BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider Streamlining Interconnection of Distributed Energy Resources and Improvements to Rule 21.	Rulemaking 17-07-007 (Filed July 13, 2017)

COMMENTS OF THE CLEAN COALITION IN RESPONSE TO ADMINISTRATIVE LAW JUDGE'S RULING REQUESTING RESPONSES TO QUESTIONS ON WORKING GROUP THREE FINAL REPORT

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I. INTRODUCTION

Pursuant to the November 27, 2019 *Administrative Law Judge's Ruling Directing Responses to Attached Questions and Revising Schedule* ("Ruling") in relation to Working Group Three's Final Report, the Clean Coalition respectfully submits these responses to certain questions attached to the Ruling.

II. DESCRIPTION OF THE PARTY

The Clean Coalition is a nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean Coalition drives policy innovation to remove barriers to procurement and interconnection of distributed energy resources (DER)—such as local renewables, advanced inverters, demand response, and energy storage—and we establish market mechanisms that realize the full potential of integrating these solutions. The Clean Coalition is a project of Natural Capitalism Solutions, a 501(c)(3) non-profit.

III. Comments

The Clean Coalition actively participated in the Working Group and development of the Report, building upon our history of leading participation in Rule 21 and related issues. Working Group Three reached consensus on a number of issues after constructive engagement and we fully support these recommendations. We were unable to achieve consensus on other issues; although we believe this may reflect fundamental differences in some instances, the press of time severely limited our ability to affirm facts, clarify and refine proposals based on stakeholder feedback, and resolve all concerns. We appreciate this opportunity to address arising from the Report and subsequent workshop and comments. We offer the following responses to the Ruling's questions.

Response to Working Group Three Report Questions

Responses provided at this time to questions only as indicated below.

We look forward to reviewing and replying to Party responses to all questions as appropriate.

Issue 12: Distribution Upgrade Timelines

- 12-a: *If the Commission adopts proposal 12-a, what reporting venue and format should the Commission require?*

Response Reporting should be overseen by the CPUC Energy Division, and publicly available through a link on the Commissions Interconnection webpage.[1] The format should be a standard electronic database and text that can be downloaded and edited for data aggregation and comparison in a format convertible to Microsoft Excel and similar common interfaces.

- 12-c: *Is there any reason that the timelines that Working Group Two recommended establishing for upgrades under Rules 15 and 16, which were addressed as part of Issue 10, should not be extended to all upgrades under Rule 21?*

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[1] https://www.cpuc.ca.gov/General.aspx?id=3962

Response Clean Coalition defers response at this time.

- 12-d:
  - *Why has the timeline for Net Generation Output Meters (NGOMs) been singled out?*
  - *What timeline is reasonable? Explain why.*

Response Clean Coalition defers response at this time.

- *12-e: This proposal is listed as consensus, but there does not seem to be agreement on how it should be implemented. Comment on the apparent areas of disagreement in this proposal. Specifically, how should notification requirements balance the need for site-specific visibility with the reality that some causes of delays will likely impact many projects. Are there situations in which an automated delay notice would meet a developer needs? Should a request to check project status constitute "notice"?*

Response Clean Coalition defers to developers regarding their needs.

- 12-f:
  - *What types of interconnections should be included in the group of interconnections subject to the framework for tracking and reporting?*

Response All interconnections should be included in tracking and reporting, this is the only way to identify where and why delays occur and thereby determine where remediating action is warranted.

- *What is a reasonable metric for tracking? Explain why your proposed metric is reasonable.*

Response Clean Coalition defers response at this time.

- *12-j: What are the impacts of adding the requirement to provide quarterly updates on substation upgrades to Rule 21?*

Response Clean Coalition defers response at this time.

Issue 16: Third Party Construction of Upgrades

- *16-a, 16-b, and 16-c: There is very little discussion of the rationale behind these proposals in the report. Discuss the pros and cons of aligning the rules governing third party upgrades required under Rule 21 with those of Rule 15.*

Response In outreach to applicants over many years the Clean Coalition has consistently received feedback indicating that delays in both scheduling and actually performing construction of upgrades is a frequent problem. DER installers ability to qualify for participation in procurement programs, and to fulfill contract requirements, is dependent upon these construction schedules. This applies both to services for individual customers and to services to load serving entities such as utilities and CCAs.

For example, each utility now annually conducts a distribution Grid Needs Assessment, develops a Distribution Deferral Opportunities Report, and conducts RFO solicitations for DER alternatives where there is high potential for substantial ratepayer savings. These projects have tight timeframes for completion, and higher cost conventional upgrades will otherwise be installed to meet the forecast need, because there is no ability to reschedule the need. In this scenario, if the DER installation requires a minor grid upgrade, a delay by the utility service planning and construction crews can easily exceed the narrow time window and result in ratepayers footing the bill for the larger upgrades that could have been avoided. Similar circumstances have hindered success in Commission mandated utility procurement programs such as ReMAT, utility local capacity resource procurement, and CCA local procurement.

These delays occur largely because utility construction crews appropriately prioritize response to emergencies and existing customers over new interconnections, and have finite resources in each region. While unforeseen priority needs will result in delays due to rescheduling, predicted periods of high workforce demand also greatly impact initial scheduling of construction, delaying it until planned availability after also meeting prior applicant commitments.

The use of fully qualified, approved, bonded and supervised third party contractors increases the construction resources available and adds flexibility in scheduling, mitigating the utility's resource and prioritization constraints and their impact on applicants need to meet external timelines.

Clean Coalition's view is that allowing third party upgrades will ameliorate some of the ongoing problems with costs and timelines associated with distribution upgrades of various types, while ensuring utility design specs are met, as determined by the utility. The upgrades and related facilities will still, under our proposed revisions, be transferred to and maintained by the utility, as is currently the practice. The primary difference under our proposed approach is that developers will have more options and control over the timing, costs, and choice of contractors performing the identified upgrades when this is a critical factor.

We also note that in both the working group and the June 21, 2019 Rule 21 Working Group 3 workshop, utilities stated that contractors are not authorized to work on energized facilities.

In this photo taken June 22, 2019 (Hwy 9, Santa Cruz, CA) we clearly see a contractor (not utility employees) working on established PG&E energized facilities in

Santa Cruz. We applaud this effective use of available resources. There was no PG&E vehicle present, nor any identifiable PG&E personnel, although we do not assert that active PG&E supervision was not provided.

- *16-d: Respond to the scenarios raised by the Green Power Institute (GPI) in Annex A?*

Response

Clean Coalition supports the consensus proposals for Issue 20

Issue 22: Interconnection Portals

- 22-a:
  - State your position on each of the 18 sub-proposals.
    - *If you support an improvement, provide an indication of the value of said improvement, both in terms of its use for individual customers and in terms of the number of customers for whom such a function would be useful.*

Response

The Clean Coalition is broadly supportive of all improvements to streamline the interconnection process and increases in transparency that support rapid resolution of questions and potential delays.

We note that utilities have indicated that they recognize value in most of the sub-proposals, and we defer to parties engaged in field processes and customer interaction regarding the value of the remaining recommendations.

We strongly reiterate our comments elsewhere that while the "number of customers" is an important metric, the number of MW effected is equally important - improvements that assist market segments providing larger quantities of renewables more efficiently through smaller numbers of individual distribution level installations are critical to meeting the goals of numerous procurement programs including those associated with urgent reliability needs. Installations serving all customers in a community are at least as deserving of streamlined processes as those serving individual customers.

- *22-b: What cost recovery mechanism is appropriate for costs incurred implementing interconnection portal improvements?*

Response There appear to be three conventional approaches to cost recovery - General Rate Case ("GRC") revenues, fees applied to all interconnection applications, or fees applied only to specific categories of applications. In the case of fees, these may be established to recover either all or some portion of costs over a specified number of years divided across a forecast number of applications, either on a per application rate or proportionately weighted to the nameplate size of the application (kW capacity).

The case for the use of GRC cost recovery:

Portal improvements streamlining the interconnection process will facilitate DER deployment, reducing the time, cost, and uncertainties that remain significant barriers to both DER growth in general and to the ability to plan for and procure DER as timely non-wires alternatives in the new Distribution Investment Deferral Framework process implemented under the Distribution Resources Plan proceeding.

Because growth in DER is aligned with state goals in support of emission reduction and local resilience, and because growth in DER generally reduces ratepayer investment in new transmission capacity and energy procurement, general ratepayers will benefit from streamlined interconnection. As such, it is reasonable for cost recovery to occur through the GRC. Additionally, GRC cost recovery is more simple and less burdensome than establishing and managing separate accounts and funding streams, including establishing, collecting, balancing and reviewing discrete application fee structures.

The case for fees:

Where costs clearly exceed benefits realized by general ratepayers it is appropriate to consider allocating those costs to the beneficiaries. While allocation should strive to be proportionate to the share of benefits received, simplicity remains a virtue for efficiency for all parties. Likewise, while any individual portal improvement may target a subset of applicants, in aggregate these may well offset each other between subsets of applicants. We aim for the greatest benefit for the greatest number while also ensuring equitable distribution of benefits across all parties and not ignoring the needs of smaller subsets of the population.

Most importantly, when measuring the impact on streamlining DER it is essential to consider both the total DER capacity aided and the total number of DER applicants aided -- the value toward meeting statewide goals and ratepayer benefits of 100 MW of new DER are the same regardless of whether this is realized through 100

1MW deployments or 10,000 10kW deployments. As such, the Commission should not only consider the number of applicants affected but also the number of MW affected by each proposal.

Issue 24: Cost of Ownership Calculation (COO)

- *All proposals: What is the range of total percentage of cost that COO can make up for a project?*

Response COO is applied to the interconnection facilities and grid upgrades, and these costs vary widely in proportion to other costs when comparing projects. If no upgrades and minimal facilities are required, then the costs are not significant, however, these costs commonly exceed 10% of total project costs, and where upgrades are required the addition of COO is very commonly the factor that results in project cancelation.

Data requests in the prior Rule 21 proceeding indicated that average costs for completed projects not interconnected under NEM rules were approximately $100,000 per MW. Where total project installed costs aim for a target benchmark of $1 per watt, this represents 10%, but where project costs are closer to $2 per watt, the same cost represents 5%. COO charges add approximately 80%, nearly doubling this impact. However, since these are median figures, they mask the larger impact on the 50% of those projects which have higher than median costs. When interconnection costs are low, COO has little impact, but many projects face interconnection costs that are the determining factor in whether or not the project is financially attractive or break even. This is especially true for larger projects designed to offer increasing renewable energy to ratepayers and meet the RPS and local Resource Adequacy needs of utilities and CCAs.

As a specific example, a CEC pilot 500kW energy storage installation required the existing distribution transformer to be exchanged for a larger size transformer

($86,000) and the line fuse to be replaced with a recloser ($87,000) for a total of $173,000. The COO one time charge adds $142,000. These are relatively minor upgrades, but the COO adds more than 10% to the project costs, nearly canceling the project.

Where the impact of COO is high, projects are typically cancelled. It is this subset of interconnection applications which is at stake. We estimate that approximately 5% more MW of local renewable energy would be cost effective to develop annually with corrections to the application of COO, representing a relatively small number of total interconnections but a larger share of the total installed capacity and energy generated (MW and MWh). Please note that this is a ballpark estimate indicative of scale, and actual forecast impacts are subject to many variables.

- *24-a: What are the effects of COO calculations on ratepayers, if any?*

Response The appropriate calculation of COO is to avoid ratepayer impact associated with grid upgrades triggered by an generator (including energy storage) interconnection request, and that is the goal of the Issue 24 proposals. If replacement cost charges are not aligned with actual replacement costs, this will result in a positive or negative cost shift between the interconnection customer and other ratepayers.

Utilities differ in how they address this. In working group meetings, SCE put forward the opportunity for replacement coverage to be a customer elective associated with monthly COO payments, but did not offer this with the one-time payment, and the illustrated limited term coverage has not been implemented. PG&E requires coverage calculated without term limit (in perpetuity), but states that that they refund unused one-time payment replacement costs based on annualized insurance/risk assessment whenever the customer terminates the GIA. SDG&E did not affirm any method of avoiding assessing and retaining excess replacement coverage charges. These practices avoid under-collection from interconnection customers, but do not all avoid over-collection, potentially burdening interconnection customers with excess charges, especially if paid as a lump sum.

To the extent that COO currently overcharges interconnection applicants, ratepayers may indirectly benefit from excess fees collected by the utility. Any total fees currently collected are far too small relative to total utility budgets to have any measurable impact on customer rates, however they can have a very significant impact on individual interconnection applicants.

To the extent that excess COO charges inhibit development of commercial projects that provide energy, capacity, and services to the load serving entities on behalf of their customers, ratepayers loose access to potential resources and must procure from a market with reduced competition and/or more costly bids in response to Requests for Offers. This impact is again spread over a large number of ratepayers, but will be more significant where resources are sought or preferred within smaller geographic areas, such as constrained Local Capacity Areas or CCA territories.

- 24-b:
    - *For non-utilities: What is the benefit of offering all three options?*

Response All three options ensure ratepayer neutrality, but offering all three options allows the applicant to determine which is more appropriate in consideration of the differences in planned operating lifespan of the generating facility, the expected lifespan of the equipment subject to COO, and the most cost effective action in the event of early equipment failure.

Assessing charges calculated for operation in perpetuity typically overstates costs relative to planned operation - there is no reason to pay for future replacement of equipment beyond the planned operation of the facility. For example, a typical PV facility will be operated for up to 30 years; if the inverters need to be replaced every 15 years, the facility owner will budget for one replacement, but will have no reason to assume costs for a second replacement at year 30 because the PV facility will be decommissioned. At that time, the possibility of extending the facility life may be warranted, and all the associated costs considered. Because facilities have numerous individual characteristics such as site ownership or terms of lease, financing, power purchase agreements, and technologies, a "one size fits all" approach is not appropriate.

- 24-c:
    - *Define like-for-like as you understand the term to be applied in this context.*

Response The Clean Coalition's preferred definition of like-for-like is equivalence of COO costs resulting in ratepayer neutrality (+/- 5%, or $5000, whichever is greater). The interconnection customer will pay for the exchange of equipment, but to the extent that COO for the equipment is comparable to that which would have been borne by ratepayers anyway, no re-allocation of COO would apply.

However, as consideration of like-for-like is simply an alternative to calculation of "net-additional" COO, it merely allows for a simplified process where this calculation is not required, saving utility staff time and streamlining the process. As such, we do not oppose allowing each utility to make its own determination of "like-for-like" as any instance will otherwise be fairly calculated. None-the-less, we strongly support efforts by the Commission to encourage utilities to establish and publish a list of like-for-like (i.e. COO equivalence) to avoid unnecessary calculations and associated delays in development of Generator Interconnection Agreements. Efficiency in the interconnection process requires taking advantage of numerous such streamlining opportunities.

- *The discussion of this proposal notes that PG&E utilizes something similar to a net-additional methodology for the COO calculations for upgrades under Rules 15 and 16. How do investor-owned utility practices for COO calculations for upgrades under Rule 21 currently differ from the described methodology?*

Response

The attached presentation from utilities at the May 2018 meeting of the CPUC Interconnection Discussion Forum provides an overview of Rules 2, 15, 16 and 21 that offers concise context and multiple illustrative examples.

Related to the discussions on COO (Issue 24), slide 11 states:

"For PG&E, if customer requests, and PG&E agrees to the installation of non-standard or Special facilities, the customer pays the <u>additional</u> cost of these facilities. The costs are based on the c<u>ost difference between standard and special/added facilities.</u> And also includes cost of ownership to cover PG&E's cost to own and maintain the special facilities."

This clearly relates to the question of the IOUs ability to determine Net Additional cost basis, which is all that is needed to apply COO to the net additional cost.

IV. CONCLUSION

We appreciate the Commission's attention and parties' history of diligent work in addressing the issues associated with interconnection and offer these comments to further those ends. We urge the Commission's consideration of both the consensus and non-consensus proposals in order to resolve the issues identified for this proceeding, look forward to offering additional information or comment on questions by Commission or proposals by Parties.

Respectfully submitted,

Kenneth Sahm White
Director, Economic and Policy Analysis
Clean Coalition

Dated: January 13, 2020

Attachment: IDF 05152018 Rules 2 15 16 21 (presentation)

VERIFICATION

I, Kenneth Sahm White am the representative for the Clean Coalition for this proceeding. I am authorized to make this verification on the organization's behalf. The statements in the foregoing document are true of my own knowledge, except for those matters that are stated on information and belief, and as to those matters, I believe them to be true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on January 13, 2020, at Santa Cruz, California

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