ratepayer savings, then ratepayer values like power quality and reliability, and then customer demand for other values like self-generation, economic development and environmental benefits.

The Clean Coalition uses as evidence for its disagreement with SDG&E about the need for 'physical assurance' of portfolios of DERs that the Sacramento Municipal Utility District has found DR to be predictable and reliable.

Finally, the Clean Coalition agrees with moving to 'smart' inverters but disagrees with PG&E that this should not be compensated; it suggests that causing DERs to incur new costs is against the intention of the proceeding.

CSE

CSE suggests that IOU comments show that they are focused on the needs of grid, not on customer preferences and proactively accounting for integration at sites chosen by customers. CSE suggest a methodology for estimating customer DER implementation at the feeder or substation level over multi-year time periods, the process for which should only take 2-3 months. However, CSE acknowledges that while a customer-approach may be most appropriate for residential customers, for commercial and industrial ("C&I") customers, a grid-driven approach may make more sense. CSE endorses the Clean Coalition's suggested methodology for this.

Because customers that adopt one DER more likely to adopt multiple and the value of multiple DERs can be greater than the sum of the parts, adoptions of combinations of DERs should be encouraged.

EDF

Like CSE, EDF honed in on combinations of DERs, and specifically suggested using DRPs to test how certain configurations or loading orders could alter outcomes, including environmental outcomes. However, in contrast to CSE, EDF suggests a rubric for valuing DERs that focuses on grid/societal benefits, inclusive of environmental values.

While EDF agrees with SDG&E that DERs compensated for performance must have performance requirements, it also urges consideration of portfolios of DERs and no 'physical assurance requirement.'

Along with Bloom Energy, EDF suggests that new measurements for reliability/resiliency are required for a grid that no longer follows the current 'spoke and wheel' model.

EDF notes its concern with SCE's suggestion that where DERs are relied upon for system reliability, parallel utility capital investments should 'backstop' them. It agrees with Wal-Mart's initial comments that this could lead to 'gold-plating' and drive up costs for DERs. EDF endorses PG&E's suggestion that this proceeding should look at where existing tariffs and procedures are barriers to DERs, and that DRPs should integrate existing commission-approved programs.

In terms of specific approaches to providing value to DERs, EDF could support: location-specific adders, requests for offers, direct compensation, tailored time-variant rates, incentives to non-exporting DG and those that export on-peak, and unbundling ancillary services to provide price signals for alternative supplies. Finally, EDF sees merit in ORA's suggestion for

one-time incentive payments.

GPI

In reviewing IOU comments, GPI replies that the IOUs are not sufficiently focused on using DRPs to facilitate high DER penetration, although it finds SCE the most forward-looking. GPI urges the Commission to build high consumer demand for DERs into DRPs. GPI agrees with the Bioenergy Association and Enernoc that non-electrical benefits should be considered as part of the criteria for evaluating DERs, and it agrees with ORA that DRPs should be used for enabling pilots and urges that electric vehicles (“EVs”) should specifically be examined in pilots.

IREC

IREC agrees with Vote Solar that a rubric for valuing DERs in terms of “low cost,” “benefit maximization” support for Solar City’s comment that DERs should be viewed as an “inherent characteristic” of customers going forward and suggests that the Commission clearly state that customers always have a right to implement DERs. IREC supports the desire of IOUs, voiced at the DRP proceeding workshop, to improve grid behavior modeling and suggests that this should be part of DRPs, including the costs for the software to enable this.

Joint Bioenergy Parties

The CPUC should consider environmental, clean energy and distributed generation policy goals that bioenergy can help achieve. Note that ratepayer benefits are broader than direct grid impacts and costs, and include reduction of health and environmental impacts, reduced greenhouse gas emissions, and increased use of alternative fuels. Argue that different forms of renewable generation have different profiles in terms of reducing greenhouse gas emissions. Notably, bioenergy reduces emissions of methane and black carbon, both of which are significantly more potent than carbon dioxide. Also urge CPUC to assess the ability of distributed energy resources to provide flexible generation and reduce curtailment. CPUC needs to ensure all relevant proceedings and policy initiatives are coordinated.

Local Government Sustainable Energy Coalition

The LGSEC focuses on the importance of local government involvement in developing and implementing distribution resources plans (“DRPs”) and the importance of DRPs to work in concert with locally adopted climate action and energy plans. The LGSEC calls for DRPs to recognize distribution areas where local governments are facilitating energy projects, for example, microgrids, distributed generation installations, energy efficiency projects. The LGSEC suggests that as the Commission reviews a utility’s DRP, the Commission should see evidence that the utility has consulted with local jurisdictions on these matters.

MCE

MCE generally supports TURN's rubric for ratepayer cost valuation, but agrees with EDF that environmental benefits should be included.

On data, MCE suggests that the Commission should mandate availability of Advanced Meter Infrastructure ("AMI") data from IOUs to advance DER deployment, which has otherwise been very difficult to obtain. It agrees with NRDC and NRG on the need for transparent communication of DER value, for example sharing Renewable Auction Mechanism ("RAM") interconnection maps as GIS layers, sharing congestion pricing maps/calculators, and clearly itemizing interconnection fees.

Finally, MCE addresses competitive neutrality by agreeing with NRG that departing load charges are a burden for DERs that could be used anti-competitively by IOUs, necessitating regulation of these charges. As well, MCE agrees with EDF that the IOUs should not use their role as the distribution service organization ("DSO") to institute biases against customer-owned DERs; they should only be able to own DERs under Affiliate Transaction Rules.

Petra Systems

Petra joins those arguing that DERs need not be available always in order to qualify as resource.

NRG

NRG strongly agrees with the criteria for valuing DERs advanced by MCE: transparency, competitive neutrality, and ease of access to data, billing and interconnection. AREM and Vote Solar add a fourth criteria that NRG also supports, how DRPs will facilitate customer choice and flexibility. NRG agrees with Solar City that "optimal locations" should include this value on the basis that DERs provide value to customers above and separate from the grid.

NRG disagrees with ORA that this proceeding should not address data questions and concurs with other commenters that utility system data, planned capital additions, DER functionality that would benefit the grid, and available capacity on existing circuits and substations should be publicly shared.

NRG notes that CESA offered the concept of the Distribution Marginal Price to incorporate a variety of values provided by DERs, but offers that its concept of Distribution Pricing Zones may be simpler and easier to implement.

Finally, NRG responds to SDG&E's comments on ownership of assets relied upon for reliability. NRG agrees that for "certain" reliability services, distribution system ownership may be required but for others, contractual or tariff mechanisms should suffice.

ORA

ORA supports SCE's suggestion that the underlying criteria for DER should be the underlying cost-benefit ratio with regard to avoided capital expenditure versus capital expenditure required for DERs. ORA finds acceptable the need for backstop utility investment as long as this is smaller than the default, because it considers DERs to be unproven for such things as reliability services. Nonetheless, ORA agrees with Vote Solar and Wal-Mart on taking an expanded view of customer value, including serving the customer choice of anyone who wishes to implement a DER.

ORA supports IREC and TURN in urging the Commission to issue guidance to IOUs prior to the creation of DRPs on ownership of distribution assets. ORA urges careful consideration of whether particular ownership structures would be more or less costly to ratepayers and ownership would mean taking on technology risk.

While ORA supports NRG's urging for transparency in distribution system requirements and CESA's proposal for a distributed marginal price in principle, ORA cannot yet comment on a specific methodology for this. It concurs on the importance of competitive neutrality and a transparent review and approval process for DRPs to support this.

ORA agrees with CAISO that IOUs should distinguish between DERs that provide system benefits and those that do not, so long as they make clear how this distinction is made. In general, ORA suggests encouraging developers to implement DERs that support the grid and decrease rather than increase volatility.

ORA supports Nest's comments to the effect that customer data privacy should be protected. Based on the existence of initiatives like the Green Button program, ORA does not believe that the Commission should revisit privacy rules for the purposes of making additional data available under DRPs.

Finally, ORA supports GPI's suggestion for the inclusion of pilots in under DRPs and the idea that EVs, as well as microgrids, are an appropriate focus for pilots.

PG&E

PG&E calls out a variety of comments that it believes should be considered beyond the scope of the proceeding, including incentives for bioenergy projects, access to customer-specific data, mandates for procurement, and ownership of distribution facilities. It urges exclusion of these concerns because of the short timeline for producing DRPs.

PG&E disagrees with Solar City and others that customer preference should be considered a value itself, and intends to structure its DRP based on cost effectiveness for all utility customers, in line with comments from TURN and ORA that DERs should be evaluated for their impacts on all ratepayers, not just those that own them.

PG&E notes agreement with NRDC that a variety of DERs should be incorporated into DRPs, including energy efficiency (“EE”), storage, EVs, and DR in addition to distributed renewables.

SCE

SCE joins PG&E in calling out comments that it believes should not be addressed in this proceeding, which SCE believes should be focused on determining “optimal location” for DERs. This includes topics like ownership, interconnection processing times, competitive market issues, procurement standards, DR, and clean energy mandates. SCE suggests that these and other state policy goals are more appropriately addressed in other proceedings.

On more specific criteria questions, SCE agrees with CAISO that annual distributed generation deliverability results could be considered as part of its Local Capacity Requirements. SCE urges consideration of DERs’ ability to contribute towards load and voltage requirements but suggest that other ancillary services benefits may be difficult to capture. SCE notes that it is supportive of transparency for non-IOUs in optimal location analysis and conclusions.

SDGE

SDG&E reiterates its view that physical assurance is necessary for any DER to be credited for reliability services. SDG&E takes issue with CalSEIA’s assertion that renewables like solar are as reliable as CalSEIA implies, noting that unpredictable available solar power can only be used when peak solar output and circuit-level load peaks, which in SD&E’s experience is rarely the case. SDG&E notes that inverter-based DERs will not operate after outages until distribution is in good condition, so they cannot be considered to be able to support system restoration.

SDG&E suggests that DR is not proven to work for what CalSEIA proposes, to back out variations in solar power due to cloud cover. It notes that DR works best with limited calls of fixed duration, a very different pattern than implied by responses to cloud cover. While solar could pair with other DERs to address intermittency, SDG&E does not consider storage a proven solution for this.

SDG&E supports a “Right Time, Right Location, Right Certainty” rubric for DERs as the threshold they have to meet in order to defer distribution capital expenditures.

Finally, SDG&E takes issue with Solar City’s urging that DERs should be credited with overall system benefits, noting that this is difficult to measure and that Solar City is not also suggesting that DERs be penalized if they hurt system stability indices. Unless impact is reflected in both directions, SDG&E urges that DERs only be credited for capital project deferrals.

SOLAR CITY

Solar City notes its appreciation of the statement from PG&E that IOUs should serve customer

preferences, and in turn supports AREM and CESA statements on including customer goals in policy goals, while disagreeing with CESA that utility shareholder value should be taken into account in the same way. (CESA noted this as a way to increase IOU comfort with the DRP process, more than as a statement of values).

Solar City disagrees with several of SDG&E's remarks, including SDG&E's statement that DERs should not be able to operate in "island" mode in order to preserve safety of personnel working on a grid during disruptions to service, suggesting that islanded DERs can prevent exporting power to the grid and thus do not pose a safety threat. Solar City also urges rejection of SDG&E's suggestion for a greater percentage of utilities' fixed costs being recovered through demand charges based on maximum grid withdrawal, saying that rate reform is beyond the scope of the proceeding. Finally, Solar City disagrees with SDG&E and CAISO that DERs must be dispatchable and not be "passive" in order to support distribution operations. It believes that SDG&E's proposed approach to governing DERs relied upon for distribution planning is unduly restrictive.

SUSTAINABLE CONSERVATION

Sustainable Conservation points out that air regulators are relying on methane digester technology to meet AB 32 goals. Sustainable Conservation encourages the CPUC to use the opportunity created through utility distribution planning to identify locations where potential exists to install digesters. Notes fixed location of dairies. Agrees with parties calling for broad definition of ratepayer benefits to include environmental benefits.

VOTE SOLAR

Reviewing initial comments, Vote Solar urges organization of the proceeding to determine optimal locations, quantify avoided costs from DERs, determine appropriate compensation for DERs, and then identify barriers. It agrees with IREC that customer engagement should be added as a component of DRPs. It urges that if a "Right location, Right time, Right size" rubric is used as suggested by SDG&E, there is a need to clarify what this means.

Vote Solar believes that after initial DRPs are submitted, there will be appropriate time to undertake a broader examination of the evolving public interest in having utilities facilitate DERs. It also suggests that after DRPs evaluate how combinations of DERs can serve as alternatives to grid investment, this should inform other proceedings on interconnection, distributed generation, vehicle-to-grid storage, resource adequacy and long term procurement.

Finally, it suggests that for DERs in areas where their benefits can be maximized, a location specific Request for Offer and direct compensation, modeled on the Renewable Auction Mechanism, could be used.

WORLD BUSINESS ACADEMY

The World Business Academy voices support for a range of comments, and specifically supports MCE on the three criteria for evaluating DRPs: transparency, competitive neutrality, and ease of access to data, billing, and interconnection.