BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans.	Rulemaking 12-03-014

COMMUNITY ENVIRONMENTAL COUNCIL COMMENTS ON WORKSHOP TOPICS

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The Community Environmental Council ("Council") respectfully submits these comments pursuant to the Administrative Law Judge's ruling from Sept. 14, 2012.

The Council's key recommendation is to develop, as an alternative procurement mechanism to respect the Loading Order, a Local Capacity Requirement (LCR) Re-MAT program that would modify the Commission's new Re-MAT (D.12-05-035) for the LCR context, with the following features and benefits:

- Uses an existing new mechanism approved by the Commission for procurement of renewable energy projects 3 MW and below (implemented pursuant to SB 32)
- An LCR Re-MAT should allow projects up to 5 MW
- The LCR Re-MAT contract price should adjust based on market interest and would be an avoided cost under PURPA, and thus by definition would be cost-effective
- Include a price ceiling and floor to ensure cost-effectiveness, with the price ceiling at the avoided cost of conventional LCR generation
- Re-MAT could be tailored for the LCR context and could include energy storage, distributed generation, and combined heat and power in different "buckets," with different adjusting price regimes
- Initial program size of 1,500 MW, to go live in late 2013, to see how effective the program is before an all-source RFO is issued in 2015
- Meets many goals other than LCR, including RPS, GHG reduction, jobs, other economic benefits
- Meets the Loading Order requirement of considering preferred resources before non-preferred resources
- Allows developers additional market certainty in obtaining a PPA, which isn't present in an all-source RFO because of competition with conventional resources

- Would bring resources online far more quickly than traditional natural gas combustion turbines, the default resource

I. Discussion

According to the long-established Loading Order, energy efficiency, demand response, and renewables must be procured before natural gas resources. The Sept. 7 Commission workshop focused primarily on how preferred resources should be properly prioritized and procured in the LTPP. The default, but far from the only, tool for procuring Local Capacity Requirements (LCR) has historically been an all-source RFO. However, many parties, including the utilities, have offered tools other than an RFO for procuring preferred resources as well as non-preferred resources. For example, SCE has suggested a bilateral contracting approach as an alternative to an RFO. And the Commission has suggested a RAM-like approach in the Sept. 14 ALJ ruling (p. 3).

The primary proposal the Council offers herein is an LCR Renewable Market Adjusting Price (Re-MAT), which is a modified version of the new SB 32 Re-MAT approved by the Commission in D.12-05-035. The Re-MAT falls in between an auction process and a traditional feed-in tariff and may work very well in the LCR context for rapidly procuring cost-effective preferred resources.

II. Commission questions

1. What changes should be made to the rules governing the Investor-owned Utilities (IOUs') procurement process that would allow all resources (natural gas combined cycle, combustion turbine, storage, demand response, combined heat and power, renewable, etc.) to compete fairly in meeting identified needs? Please provide specific proposals for structuring an all-source procurement process.

As the Council demonstrated in its Opening Brief filed on Sept. 24, the Commission must, based on clear precedent, fully consider the ability of preferred resources to meet LCR before it authorizes any conventional generation. Accordingly, while Question 1 is moving in the right direction its assumptions are still backwards in terms of how the IOUs should procure needed resources. The Commission should, as its default, be aiming to meet all LCR with preferred resources – as much as is technically and economically feasible.

The Council proposes as one potentially powerful tool for meeting projected LCR, and to meet the loading order's requirement that preferred resources be procured before conventional resources, a modified *Renewable Electricity Market Adjusting Tariff* (Re-MAT), similar to that recently approved by the Commission in D.12-05-035 (R.11-05-005). (The most recent RPS quarterly report has a good summary of the new program on pp. 7-8). The key features of our proposed LCR Re-MAT are as follows:

- Uses an existing new mechanism approved by the Commission for procurement of renewable energy projects 3 MW and below (implemented pursuant to SB 32)
- An LCR Re-MAT should allow projects up to 5 MW
- The LCR Re-MAT contract price should adjust based on market interest and would be an avoided cost under PURPA, and thus by definition would be cost-effective
- Include a price ceiling and floor to ensure cost-effectiveness, with the price ceiling at the avoided cost of conventional LCR generation
- Re-MAT could be tailored for the LCR context and could include energy storage, distributed generation, and combined heat and power in different "buckets," with different adjusting price regimes
- Initial program size of 1,500 MW, to go live in late 2013, to see how effective the program is before an all-source RFO is issued in 2015
- Meets many goals other than LCR, including RPS, GHG reduction, jobs, other economic benefits
- Meets the Loading Order requirement of considering preferred resources before non-preferred resources
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On the last point, the Scoping Memo in this proceeding cites GenOn on the length of time it takes to complete a traditional power plant in California (pp. 6-7): "GenOn asserts that it can take seven to nine years to develop and construct a new generation project in California." We agree with this estimate. LCR Re-MAT projects could, however, be brought online within 3-5 years from now (one year for program development and roll-out, plus two to four years for obtaining a PPA, project entitlement, construction and COD), far ahead of the schedule for conventional plants.

The Commission recently approved the Re-MAT pursuant to SB 32, in D.12-05-035 (R.11-05-005). This allows renewable energy projects up to 3 MW to apply to be in the Re-MAT queue and to accept or reject the offered price in each price period, starting at $89.23/MWh. The price then adjusts up or down depending on market interest, ensuring that ratepayers don't under- or over-pay.

The starting price for an LCR Re-MAT should be the avoided cost of conventional generation for meeting LCR and this is an empirical matter that should be briefed by the parties. We also propose that the starting price act as the price ceiling, to ensure cost-effectiveness of this program. As such, if market interest in the program leads to price reductions – as is the purpose of the Re-MAT approach – once the price falls too low to allow viable projects the price will then start to rise again. But it will only rise as far as the starting price/ceiling price to ensure cost-effectiveness.

Similarly, Re-MAT should include a price floor to provide developers additional certainty with respect to the lowest possible price they may have to accept, and to plan accordingly.

Re-MAT could work quite well, with the modifications suggested, in the LCR context. In particular, an LCR Re-MAT of 1,500 MW over a one-year program period could resolve many of the issues present in D.12-05-035, highlighted by the Clean Coalition

and other parties, most of which stem from far too small a program created by that decision.

The Council's proposed LCR Re-MAT would be a large enough program to represent real progress in meeting LA Basin LCR, but would still leave some room for conventional plants in a later all-source RFO, if these are required. If the first LCR Re-MAT is successful, however, additional tranches could be offered.

The Council does not oppose an all-source RFO for LCR that can't be met with preferred resources. However, as discussed above, state precedent and the OIR require that preferred resources be fully considered before conventional generation is considered for meeting LCR.

Nor is the Council necessarily opposed to an LCR RAM (Renewables Auction Mechanism) as an alternative to an all-source RFO (suggested in the ALJ Ruling of Sept. 14), which would entail a modification of the existing RAM program that is designed for 20 MW and below renewable energy projects (D.10-12-048). RAM is distinct from Re-MAT in that RAM is a traditional reverse auction process where developers bid the best price they can and then hope for a contract to be awarded, with no knowledge of other prices being bid and therefore no way to know with any certainty whether they are likely to obtain a contract. Re-MAT is different than RAM in that a set number of MW are allocated in each pricing period and if the price is acceptable to developers all of these MW will be contracted in that pricing period. So while developers still have no certainty that they will be able to obtain a contract under Re-MAT, due to limited supply and high demand, there is less uncertainty than with RAM because there is a possibility that no contracts will be awarded under RAM if the bids are not considered favorable by the IOU or the Commission, combined with the complete opacity of other parties' bids. For example, here is the record of the first year of the RAM program (from the most recent RPS quarterly report), showing starkly the number of frustrated developers seeking PPAs but who did not receive a PPA:

	RAM1 Capacity Target (MW)	Bids Received (MW)	Executed PPAs (MW)
Baseload	45	82	9
Peaking As-Available	100	3,274	122
Non-Peaking As-Available	45	22	14

* *Note: Some bids were submitted to multiple IOUs and may be double-counted in these cumulative totals.*

Most importantly, literally 3.7% of bidders received a solar contract (peaking as-available), with only 122 MW out of 3,274 MW bid receiving a contract. This high rate of rejection is extremely inefficient and very likely leads to higher prices because the risk for development capital (far more expensive than construction capital) is so high.

It is possible that aspects of an LCR Re-MAT – for rooftop solar, for example – may also result in many interested parties entering the queue and not obtaining a PPA due to lack of MW available. However, there is far more certainty provided under the Re-MAT queue and PPA process than a simple one-shot bid approach like the RAM.

Additional LCR Re-MAT details

The LCR Re-MAT should allow any project up to 5 MW, with certain limitations regarding costs of interconnection. Specifically, as with the Re-MAT created by D.12-05-035, LCR Re-MAT projects should interconnect to the distribution grid and should have limited network upgrade costs.[1]

We suggest that the LCR Re-MAT include renewable DG, storage and CHP in the following tranches:

- Renewable DG: 1,000 MW
- Storage: 250 MW
- CHP: 250 MW

[1] We don't agree with the $300,000 network upgrade cost limitation in D.12-05-035 and suggest instead a sliding scale based on project costs be implemented.

The Renewable DG tranche will be open to any RPS-eligible technology as specified by Public Resources Code 25741. This is different than the D.12-05-035 Re-MAT because that decision created three product type pricing buckets (essentially wind, solar and biomass). The Council suggests that the LCR Re-MAT can be simplified to allow all eligible renewable technologies to be part of just one tranche.

The Renewable DG tranche is four times larger than the other two because the scalability and market readiness of, particularly, rooftop solar PV is far higher than storage or CHP. While storage can be deployed anywhere and is thus highly scalable in a technical sense, it is a young technology and has not been widely deployed to date. Our hope is that this LCR Re-MAT will help bring storage to scale. Conversely, while CHP is economically viable and fairly widespread around the US and the globe, it has limited deployment options in the LA Basin, at the size envisioned with the LCR Re-MAT (5 MW and below), because CHP must by definition be co-located with relatively large process heat consumers, and these are limited in nature.

2. What amendments, if any, would be necessary to the most recent long-term Request for Offers issued by Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric (SDG&E), and Southern California Edison (SCE) to ensure that all resources are eligible to compete in meeting future Request for Offers (RFO)? Are there any changes specific to meeting Local Capacity Requirements (LCR)?

The Council recommends that any LCR RFO process be delayed until the pilot LCR Re-MAT is completed. It will likely take 9-12 months for an LCR Re-MAT to be developed and finalized in a decision and another 12 months for the pilot to be completed. At that time, around the end of 2014, parties should have an idea of how successful the LCR Re-MAT approach will be and, given SCE's suggested timeline, completing the pilot LCR

Re-MAT by the end of 2014 will have no negative impact on the RFO approach – unless the results of the pilot LCR Re-MAT demonstrate that it is alone sufficient as a procurement mechanism for meeting any LCR.

CEJA's Track I Opening Brief (Sept. 24, 2012) does an excellent job of demonstrating that the combined impact of reasonable assumptions for the deployment of EE, DR, CHP, storage and renewables should moot any conventional LCR needs. Accordingly, with an LCR Re-MAT in place to ensure that the renewable, storage and CHP potential in the LA Basin is met – along with other programs that are already in place – it is unlikely that any conventional LCR needs will remain.

More specifically, CEJA calculates that 2,335 to 3,854 MW of DG is available in the LA Basin,[2] based on recent calculations by other parties, including the Los Angeles Business Council's detailed 2010 report, and should be included in CAISO's calculations of LCR (Opening Brief, p. 24, fn 164). There are insufficient programs in place, however, to bring this solar capacity online, prompting the Council's suggestion for an LCR Re-MAT that will include a renewable DG tranche.

The LA Business Council and the UCLA Luskin Center calculated in a major report[3] released in 2010, *Bringing Solar Energy to Los Angeles*, that SCE territory in Los Angeles County contained over 12,000 MW of rooftop solar potential (p. 42 of the report, see Figure 1). This does not include parking lot solar potential, which would substantially increase this figure. County-wide, the same report calculates that the solar rooftop potential exceeds 19,000 MW, which is relevant because SCE is seeking to procure LCR on behalf of all LSEs in the LA Basin.

Figure 1. *Los Angeles Business Council report estimate of rooftop solar potential in Los Angeles*

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[2] CEJA Opening Brief, p. 32.

[3] http://www.labusinesscouncil.org/online_documents/2010/Consolidated-Document-070810.pdf

County (2010).

Table 12: County of Los Angeles: Megawatts of Physical Rooftop Solar Potential by Utility

Utility	SoCal Edison	LA Dept of Water & Power	Vernon Light & Power	Glendale Water & Power	Burbank Water & Power	Pasadena Water & Power	Cerritos Electric Utility	Azusa Light & Power	Total
Megawatts	12,278	5,536	307	278	245	197	169	104	19,113
Parcels ≥ 1 kW	939,260	464,326	1,044	23,125	19,431	16,341	12,462	5,825	1,481,814

There is, then, enough solar potential to meet a substantial portion of the LA Basin's LCR, particularly if energy storage is also included. These preferred resources may in fact be able to meet all LCR need if calculations by CEJA (see below) are accurate. CEJA shows that reasonable assumptions about the availability of preferred resources moot the need for any conventional LCR generation (Opening Brief, p. 32).

3. What specific characteristics or attributes must any resource -- including demand-side, energy storage, or distributed -- provide in order to meet future procurement needs? In the absence of a Net Qualifying Capacity, what methodology should be used to determine a proxy capacity value for resources lacking a Net Qualifying Capacity for use in LCR capacity accounting? How can these characteristics or criteria be turned into criteria to evaluate resources bid into a Request for Offers to meet LCR or other needs? How should those criteria be weighted?

CEJA demonstrates in a convincing manner in its Sept. 24 Opening Brief on Track I issues that CAISO's assumptions for calculating LCR in the LA Basin are unreasonably conservative and ignore many highly material developments with respect to preferred resources. We look forward to the CAISO and IOU response to CEJA's brief. If CEJA's calculations are valid, no conventional LCR generation will be needed in the planning horizon of this proceeding. What will be required, however, are new tools for ensuring that CEJA's calculations for preferred resources are made real – and do not remain hypothetical.

The Council's LCR Re-MAT proposal described below is specifically designed for this purpose. It will, if designed correctly, quickly allow SCE to procure preferred resources at a scale that can meet a substantial portion, or possibly all, of the calculated LCR.

However, if the Commission decides to adopt the CAISO calculations without further revision, it is important to determine what attributes must be met by LCR resources – the "specific characteristics or attributes" described in question 3 above. This is a question that CAISO and the IOUs are best situated to answer, with party feedback, though it may be a moot point, as discussed below. CAISO has attempted to define "flexible resources" in a manner that essentially excludes anything but conventional (natural gas) resources. However, it has not been established that flexible resources are necessary to meet LCR.

During the Sept. 7 workshop, the Council's attorney Hunt asked the CAISO representative if it may not be the case that some on-site generation or generation located close to load, such as solar, could reduce LCR on a higher than a one to one basis due to the lack of any line losses for on-site generation when compared to remote generation. CAISO's representative answered that this could be the case, but was not necessarily the case in all situations. CAISO's representative N. Millar also stated during Track I hearings that energy efficiency "provide[s] the energy savings necessary to offset other forms of generation in both the local area and on a system basis."[4]

The ability of on-site generation and/or EE to moot LCR from conventional generation, and by how much, is an important question that needs fleshing out and we request that the Commission firm up an answer, with party feedback, in this proceeding. For example, if on-site solar does as a general matter provide more than a one-to-one reduction for LCR from conventional resources, this needs to be built into any future modeling by CAISO or SCE. The same holds for energy efficiency and demand

[4] CAISO Ex. 6 (N. Millar Reply Test.) at p. 12.

response, which should also generally have a higher than one-to-one reducing effect on LCR from conventional generation.

Essentially, any resources that reduce on-site power consumption from the grid in a reliable manner should have at least a one-to-one reduction on LCR from conventional generation, mooting any discussion about the required attributes of LCR technologies more generally. In other words, to be entirely clear: if preferred resources like on-site solar, EE, and DR reduce LCR from conventional generation by a one-to-one ratio or better we do not need to enter into the tricky debate about exactly what attributes LCR resources should have.

4. What are the pros and cons of the following procurement methods with regard to: 1) local procurement considered in Track 1 of LTPP, and 2) operational flexibility and general system procurement considered in Track 2 of LTPP?

> A. Continuation of current practices for procurement with minor clarifications;

With respect to both 1) and 2), current practices for procurement have failed to respect the loading order. We are not convinced by SCE's suggested RFO approach or "flexibility" approach that the loading order will be respected. Rather, a new paradigm is required and we have suggested such with our LCR Re-MAT proposal.

> B. A "portfolio approach" that allocates, based on strategic/portfolio considerations, the total quantity of new flexible resources among various eligible resources (for example, how could/should the allocations be adjusted periodically based on current or expected conditions?).

Commission precedent and the EAP I and EAP II require that preferred resources be considered before conventional resources. The "portfolio approach" won't necessarily

do this.

a. SCE provided two proposed alternatives to filling any LCR need at the September 7, 2012 workshop, one with flexibility for SCE in procuring resources via two separate tracks, and another approach using an all-source RFO. Is there some way to blend these approaches? If so, how, and should the Commission attempt to do so?

No. The Council supports a different approach with our proposed LCR Re-MAT for preferred resources before other approaches like SCE's two proposal are pursued. We are not necessarily opposed to the flexibility or RFO approach after the LCR Re-MAT has been executed, but there is strong evidence from CEJA and other parties that preferred resources under an LCR Re-MAT and other existing programs could moot any conventional generation needs for LCR.

C. Establishing a set of minimum criteria for operational flexibility characteristics for all acquired resources;

The Commission and CAISO should use up-to-date and fair information about the ability of preferred resources to meet systems needs, including flexibility needs. While preferred resources can't do everything that conventional generation can do, preferred resources possess many attributes required for a reliable system. Moreover, as discussed above, if preferred resources reduce conventional generation LCR on at least a one-to-one basis then the discussion about flexibility characteristics is also mooted, at least with respect to LCR.

D. A "strong showing" requirement that the utility must demonstrate that its procurement process was substantially

open to all resource types and appropriately considered all of the values discussed above and that the resulting portfolio of resources is an optimal solution.

Given the LTPP history over the last few cycles, we are not convinced that a weak standard like "a strong showing" will achieve any improvement with respect to the loading order. We have sufficient time to try alternatives to a traditional RFO, based on the IOUs' own schedule, and it would seem that the Commission is all but compelled by applicable precedent to require a different approach before authorizing any procurement programs that would include non-preferred resources.

E. Adjusting existing procurement mechanisms, such as the Renewable Auction Mechanism, to focus on the physical locations with needs that can be met by that programmatic resource.

We discussed above, in our response to Question 1, the pros and cons of a modified RAM program in the LCR context versus a modified Re-MAT. The key problem with a modified RAM program is that there is far less certainty for developers seeking to bid into the new program, and thus far less certainty that the program would be effective. Given the strong and proven track record of feed-in tariffs to achieve their goals, a modified and well-designed Re-MAT, which is a type of feed-in tariff, is the clear winner in terms of meeting the various goals in this proceeding, including: 1) cost-effective deployment of preferred resources – as required by the loading order – by ensuring that the Re-MAT price cap does not exceed the avoided cost of conventional LCR generation; 2) rapid deployment of preferred resources to meet or moot LCR, which can be accomplished before any traditional LCR RFO is issued; 3) high confidence that LCR Re-MAT program goals will be met, at least with respect to the largest tranche of 1,000 MW renewable DG – if the program is designed well.

5. At the September 7th workshop, some parties discussed retrofits to existing generation assets as a potential source of incremental capacity. What, if any, changes would need to be made to the most recent long term RFO issued by PG&E, SDG&E, and SCE to allow for incremental capacity associated with retrofits to existing generation to compete to meet Local Capacity Requirements? Are there any differences in payment streams that should be given for existing capacity, as opposed to upgraded capacity?

No comment at this time.

6. At the September 7th workshop, both SCE and Enernoc raised concerns that it would be difficult to procure demand response resources that match the online dates (2017 to 2020) and duration (e.g., 20 years) of the conventional generation that is being contemplated as a source of LCR capacity. How could a demand side program be authorized through this LCR procurement process that delivers an on-line date and a duration that is comparable to conventional generation? What additional values are currently attributed to demand response resources in other markets that are currently not accounted for in California, and that might be taken into account as part of an LCR procurement process?

No comment at this time.

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Respectfully submitted,

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