

# *Crossborder Energy*

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*Comprehensive Consulting for the North American Energy Industry*

December 1, 2006

Mr. Honesto Gatchalian  
Energy Division  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102  
E-mail: [jinj@cpuc.ca.gov](mailto:jinj@cpuc.ca.gov)

RE: Comments on Draft Resolution E-4049 on the 2006 Market Price Referent

Dear Mr. Gatchalian:

The California Wind Energy Association (CalWEA) and the California Cogeneration Council (CCC) are pleased to present the following comments on Draft Resolution E-4049 (“Draft Resolution”) circulated by the Energy Division on November 17, 2006. The Draft Resolution calculates values for the 2006 Market Price Referent (MPR) for use in the 2006 Renewables Portfolio Standard (RPS) solicitations.

CalWEA / CCC have reviewed and offer the following comments on Draft Resolution E-4049. In general, CalWEA / CCC appreciate the completeness and transparency of the MPR process – the key assumptions underlying the proposed MPR are available and well-documented in the Draft Resolution, and Energy Division staff has conducted an open, informal, and inclusive process for making changes to the MPR input assumptions and calculation methods.

CalWEA / CCC fully support the 2006 MPR calculation that is presented in Draft Resolution E-4049, but submit that the 2006 MPR also should include an adder representing the costs to control the greenhouse gas (GHG) emissions from a new gas-fired combined-cycle (CCGT) power plant in California. In the most recent decision modifying the MPR methodology (D. 05-12-042), the Commission declined to adopt a GHG adder for the 2005 MPR, but stated on pages 47-48 that it would re-visit this issue once “these policy discussions are translated into regulatory programs or other sufficiently concrete market impacts.” The order, at page 47, makes clear that the MPR should include a GHG adder when the costs of mitigating carbon emissions become an “out-of-pocket expense incurred by the conventional fired generator.”

The “policy discussions” on GHG regulation that were taking place a year ago, and that are referenced on pages 47-48 of D. 05-12-042, now have produced definitive, concrete legislative action: this fall Governor Schwarzenegger signed AB 32 and SB 1368, which together commit California to a comprehensive regulatory program to control GHG emissions,

including emissions from the energy sector. AB 32 authorizes the California Air Resources Board (CARB), in consultation with the Commission, to adopt a comprehensive program of GHG regulation statewide, including both early action and permanent control measures. Under AB 32, CARB's permanent program of GHG regulation must be in place by January 1, 2012. SB 1368 requires the Commission to adopt an interim GHG Emission Performance Standard by February 1, 2007; this GHG EPS will apply to all new, significant long-term procurement commitments by the regulated California electric utilities for base load generation. CalWEA / CCC believe that these concrete legislative steps to adopt a comprehensive program of GHG regulation in California make clear that new gas-fired generation in California must consider the costs of GHG mitigation as a real, out-of-pocket expense that such a project will face during its operating life. As a result, the time has come for the RPS MPR to include a GHG adder.

In addition, in a number of its regulatory activities, the Commission already has adopted and is using GHG emission costs to determine the costs that ratepayers should bear for new electric resources. This is precisely the role of the MPR with respect to new renewable resources, and the exclusion of GHG emission costs from the MPR threatens to discriminate against new renewable generation in comparison to other types of electric resources. For example, the Commission considers GHG emission costs in its evaluation of whether to fund energy efficiency programs that have long-term impacts on energy usage. The Commission does these evaluations using the E3 avoided cost model.<sup>1</sup> E3's avoided costs of GHG emissions increase from \$8 per ton CO<sub>2</sub> in 2004 to over \$20 per ton CO<sub>2</sub> in 2023.<sup>2</sup> Thus, there is already a set of Commission-approved avoided costs for GHG emissions that can be used to place a cost on the GHG emissions from the new CCGT that is the basis for the MPR. Energy efficiency programs are demand-side resources that result in a long-term reduction in GHG emissions, which the E3 model values based on the avoided GHG emissions from a CCGT. New base load renewable resources developed under the RPS program have precisely the same impact – they are a carbon-free supply-side resource that avoids the GHG emissions from the new CCGT that would be built in the absence of the RPS generation. As a result, if GHG costs are included in evaluating carbon-free demand-side resources, they also should be employed in valuing comparable supply-side projects under the RPS program

Furthermore, in D. 04-12-050, the Commission also adopted the use of the E3 GHG values for comparing fossil-fueled and renewable resources that bid into the utilities' regular procurement solicitations. In these solicitations, the bid of a fossil-fueled project will be increased by the cost of GHG emission mitigation, also using the E3 GHG costs. Thus, the utilities may accept a renewable bid so long as it does not exceed a competing fossil bid by more than the costs of mitigating the fossil plant's GHG emissions. The MPR process is conceptually identical – it involves comparing the bid of a new renewable project against a competing fossil-fueled resource (the new CCGT used to set the MPR), to determine how much of the costs of the

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<sup>1</sup> See D. 05-04-024.

<sup>2</sup> The E3 Avoided Cost Calculation spreadsheet is available at [http://ethree.com/cpuc\\_avoidedcosts.html](http://ethree.com/cpuc_avoidedcosts.html).

new renewable project will be assigned directly to ratepayers. To be consistent with the bid evaluation methodology adopted in D. 04-12-050, the MPR also should include GHG mitigation costs in the total costs of the MPR's CCGT.

Finally, this Commission has begun to incorporate GHG values into its evaluations of the costs that ratepayers should bear for new utility-owned electric resources. Yesterday, the Commission issued an order amending the cost-effectiveness calculations for the steam generator replacement project (SGRP) at the San Onofre Nuclear Generation Station (SONGS) to include a GHG adder based on the E3 values.<sup>3</sup> These cost-effectiveness calculations assume that, if the SGRP does not proceed and SONGS is prematurely retired in 2012, the generation will have to be replaced with new gas-fired CCGT generation.<sup>4</sup> The GHG adder adopted in yesterday's order is based on the GHG emissions from these CCGTs and adds to the costs of the CCGT replacement generation. Similarly, the MPR is a benchmark that reflects the costs of the CCGT replacement generation that would have to be procured in the absence of new RPS generation. Thus, the MPR also should include a GHG adder. CalWEA is particularly concerned that the MPR include a GHG adder if the ratepayers' responsibility for utility-owned resource additions, such as the new steam generators at SONGS, is being evaluated against CCGT costs that include a GHG adder. Given the Commission's decision yesterday to use a GHG adder as part of the CCGT costs used to evaluate the SONGS SGRP, it would be unduly discriminatory not to include a GHG adder in the 2006 MPR.

In response to this request, CalWEA / CCC expect that the utilities may continue to attempt to argue, as they have in the past when other parties have proposed a GHG adder to the MPR, that GHG regulation still has not reached the point where "sufficiently concrete market impacts" can be identified. CalWEA / CCC disagree, and believe that AB 32 and SB 1368 have moved California beyond mere "policy discussions" on the regulation of GHGs. This legislation will have clear and concrete market impacts, including the exclusion of new, uncontrolled coal-fired generation from the California market. Any new generation resource developed in California today now knows that, after February 1, 2007, it must limit its GHG emissions to no higher than a CCGT (per SB 1368) and that it will be subject to comprehensive GHG regulation no later than January 1, 2012 (per AB 32). Based on Paragraph 5 of the Governor's Executive Order S-20-06, signed October 17, 2006, California appears headed toward a market-based system of GHG regulation that will place a definite, transparent cost on GHG emissions. Thus, these regulations will cause generators that burn fossil fuels to incur real, out-of-pocket expenses for GHG mitigation.

The utilities also may argue that, under SB 1368, new CCGTs in California are not yet required to control their GHG emissions, because a new CCGT will meet SB 1368's EPS. However, a new CCGT may be subject to early action control measures under AB 32 and will be subject to AB 32's permanent GHG regulations no later than January 1, 2012. Thus, at a minimum, the Commission should adopt a GHG adder that assumes that a new CCGT will be subject to out-of-pocket GHG emission control costs no later than January 1, 2012.

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<sup>3</sup> See Proposed Decision of ALJ O'Donnell in A. 04-02-026, Agenda Item No. 4, Agenda 3183 (November 30, 2006). The final decision number is not yet available.

<sup>4</sup> See D. 05-12-040, at 22.

As the Commission already has adopted values for GHG mitigation costs that are used to evaluate other long-term electric resource options (including energy efficiency programs and utility-owned options such as the SONGS SGRP), these values readily can be assembled into a GHG adder that should be included in the 2006 MPR benchmark for the value of new renewables to California ratepayers.

**Tables 1 and 2** below show two options for calculating a GHG adder for the 2006 MPR, using the Commission's adopted costs of mitigating GHG emissions. The first option (Table 1) assumes that GHG mitigation costs begin immediately, because all new resources will consider GHG control costs over their expected life. The second option (Table 2) assumes, more conservatively, that CCGTs will not incur GHG control costs until January 1, 2012. For both options, the GHG adder is levelized over the appropriate contract term at a discount rate of 8.50%, which is the 20-year weighted average cost of capital used in the draft 2006 MPR calculation. Because GHG mitigation costs are assumed to grow over time, under both options CalWEA / CCC's proposed GHG adders vary depending on the start date for the RPS project. For the first option (immediate consideration of GHG control costs), CalWEA / CCC's GHG mitigation costs range from \$4.60 to \$7.00 per MWh for project start dates ranging from 2007 to 2012. For the second option (GHG control costs begin in 2012), the GHG adder ranges from \$2.11 to \$7.00 per MWh for project start dates that vary from 2007 to 2012. CalWEA / CCC provide with these comments spreadsheets showing the details of the calculations underlying Tables 1 and 2.

**Table 1 – GHG adders assuming 2007 start for GHG regulation (\$/MWh)**

Project Operation	10 year	15 year	20 year
2007	4.60	5.05	5.48
2008	4.83	5.30	5.76
2009	5.07	5.56	6.04
2010	5.32	5.84	6.35
2011	5.59	6.13	6.66
2012	5.87	6.44	7.00

**Table 2 – GHG adders assuming 2012 start for GHG regulation (\$/MWh)**

Project Operation	10 year	15 year	20 year
2007	2.11	3.08	3.76
2008	2.70	3.62	4.29
2009	3.37	4.22	4.87
2010	4.11	4.89	5.51
2011	4.94	5.62	6.22
2012	5.87	6.44	7.00

In sum, CalWEA / CCC believe that, with AB 32 and SB 1368, California has “crossed the Rubicon” of GHG regulation, moving from policy discussions to a concrete regulatory program that will impose real costs on generators that emit GHGs. As a result, the Commission needs to re-visit its determination in D. 05-12-042 that the MPR should not include the costs of GHG mitigation.

CalWEA has previously provided the Energy Division with CalWEA’s proposal for a GHG adder, in response to the Energy Division’s request for parties’ ideas on how the 2005 MPR calculation should be modified. CalWEA / CCC respectfully ask the Commission to consider, and to adopt, CalWEA’s GHG Adder as an integral component of the 2006 MPR.

CalWEA and CCC appreciate the Energy Division’s review of these comments. As requested in the cover letter to the Draft Resolution, we also include a subject index with the recommended changes to the Draft Resolution, a table of authorities, and a list of revised findings. Please do not hesitate to contact us with any questions or concerns.

Sincerely,

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On Behalf of  
**THE CALIFORNIA WIND ENERGY ASSOCIATION**  
**THE CALIFORNIA COGENERATION COUNCIL**

cc: Paul Douglas, Energy Division  
Sean Gallagher, Energy Division Director  
Commissioners  
Service Lists for R.06-02-012 and R.06-05-027

### **Recommended Changes to the Draft Resolution**

Draft Resolution E-4049 should be amended to include a greenhouse gas (GHG) adder to the 2006 market price referent (MPR).

### **Table of Authorities**

#### *Commission Decisions*

- D. 04-12-050
- D. 05-04-024
- D. 05-12-040
- D. 05-12-042

#### *California Statutes*

- AB 32 (Health and Safety Code Sections 38500 *et seq.*)
- SB 1368 (Public Utilities Code Section 8340)

#### *Executive Orders of the California Governor*

- Executive Order S-20-06, signed October 17, 2006

### **Revised Findings**

1. AB 32 and SB 1368 adopt a regulatory program to control greenhouse gas emissions in California. This program will have significant, concrete market impacts on the electric industry in California. As a result, the 2006 MPR should include an adder to incorporate the costs of GHG mitigation.
2. The Commission has adopted GHG mitigation costs in D. 05-04-024, as part of the E3 avoided cost model. These costs should be the basis for the GHG adder for the 2006 MPR.
3. With the exception of the addition of the GHG adder, the 2006 MPRs were calculated and released consistent with prior Commission decisions.
4. Party comments on the 2006 MPR will guide future MPR calculations.
5. The 2006 MPR values for baseload proxy plants have been finalized for use in the 2006 Renewables Portfolio Standard (RPS) solicitations.

**CERTIFICATE OF SERVICE**

I certify that I have by e-mail this day served a true copy of the CalWEA / CCC comments on Draft Resolution E-4049 on all parties on the service lists for R.06-02-012 and R.06-05-027.

Dated December 1, 2006 at Berkeley, California.

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Christa Goldblatt