

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

**Order Instituting Investigation into Implementation of  
Assembly Bill 970 Regarding the Identification of  
Electric Transmission and Distribution Constraints,  
Actions to Resolve Those Constraints, and Related  
Matters Affecting the Reliability of Electric Supply.**

**Investigation 00-11-001  
(Filed November 2, 2000)**

**REPLY COMMENTS OF THE  
CALIFORNIA WIND ENERGY ASSOCIATION  
ON THE  
PROPOSED INTERIM METHODOLOGY FOR DEVELOPMENT AND  
CONSIDERATION OF TRANSMISSION COSTS IN RPS PROCUREMENT**

The California Wind Energy Association (CalWEA) respectfully responds to the April 12, 2004, opening comments of Pacific Gas & Electric Company (PG&E) and the Center for Energy Efficiency and Renewable Technologies (CEERT).

**I. Generation or Consumption of VARs**

PG&E (at pp.9-10) supports the ALJ Ruling's conclusion that the adders should not be adjusted to reflect VAR support; but that a project could submit its VAR characteristics along with its bid, for the utility to assess as part of the bid. PG&E further argues that VAR support would not be significant in any event.

PG&E suggests that the Commission adopt a policy of ignoring physical facts. If VAR production by wind generators lowers transmission investment needs, that fact is no less significant than generator characteristics that increase transmission investment needs. Both effects should be reflected in the design of the transmission facilities and in the associated bid adjustments.

Nor should the Commission make decisions based on PG&E's informal views that significant benefits from VAR support will be "unlikely." If VARs from wind generation do not reduce transmission requirements, the bid adders should not be lowered. That wind generator VARs might not reduce costs in some cases does not justify ignoring VARs in all cases. Both PG&E and SCE cost estimates already include

FACTS device costs that may be avoided in whole or in part by effective utilization of wind generator proposed VAR capabilities. To effectively and beneficially use such is consistent with Least Cost and Best Fit.

PG&E also argues that that even if on-site VAR production does reduce transmission requirements, benefits do not result because VAR production at the generator site cannot satisfy the transmission system's need for VARs remote from the wind generator. PG&E misses the point. That VARs might not travel well from a wind generator to a distant load does not justify disregarding their positive attributes at the point of interconnection. Moreover, VARs need not travel to some distant load to be a benefit to the transmission network. If an area proximate to the wind generator is deficient in VARs and is experiencing sagging voltages (as Edison's comments on FERC's Order No. 2003-A indicate is the case near Tehachapi),<sup>1</sup> then the ability of wind machines to produce VARs benefits the network, at a cost savings compared to the utility resolving the problem with additional equipment. This VAR capability of modern wind machines is further enhanced by the fact that both the static capacitor banks and the dynamic VAR-producing devices associated with wind machines can provide this voltage support benefit even when wind generators are not producing power.<sup>2</sup> This capability is not conferred by synchronous generators.

## **II. Exclusion of Pre-Planned Upgrades**

PG&E, at section II.B.2 of its initial comments, states:

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<sup>1</sup> SCE Request for Rehearing in Standardization of Generator Interconnection Agreements and Procedures, RM02-1-002, Exhibit A, Tr 1181, lines 6-19, April 5, 2004.

<sup>2</sup> As noted in CalWEA's initial comments, traditional wind generators are induction generators characterized by a relatively large consumption of VARs. As a consequence, the original types of wind generators required that substantial amounts of transmission capacity be set aside for providing VARs to the wind machines in addition to the capacity needed to accept megawatts of output from the wind generators. In addition, the original types of wind generators were designed to drop off line whenever a short circuit depressed voltages near the generator and prevented the transmission system from providing VARs to the generator.

Modern designs, however, employ static VAR compensators and capacitor banks to provide VARs that are closely calibrated to the VAR consumption of the machines, and to VAR needs of the local grid, even during short circuit conditions. Moreover, modern designs are able to remain on the line without interruption during short circuits (short circuit or fault carry through). The benefit of this capability is not reflected in the cost estimates done so far, and should be.

As drafted, it appears the ALJ Ruling would require the utilities to start with a revised “base case” that excludes upgrades already planned to accommodate projects in the ISO interconnection queue at the time the Reports are prepared (the Interim Proposed Methodology’s Level 1), then create a separate level “for each project [already?] in the ISO interconnection queue for which needed transmission upgrades are identified.” *Id.* (§ C(4)(d)(iii) (Level 2)). In effect, this would require the utilities to “back out” generation already in the ISO Interconnection Queue and the associated transmission capacity, some of which would be available to accommodate new renewables generation with no additional cost to ratepayers. This would serve no apparent purpose because all such upgrades are already included in the base cases on which the Transmission Ranking Cost Reports will be based; PG&E’s existing conceptual studies likewise started from base cases that assumed the availability of all transmission capacity planned to be installed to accommodate all new generation projects already in the ISO queue, as well as the generation projects themselves, at the time the studies were prepared. Therefore, any transmission capacity that will already exist in excess of need would have been reflected in PG&E’s Level 1 transmission capacity in the first instance.

CalWEA agrees with the ALJ’s approach, for three reasons. First, network upgrades associated with generators already in the queue are not necessarily going to be built. If the associated projects fail, the cost of those upgrades will be imposed on the next generator in the queue that is in the same cluster with the failed project. In that case, no one would dispute the relevance of the upgrade and its cost to calculation of the bid adders.

Second, network upgrades associated with generators already in the queue are presumably the least-cost network upgrades for the cluster under consideration, in terms of incremental cost per MW of generation added to the grid. The objective is to capture all of the upgrade costs associated with a cluster.

Third, to the extent generators already in the queue are going to bid in the renewable auction, the upgrades associated with those generators represent an element of the costs to be captured by a bid adder. They should be included. If PG&E’s modification is accepted, the cost of network upgrades associated with generators in the queue will not be captured in the bid adders.

### **III. Expansions of the Existing Transmission Network**

PG&E is correct to say (at p. 4) that radial lines should not be treated as network facilities merely because they connect more than one project. PG&E is in error,

however, when it states (at p. 6) that “[t]he relevant test is not how many generators utilize a particular transmission facility, but whether that facility is located before or beyond the point of interconnection to the existing transmission grid.” PG&E creates a false dichotomy between gen-ties and facilities located at or beyond the “existing” transmission grid. In doing so, PG&E disregards an entire universe of physical realities. An upgrade can have network features, can benefit the existing network, can have exactly the same characteristics as the existing network; but, rather than being located on the “existing” transmission grid, instead expands the boundaries of that transmission grid, thereby creating a larger, more flexible and more beneficial grid. Implicit in PG&E’s position is that the boundaries of the “existing” grid, once installed, never change. The facts are otherwise.

Indeed, the word “existing” does not appear in FERC’s specification of the grid or the transmission provider’s network facilities. FERC’s Order 2003, paragraph 21, states “Network Upgrades include only facilities at or beyond the point where the Interconnection Customer’s Generating Facility interconnects to the Transmission Provider’s Transmission System.” The word “existing” does not appear in the definition. FERC cites Entergy Gulf States, Inc. [98 FERC ¶ 61,014 (2002)] in support of this definition. In the Entergy Gulf States case, Calpine was charged for two radial 230 kV lines from its generator into a new switching station that connected the two radial lines to two pre-existing Entergy Gulf States 230 kV lines, two 230 kV breaker-and-a-half bays to connect the four circuits, a new 230 kV breaker for the pre-existing China 230 kV line and location of three 69 kV overhead lines. Calpine did not seek network treatment for the two radial lines, but contended that all the other facilities were network facilities. FERC agreed.<sup>3</sup>

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3 Order 2003-A (at paragraph 76 ) slightly modified this definition of the dividing line between directly-assigned interconnection facilities and network facilities. Again, the word “existing” does not appear in the definition:

76. We agree that using the phrase "at or beyond the point at which the Interconnection Customer interconnects to the Transmission Provider's Transmission System" in the definition of Network Upgrades could cause confusion. Therefore, we are revising this part of the definition to be "at or beyond the point at which the Interconnection Facilities connect to the Transmission Provider's Transmission System."

#### IV. Expedited Benefits Review Process

CEERT recommends a process that could expedite consideration of transmission benefits. As we understand CEERT's concept, bidders who seek to have transmission benefits reflected in their bids could have the utility rank the bid with and without the bidder's asserted benefits. Only if inclusion of the benefits would affect the bid outcome would the benefits issue remain alive for consideration at the PRG.

CEERT's proposed process would make the benefits determination process more efficient without losing value. We would suggest, however, two modifications. First, bidders and the responding utilities should be instructed to use the same methodology in determining and quantifying benefits, and we would again suggest that CalWEA's proposed methodology be used. Second, if the utility disagrees with the bidder's assessment of benefits, the utility should respond with its own assessment and the Commission (rather than the PRG) should resolve the differences in an expedited dispute resolution process.

Respectfully submitted,



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Law Offices of Scott Hempling, P.C.

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Association

April 19, 2004

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We also note that the Transmission Provider's Interconnection Facilities are direct assignment facilities owned by the Transmission Provider on the Interconnection Customer's side of the Point of Interconnection whereas the Transmission Provider's Transmission System consists of facilities at or beyond the Point of Interconnection. These changes resolve the concerns raised by Reliant and EEI. [Footnote 21: The revised definition reads as follows: "Network Upgrades shall mean the additions, modifications, and upgrades to the Transmission Provider's Transmission System required at or beyond the point at which the Interconnection Facilities connect to the Transmission Provider's Transmission System to accommodate the interconnection of the Large Generating Facility to the Transmission Provider's Transmission System."]

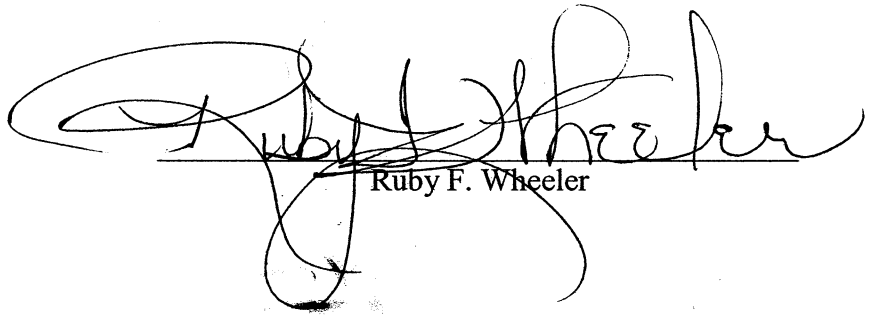
## Certificate of Service

I hereby certify that I have this day served a copy of the

***Reply Comments of the California Wind Energy on the Proposed Interim Methodology for Development and Consideration of Transmission Costs In RPS Procurement***

On all known parties to R.00-11-001 by mailing a properly addressed copy by first-class mail with postage prepared to each party named in the official service list.

Executed on April 19, 2004, at San Francisco, California.



Ruby F. Wheeler