

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue
Implementation and Administration of
California Renewables Portfolio Standard
Program.

Rulemaking 11-05-005

CLEAN COALITION REPLY COMMENTS ON ADMINISTRATIVE LAW JUDGE'S
RULING REQUESTING COMMENTS ON THE RENEWABLE AUCTION
MECHANISM

Rulemaking 11-05-005
Decision 10-12-048

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I. Introduction

The Clean Coalition is a California-based nonprofit organization whose mission is to accelerate the transition to local energy systems through innovative policies and programs that deliver cost-effective renewable energy, strengthen local economies, foster environmental sustainability, and provide energy resilience. To achieve this mission, the Clean Coalition promotes proven best practices, including the expansion of Wholesale Distributed Generation (WDG) connected to the distribution grid and serving local load. The Clean Coalition drives policy innovation to remove barriers to the procurement and interconnection of WDG projects, integrated with Intelligent Grid (IG) solutions such as demand response, energy storage, and advanced inverters. The Clean Coalition is active in numerous proceedings before the California Public Utilities Commission, the California Energy Commission, and other state and federal agencies throughout the United States. The Clean Coalition also designs and implements WDG and IG programs for utilities and state and local governments.

The Clean Coalition supports the preference expressed by PG&E¹, SCE² and SDG&E³ to account for the locational value factors included in Least Cost, Best Fit (LCBF) calculations. However, while the use of LCBF factors is a step in the right direction, LCBF misses a few major components of the ratepayer value of projects that serve local load rather than using the transmission system.

¹ Pacific Gas and Electric Company's Opening Comments in Response to Questions in Attachment A to the Administrative Law Judge's December 31, 2013 Ruling Requesting Comments on the Renewable Auction Mechanism, pgs. 6-7.

² Comments of Southern California Edison (U338-E) on Administrative Law Judge's Ruling Requesting Comments on the Renewable Auction Mechanism, pg. 23.

³ Comments of San Diego Gas and Electric Company (U 902 E) In response to Administrative Law Judge's Ruling Requesting Comments on the Renewable Auction Mechanism, pg. 13.

These reply comments clarify the extent to which the four locational value factors we identified in our opening comments⁴ are not included in LCBF methodology. The values that have not been captured by LCBF are important and substantial ratepayer values of projects located closer to load. To summarize:

- Local capacity value is included in LCBF;
- Avoided transmission-level line losses and congestion costs are included in LCBF, but distribution-level line losses are *not* included;
- Avoided Transmission Access Charges (TACs) are *not* included in LCBF; and
- Avoided future transmission investments are *not* included in LCBF.

The Clean Coalition supports TURN's recommendation that this proceeding develop policies to favor projects sited in locations on the distribution grid where new capacity would satisfy local resource needs. We also support ORA's recommendation to use the workshop process to determine appropriate values.

We acknowledge the added complexity and effort of performing full LCBF ranking on all RAM bids; we support further exploration of the merits of LCBF in the RAM context and do not take a position at this time on its direct application. As noted in our opening comments, we support options to both limit the number of full bid evaluations by screening for competitive bids and to streamline the LCBF process through simplified or proxy values. Similarly, we recommend that the Commission use the workshop process to determine the ease of estimating each of the locational values that we proposed in our opening comments and the methods for performing such estimates that we recommended in such comments.⁵

II. Clarification of Extent of Inclusion of Locational Values in Least Cost, Best Fit Calculations

⁴ See Clean Coalition Amended Opening Comments on RAM Reauthorization, pp. 19-27.

⁵ See Clean Coalition Amended Opening Comments on RAM Reauthorization, pp. 19-27.

Least Cost, Best Fit (LCBF) methodologies utilized by utilities in RPS solicitations offer valuable and accurate comparison of multiple factors in bid ranking and selection. We support consideration of LCBF factors in the RAM selection process. However, the LCBF methodologies do not capture several significant locational value factors identified in our opening comments. The Clean Coalition takes this opportunity to clarify the degree to which the cost factors we have identified would be addressed if LCBF were fully applied to RAM bids.

a. History

Senate Bill 1078 Renewable Portfolio Standard Program⁶ requires the Commission to adopt criteria for the rank ordering and selection of least-cost, best-fit renewable generation resources. Decisions D.03-06-071 and D.04-07-029 adopted criteria for the rank ordering and selection of least cost, best fit renewable resources for use in RPS solicitations. D.11-04-030 added that each utility should describe LCBF treatment of congestion factors.

D.03-06-071 developed the majority of the components of LCBF evaluation, and identified two components for further study. Those two components were (i) establishing capacity values for intermittent technologies and (ii) developing bid equalization adders to reflect the cost of transmission needed to connect new renewable generation to the grid.

The task of developing any necessary bid adders was assigned to the Commission's Transmission Investigation I.00-11-001, and D.04-06-013 approved a methodology for considering transmission costs. D.04-07-029 addressed the remaining issues related to the rank ordering and selection of least-cost, best-fit renewable generation resources.

b. Overview of the LCBF Ranking Methodology

Bids are evaluated using the following step-by-step process:

⁶ Codified by California Public Utilities Code §§ 399.11 through 399.16.

- 1) The Net Market Value (NMV) is computed for each Offer.
- 2) NMV is adjusted by other attributes, such as location, RPS portfolio need, energy firmness, and curtailment, to arrive at the Portfolio-Adjusted Value (PAV).
- 3) After the calculation of PAV is complete, the utility considers project viability, contribution to RPS goals, and supplier diversity.

The set of highest ranked Offers that allow for a reasonable probability of satisfying the utility's procurement goal is selected for the Shortlist. For example, PG&E evaluates each bid in terms of the following quantitative and qualitative attributes. Project viability, as established by the Project Viability Calculator (PVC), has the greatest qualitative effect on the ranking.⁷

The following is a list of the sub-components of each step of the LCBF process.

1. Net Market Value
 - a. Benefits (Energy, Capacity, Ancillary Services)
 - b. Contract Payments
 - c. Transmission Network Upgrade Costs (also called a "transmission adder")
 - d. Congestion Cost
2. Portfolio-Adjusted Value
 - a. Location
 - b. RPS Portfolio Need
 - c. Energy Firmness
 - d. Curtailment
 - e. Contract Term Length (Tenor)
3. Project Viability
4. RPS Goals
5. Supplier Diversity

⁷ PG&E 2013 RPS RFO, Attachment K
<http://www.pge.com/b2b/energysupply/wholesaleelectricssuppliersolicitation/renewables2013/>

c. Transmission Related Costs

In our opening comments we identified Transmission Access Charges (TACs) as a substantial specific cost associated with the use of transmission service, and reliance upon transmission-dependent generation as the primary factor influencing increases or decreases in future TAC rates. We also identified line losses and local capacity value as significant locational values. We clarify here the degree to which these factors are not captured in current LCBF methodology.

Transmission Use Charges

Use charges in the form of Transmission Access Charges (TACs) or their equivalent apply to the delivery of energy from generator bids when this energy utilizes the transmission system. These charges are applied by the transmission operator one each unit of energy (MWh) passing through its transmission system and passed through to customers in addition to the contracted energy price reflected in the energy bid offers.

As detailed in our opening comments, these ratepayer charges currently amount to 1.5¢/kWh, are increasing rapidly, and have a projected levelized cost of at least 2.4¢/kWh across twenty year contracts. As such, a bid subject to these energy delivery charges will cost ratepayers 2.4¢/kWh more than a comparable bid that serves load directly through the distribution system. The LCFB methodology utilized by California's IOUs does *not* account for this difference in ratepayer value.

These delivery charges, which are clearly determined by whether or not a project can deliver energy to load without utilizing the transmission system, are *not* reflected in LCBF Net Market Value evaluation of Transmission Network Upgrade Costs, Contract Payments, Energy Benefits, Capacity Value, and Congestion Costs, or in the Portfolio Adjusted Value Location factor. The application of TAC costs on top of the wholesale energy purchase price represent a *very* significant difference in ratepayer cost that should be reflected in LCBF but is not currently considered.

Transmission Capacity

TAC rates reflect the cost of new investment in the transmission system. Increasing transmission capacity has contributed to a rapid rise in current TAC rates that would be halted if new capacity were not required. We addressed avoidable future TAC rate increases in our opening comments, making the important point that reductions in the TAC rate apply to all energy utilizing the transmission system, not just the energy from the project being evaluated. Preserving transmission capacity and deferring TAC rate increases is an additional benefit of avoiding the use of transmission.

In determining the LCBF Net Market Value, the Transmission Network Upgrade Costs or “transmission adder” is included. However, this *only* accounts for the cost of upgrades specifically triggered by project interconnection. It does *not* account for the use of all other transmission capacity related to delivery of the energy being bid.

Creating new transmission capacity is expensive, making existing capacity a valuable resource. While actual costs for adding capacity vary widely depending on the location and distance over which capacity is added, the average cost of new capacity approved or constructed in the last decade is in the range of \$1 Million per MW, and this cost is paid for by ratepayers. Where delivery utilizes existing capacity, the cost of creating that capacity is *not* reflected in the bid equalization adder, even though assigning Deliverability to the generating project means that the transmission capacity is made no longer available to meet future transmission needs. While it is appropriate to make full and optimal use of existing transmission resources, these valuable resources should be assigned to meet needs that cannot be met cost effectively without the use of transmission. LCBF does not provide a true ratepayer impact cost analysis as long as it does not account for the value of existing transmission capacity assignments associated with bids, and the impact this will have on future “needs determination” for ratepayer funded expansion of transmission capacity that would otherwise be deferred or avoided.

To a very limited extent, LCBF does indirectly reflect some future transmission capacity impact. The Net Qualifying Capacity (NQC) of a Generating Facility is considered in LCBF and the resulting Resource Adequacy (RA) value is incorporated. Where this contributes to meeting Local Capacity Requirements (LCR), that value is also incorporated in LCBF; however, this only reflects the marginal value in CAISO economic

dispatch of resources. Through the Transmission Planning Process (TPP) this will account for the value of new transmission that would be procured *solely* on the basis of economic value, but *not* the larger and more common transmission capacity investment driven by reliability and deliverability requirements. As discussed in our opening comments, the average total value of a project preserving available transmission capacity is on the order of \$20/MWh.

LCBF does not address distribution upgrade costs and is not required to do so as these costs are borne by the generation facility owner and are not reimbursed by ratepayers; as such, distribution upgrade costs are fully reflected in the energy price bid.

Line Losses and Congestion Costs

Beyond the transmission upgrade, capacity value, and future investment value factors associated with interconnection of new generation capacity discussed above, LCBF ranking value considers the energy value and contract payment costs defined in the applicable Power Purchase Agreement (PPA). This includes a number of factors influencing the value of the energy provided, including some line losses, but does not account for differences in distribution level line losses.

The Energy Benefit calculation used by PG&E does account for both transmission losses and congestion costs or congestion reduction values that vary by the location of the bid project relative to the Locational Marginal Price (LMP) at the corresponding Trading Hub. This approach could be extended to account for the complete avoidance of transmission losses where distribution connected generation is serving local load. The Minimum Coincident Load Test (MCL) discussed in our opening comments is already available in distribution level interconnection results and can be easily employed to determine the extent to which each project will avoid all transmission losses. The Clean Coalition supports the inclusion of this factor, and we note that distribution losses, which can be equally significant between the substation and load, may be substantially reduced where the generation is located closer to coincident loads within the distribution system, and this should also be considered when determining the Net Market Value.

Additional Locational Factors

Location is specifically referenced in the Portfolio Adjusted Value (PAV), which includes adjustments for Location, RPS Portfolio Need, Energy Firmness, and Curtailment. It is important to understand that while Location is evaluated as an adjustment factor, the application of this factor in PAV is only used to determine whether or not a proposed project is located within the utility's service territory.

PG&E for example, differentiates location only by associated market Trading Hub (NP15, SP15, or ZP26), simply reflecting a preference for projects in its service territory. This preference is influenced by constraints that may limit the amount of capacity in SP15 that PG&E can count toward its RA requirement. As the utility notes in its RPS RFO "Capacity located closer to PG&E's load is likely to deliver energy that has more value for PG&E's bundled electric portfolio, even when market forward prices indicate that energy delivered farther away has greater Market Value. The long-term risk for PG&E's customers is less when resources are located within PG&E's service territory rather than outside of PG&E's service territory." The calculation of PAV recognizes this only by reducing the value of energy and capacity for offers from resources located in SP15.

While locating generation much closer to load reduces the number links in the chain required to deliver energy to customers, reducing reliance on critical infrastructure and improving reliability, no further locational differentiation is currently employed in LCBF methods.

III. Support for a Locational Value Workshop

The Clean Coalition continues to strongly support the Commission's efforts to adopt more comprehensive methodologies for determining locational value both as it relates to resource portfolio scenarios as well as the locational value of individual projects. We strongly support adoption interim measures as part of this proceeding to capture locational value differences for ratepayers.

We support TURN's request that the Commission solicit proposals in this proceeding to "develop policies and tools to favor interconnection at the distribution level in locations where new capacity would satisfy local resource needs."⁸ We also support ORA's recommendation to use the workshop process to determine appropriate portfolio-adjusted values, including congestion/transmission and integration costs, among others.⁹

Respectfully submitted,

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⁸ Comments of The Utility Reform Network Concerning Extension of the Renewable Auction Mechanism, pg. 11.

⁹ Opening Comments of the Office of Ratepayer Advocates on the Administrative Law Judge's Ruling Requesting Comments on the Renewable Auction Mechanism, pg. 5.