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August 1, 2007

## HAND DELIVERED

Legal Document Examiner  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

Re: R. 06-02-013

Legal Document Examiner:

Enclosed for filing in the above-referenced proceeding are the original and five (5) copies of the **Opening Brief of the California Wind Energy Association**. Copies have been served on all parties of record in this proceeding.

Please return a filed-stamped copy to us using the enclosed self-addressed and stamped envelope. Thank you for your attention to this matter.

Sincerely,

R. Thomas Beach

On Behalf of the  
**California Wind Energy Association**

Enclosures

cc: The Honorable Michael R. Peevey, President  
The Honorable Dian Grueneich, Commissioner  
The Honorable Rachelle Chong, Commissioner  
The Honorable John Bohn, Commissioner  
The Honorable Timothy A. Simon, Commissioner  
Presiding Administrative Law Judge Carol Brown  
Presiding Administrative Law Judge David Fukutome  
Presiding Administrative Law Judge Kenneth Koss  
All parties on Service List in R, 06-02-013

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

Order Instituting Rulemaking to Integrate Procurement )  
Policies and Consider Long-Term Procurement Plans. ) R. 06-02-013  
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**Opening Brief of  
the California Wind Energy Association**

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On Behalf of  
**CALIFORNIA WIND ENERGY ASSOCIATION**

August 1, 2007

## Table of Contents

PG&E’s Asserted Need for Additional Peaking Resources Equal to 20% of New Wind Capacity Is Based on Extremely Limited Data .....	2
The Commission Has Used a Much More Sophisticated Analysis of the Capacity Value of Wind for RPS and RA Purposes .....	3
PG&E’s Proposal Seeks to Alter Commission-established Policies for the RA and RPS Programs, Changes Which Are Beyond the Scope of this Case .....	8
PG&E’s Over-simplified Analysis of the Capacity Value of Wind Cannot Support a Finding That 500 MW of Additional Peaking Resources, at a Cost of 500 Million Dollars, Are Needed to Back Up Wind Generation .....	9
The Commission Should Not Adopt Changes in the Capacity Value of Wind until It Has Reviewed the CEC’s New, Comprehensive Study of the Impacts of Integrating Major Increases in Intermittent Renewable Generation .....	10
Conclusion .....	12

## Table of Authorities

### *CPUC Rules of Practice & Procedure*

Rule 6.2 .....	1
----------------	---

### *CPUC Decisions*

Decision 03-06-071 .....	3, 4
Decision 04-07-029 .....	3-5
Decision 04-10-035 .....	6
Decision 05-10-042 .....	6

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Pursuant to Rule 6.2 of the Commission’s Rules of Practice and Procedure, the California Wind Energy Association (CalWEA) respectfully files this opening brief in the Commission’s proceeding to review the long-term procurement plans (LTPPs) of the major California investor-owned utilities (IOUs), including Pacific Gas & Electric (PG&E). CalWEA’s participation in this case is limited to a single issue – PG&E’s request that the Commission authorize it to procure additional capacity resources due to the alleged inability of wind resources to provide significant generation during some peak hours. PG&E’s far-reaching proposal is based on a very limited set of data, and is contrary to the Commission’s approved measures of the capacity value of wind resources. PG&E’s request also is inconsistent with the Commission’s established “counting rules” for the resource adequacy (RA) contribution of wind resources and with how bids from new wind resources are evaluated on a “least cost, best fit” (LCBF) basis in the Renewables Portfolio Standard (RPS) program.

PG&E’s request exceeds the scope of this case, which does not include changes to the policies guiding the RA or RPS programs. Furthermore, California has made a significant effort to understand the impacts of integrating large amounts of intermittent wind generation into the California grid, and the Commission’s adopted policies for resource adequacy and the LCBF evaluation of new RPS resources reflect the results of those studies. To date, those studies have not shown a need for new resources to back up incremental wind generation. In addition, further studies of integrating increasing amounts of renewables are ongoing, and the Commission should

not authorize PG&E or the other IOUs to procure back-up generation for their wind resources until those studies clearly establish the need for such additional resources. Likewise, the Commission also should reject PG&E's attempt to limit intermittent renewables to no more than 10% of its bundled sales.

I. PG&E'S ASSERTED NEED FOR ADDITIONAL PEAKING RESOURCES EQUAL TO 20% OF NEW WIND CAPACITY IS BASED ON EXTREMELY LIMITED DATA.

PG&E's resource plan asserts that there is a 20% "gap" between the RA value of wind and its contribution to the system in certain peak hours. As a result, all of PG&E's resource plan scenarios include additional peaking resources equal to approximately 20% of incremental installed wind capacity.<sup>1</sup> Although PG&E's testimony states that it expects to have wind generation ranging from 2,200 to 4,100 MW on its system in 2016,<sup>2</sup> the amount of back-up capacity it is proposing appears to be 500 MW in all of the utility's scenarios.<sup>3</sup>

The utility justifies the need for these additional peaking resources based on a comparison, in the three peak months of the last three summers, of the RA values of the utility's existing wind resources to the actual output of its wind resources in the California Independent System Operator's (CAISO) peak hour of the month. PG&E asserts that these nine hours of data on wind generation (one hour in each of three summer months over three years) establish that wind resources contribute just 0.3% to 7% (average 3%) of wind's installed capacity toward meeting the utility's peak demand. PG&E therefore argues that there exists a 20% "gap" between the RA value of wind and its actual capacity contribution to the system peak.<sup>4</sup>

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<sup>1</sup> Exhibit (Ex.) 1 and 10, at IV-77.

<sup>2</sup> *Ibid.*, at IV-76.

<sup>3</sup> *Ibid.*, at IV-76, footnote 69. PG&E's witness Mr. Alvarez did appear to indicate on the stand that the additional peaking generation to back-up wind might be 400 - 500 MW. Tr. 836:12-17. 500 MW is 20% of 2.500 MW.

<sup>4</sup> *Ibid.*, at IV-76 to IV-77. PG&E witness Mr. Alvarez confirmed that these nine data points of wind generation in just nine peak hours were the basis for PG&E's testimony on the 20% "gap." Tr. 740:19 to 741:2. The nine data points are in the record in Ex. 153.

II. THE COMMISSION HAS USED A MUCH MORE SOPHISTICATED ANALYSIS OF THE CAPACITY VALUE OF WIND FOR RPS AND RA PURPOSES.

The Commission has addressed and adopted methods to assess the capacity value of California's wind resources in two other contexts: (1) the LCBF analysis of RPS contracts and (2) the RA program. These methods are far more sophisticated and comprehensive than the few data points on which PG&E relies in its procurement plan, and support significantly higher values for the effective capacity of California's wind resources.

The Commission has evaluated the capacity value of wind resources as part of the RPS program. In Decision 03-06-071, which established the basic policies and procedures for the RPS program, the Commission directed the utilities to assess the capacity value of intermittent, as-available renewable resources such as wind using the results of a 2003 study that the Commission and the California Energy Commission (CEC) conducted on the integration of renewable resources into the California grid (the "Integration Study").<sup>5</sup> Subsequently, the Commission used the results of the Integration Study in Decision 04-07-029, which adopted criteria for the LCBF evaluation of bids from new RPS resources:

For wind resources, we adopt a capacity value that is an average of those found in the Integration Study for the existing resources in the state's three principal wind resource areas (Altamont, San Geronio, and Tehachapi): 24%.<sup>6</sup>

Decision 04-07-029 emphasized that the Integration Study values should provide "a lower bound to the capacity value a utility should impute to a wind resource bid into its RPS solicitation."<sup>7</sup>

The Integration Study relied upon a sophisticated analysis of the Effective Load Carrying

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<sup>5</sup> D. 03-06-071, at 30. The Integration Study was prepared by Brendan Kirby of Oak Ridge National Laboratory (ORNL), Michael Milligan of the National Renewable Energy Laboratory (NREL), Yuri Makarov and David Hawkins of the CAISO, and Kevin Jackson and Henry Shiu of the California Wind Energy Collaborative at the University of California, Davis. Messrs. Kirby and Milligan are leading U.S. researchers on renewable integration issues, and the remaining authors have considerable expertise on the technical aspects of operating the California grid and on wind generation in California.

<sup>6</sup> D. 04-07-029, at 20.

<sup>7</sup> *Ibid.*, at 20 (emphasis added).

Capacity (ELCC) of California wind resources to determine their capacity value, and Decision 04-07-029 adopted the use of this approach to determine the capacity value of wind resources:

The immediate capacity issue arises from a focused Commission directive in D.03-06-071 (p. 30), establishing that the capacity value of as-available resources will be set by the Commission with reference to the CEC Integration Study. [Footnote: The values developed in the Integration Study are for each technology's Effective Load Carrying Capability (ELCC), which can be understood as a refined method of calculating capacity that captures its value in relation to system demand. Parties have used ELCC and capacity value interchangeably in briefs. To be precise, what we are adopting here are ELCC values, and we endorse the continued use of ELCC calculations in future RPS policy development, as embodied in scheduled updates to the Integration Study and subsequent Commission decisions.]<sup>8</sup>

Thus, the Commission has endorsed the use of the ELCC analysis presented in the Integration Study to establish the capacity value of wind resources under the RPS program. To CalWEA's knowledge, the ELCC analysis and values adopted in D. 04-07-029 have not been supplanted by more recent studies.

As presented in the Integration Study, the Effective Load Carrying Capability analysis of a generating resource is a sophisticated measure of "a generator's contribution to the reliability of the overall electrical supply system."<sup>9</sup> The ELCC approach uses an hourly reliability model of the CAISO system to calculate the loss-of-load probability (LOLP) across all 8760 hours of the year, adds a generation resource to the system, and then determines how much additional load the system can support (i.e. "carry") while maintaining the original LOLP.<sup>10</sup> Dividing this additional "carried" load by the nameplate capacity of the added resource yields the resource's ELCC, expressed as a percentage. The Integration Study found that the ELCC of the major wind

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<sup>8</sup> *Ibid.*, at 19-20.

<sup>9</sup> See Integration Study, Executive Summary, at xi. Although ALJ Brown did not admit the Integration Study (Ex. 152) into the record, she did make clear that the study could be cited in parties' briefs, as the Commission has adopted it in D. 04-07-029 for the purpose of establishing the capacity value of wind resources. Tr. 757:21 to 758:10 .

<sup>10</sup> Integration Study at 24-25.

resource areas in California ranges from 22% to 26%, and averages 24% (the value adopted in D. 04-07-029).

Importantly, the ELCC measures the capacity value of a resource across all hours of the year, and does not consider just a few peak hours. Even though a resource may have low output during the peak hour with the highest demand, that resource can still make a significant contribution to the reliability of the system if it has significant output in other high-demand hours when the LOLP is high and capacity is valuable. The Integration Study explains clearly that the capacity value of a resource should not be assessed using the approach that PG&E has taken in its procurement plan, that is, looking at wind output during just a few peak hours:

Ad hoc methods that calculate the renewable plant capacity factor over a very small number of hours surrounding the peak may not adequately capture any impacts on system reliability. For example, a wind plant that produces at its rated capacity during a very small number of hours surrounding the peak would be rated with a capacity value at or near its rated capacity. However, such a plant would not provide the same level of capability during other near-peak hours as a conventional plant could potentially provide. Conversely, a wind plant that is given a capacity value of 0 might contribute significant levels of output during near-peak hours when system reliability is still critical.<sup>11</sup>

In fact, the data on wind output in California shows that the last statement in this quote is close to the reality of wind output in California: wind output tends to be very low during a few peak hours with the highest loads, but wind output is much higher during other, near-peak hours “when system reliability is still critical.” The Integration Study includes Figures 3.15, 3.16, and 3.17 that show the cumulative capacity factor of wind generation in the Altamont, Tehachapi, and San Geronio regions over the top 10% of hourly loads in the year (i.e. the top 876 hours), ranked by LOLP.<sup>12</sup> The figures are similar for all three wind resource areas – wind generation is relatively low in the top ten or twenty hours (capacity factors of 0% to 20%), but increases rapidly thereafter to reach cumulative capacity factors of 30% to 32% over all 876 hours. These figures also show the calculated ELCC for each of the wind resource areas; the ELCCs are 22% to 26%,

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<sup>11</sup> Integration Study, at 26.

<sup>12</sup> These figures are on pages 37-38 of the Integration Study.

as the low generation during the 10-20 top hours is balanced by much higher generation in the other near-peak hours. Thus, the Integration Study shows clearly that the capacity value of wind resources in California cannot be assessed simply by looking at a few data points of wind output during a few peak hours, as PG&E did in formulating its resource plan.

PG&E also points to data on wind generation from the July 2006 heat wave shown in Figure 7 of the CAISO's *2007 Summer Assessment*, which is an attachment to PG&E's Exhibit 3. Although this data shows relatively low wind generation in the daily peak hours (typically 3 to 4 p.m.) during the heat wave, on most days wind output rose sharply in the hours immediately after the peak. PG&E's witness conceded on cross examination that system demand also was very high during such near-peak hours when wind generation was substantial and increasing.<sup>13</sup> Again, although wind generation was low during the daily peak hour, it was much higher in other near-peak hours when capacity was also needed and valuable.

Additionally, the Commission considered the capacity value of wind when it established the "counting rules" to determine utility compliance with the Commission's RA requirements. In the Commission's 2004 proceeding to develop the RA counting rules, CalWEA and the Division of Ratepayer Advocates (DRA) proposed to count wind capacity by multiplying installed capacity by the ELCC values for wind from the Integration Study; other parties proposed using various measures of historical generation. The Commission, in Decision 04-10-035, adopted the use of historical wind output over the summer on-peak period used in Standard Offer No. 1 (SO1) contracts.<sup>14</sup> Subsequently, in Decision 05-10-042, the Commission clarified that the RA value of wind should be a three-year, month-specific, historical rolling average of on-peak wind generation during the SO1 summer on-peak period.<sup>15</sup>

Although the Commission did not adopt the use of ELCC values for RA counting

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<sup>13</sup> Tr. 751:3 to 752:7.

<sup>14</sup> D. 04-10-035, at 24-25.

<sup>15</sup> D. 05-10-042, at 71.

purposes, the historical method adopted for the RA program produces very similar results to the ELCC method. Indeed, PG&E's testimony and workpapers in this case show that the RA value of wind on its system in the peak months of June to August varies from 31% in June to 17% in August, with an average of 23%, very close to the statewide wind ELCC value of 24% determined in the Integration Study.<sup>16</sup>

Thus, the Commission has adopted two methods for valuing wind capacity, one for determining wind's contribution to RA requirements and another for valuing wind generation under new RPS contracts. Both methods indicate that wind generation operating in California has a capacity value today of 23 - 24% of installed capacity. Both methods assess wind output across many peak hours. The SO1 on-peak period typically is noon to 6 p.m. on summer weekdays, or about 130 hours per month. The ELCC approach assesses the capacity value of wind in all hours of the year. In contrast, PG&E attempts in this case to rely on just 9 data points of hourly wind generation in 9 monthly peak hours. CalWEA does not contest the fact that wind generation is low during a few peak hours, as shown by the very limited data set that PG&E has selected. However, this says nothing about the significant generation that wind facilities produce during the many near-peak hours when PG&E's system demand – and its need for capacity – also are very high. The RA value of wind and the Integration Study's sophisticated ELCC analysis show that the substantial amounts of wind generation in near-peak hours produce a capacity value for wind of 23 - 24% of installed capacity.

The Integration Study considered and rejected an analysis similar to PG&E's when it refers to “ad hoc methods that calculate the renewable plant capacity factor over a very small number of hours surrounding the peak.” The study correctly concluded that such an approach “may not adequately capture any impacts on system reliability.”<sup>17</sup> Thus, in adopting the Integration Study and the RA counting rules, the Commission already has considered the arguments PG&E is making in this case that wind output can be low during a few peak hours,

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<sup>16</sup> Ex. 1 and 10, at IV-76 and IV-77; also, Ex. 153.

<sup>17</sup> Integration Study, at 26 (emphasis added).

and nonetheless has adopted much higher capacity values to reflect the more significant capacity value that wind provides in near-peak hours.

III. PG&E'S PROPOSAL SEEKS TO ALTER COMMISSION-ESTABLISHED POLICIES FOR THE RA AND RPS PROGRAMS, CHANGES WHICH ARE BEYOND THE SCOPE OF THIS CASE.

PG&E asks this Commission to find that wind can be depended on to provide capacity equal to only 3% of installed wind capacity. As a result, the utility asks for authority to procure back-up capacity equal to the 20% "gap" between 3% and the 23% value for wind now set under the adopted RA counting rules. In effect, PG&E is asking the Commission to find that the adopted RA counting rules for wind are wrong and the capacity value of wind generation should be assessed based on wind output only during the three peak hours of June, July, and August over the past three years. Adopting such a position would amount to a dramatic, and unjustified, change in the RA counting rules for wind.

Furthermore, if the Commission adopts PG&E's proposal in this case, the utility also is likely to argue that the Commission should no longer use the ELCC value for wind in its LCBF evaluation of new RPS wind contracts. In the RPS context, the utility could argue that the capacity value of a new wind contract is just 3% of installed capacity, because the utility now has to acquire separate back-up generation to provide any capacity value above 3%. This would dramatically reduce the value of wind generation, when compared to other renewable resources against which wind must compete in RPS solicitations.

The Assigned Commissioner and Administrative Law Judges have established clearly that the scope of this case does not include changes to adopted RA or RPS policies.<sup>18</sup> Instead, the

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<sup>18</sup> The Assigned Commissioner's September 25, 2006 Ruling and Scoping Memo in this case makes clear, at page 13, that the utilities should file long-term procurement plans which "should be based on existing procurement authority, Commission established procurement policy, and should demonstrate how the IOU intends to implement procurement in accordance with existing laws and policies." The Commission has identified certain procurement policies that it wished to review in this case (for example, see pages 24-25 of the September 25, 2006 Ruling); however, the adopted policies for RPS LCBF evaluations or for RA counting rules are not among

purpose of this case is to review the utilities' LTPPs in the light of adopted RA and RPS program policies. Past Commission decisions in the RA and RPS dockets have reviewed carefully the existing data and studies on the capacity value of wind – including PG&E's data that wind output can be low during a few peak hours – and have adopted capacity values in the range of 23% to 24% of wind's installed capacity. The Commission must therefore reject PG&E's "backdoor" effort in this case to undermine the adopted RA and RPS policies on the capacity value of wind.

If PG&E wishes to change Commission policy on the capacity value of wind generation, it should do so in the Commission's RA and RPS dockets (R. 05-12-013 and R. 06-02-012, respectively). Indeed, the Energy Division's report on the initial performance of the RA program in 2006 identified the issue of wind's performance in peak hours as a possible issue to be considered in future refinements of the RA counting rules.<sup>19</sup> If PG&E believes strongly that the current RA counting rules for wind are wrong, it should pursue its views in R. 05-12-013. The Commission should not allow PG&E to undermine the adopted RA counting rules or RPS LCBF policies in this case, where such changes are clearly beyond the scope that the Commission has set for this proceeding.

IV. PG&E'S OVER-SIMPLIFIED ANALYSIS OF THE CAPACITY VALUE OF WIND CANNOT SUPPORT A FINDING THAT 500 MW OF ADDITIONAL PEAKING RESOURCES, AT A COST OF 500 MILLION DOLLARS, ARE NEEDED TO BACK UP WIND GENERATION.

PG&E admits through its own testimony, and its witness, that the analysis it proposes for the value of wind generation is over simplified. PG&E's testimony, at Volume 1, page IV-77, lines 4-5, characterizes its analysis as "simple," and admits that it "does not address the complex planning and operational impacts of higher wind penetration levels" and that "many questions

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these policies.

<sup>19</sup> See the CPUC Energy Division's March 16, 2007, "2006 Resource Adequacy Report," submitted in R. 05-12-013, at pages 6 and 34-36. This report is available at [http://www.cpuc.ca.gov/word\\_pdf/REPORT/65960.doc](http://www.cpuc.ca.gov/word_pdf/REPORT/65960.doc).

remain unanswered as to the impact of higher wind penetration.”<sup>20</sup> Yet the utility continues to argue that its analysis, based on just a few hours of wind generation, justifies a Commission finding that PG&E needs an additional 500 MW of operationally flexible resources to back up the expected future growth of wind generation on its system. New combustion turbine capacity will cost at least \$1,000 per kW,<sup>21</sup> so 500 MW of new peaking capacity represents an investment of \$500 million. PG&E’s 9 data points are far too slender a reed to support a Commission decision to authorize a half-billion dollar investment in peaking capacity.

V. THE COMMISSION SHOULD NOT ADOPT CHANGES IN THE CAPACITY VALUE OF WIND UNTIL IT HAS REVIEWED THE CEC’S NEW, COMPREHENSIVE STUDY OF THE IMPACTS OF INTEGRATING MAJOR INCREASES IN INTERMITTENT RENEWABLE GENERATION.

The record in this case shows that the CEC has almost finished a major new study of the impacts of integrating significant increases in intermittent renewable generation into the California grid.<sup>22</sup> This study, the Intermittency Analysis Project (IAP Study), examines the integration of the levels of new wind and solar generation that are expected to be needed to meet the state’s current RPS goal of 20% renewable generation by 2010, as well as Governor Schwarzenegger’s “stretch” RPS goal of 33% renewables by 2020.

The CEC’s witness on renewable issues, Ms. Raitt, described the scenarios that the IAP Study is examining:

The scenarios were developed with industry (transmission working groups, CPUC, CA ISO, utilities and industry) consultation. The 4 scenarios are: (1) base

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<sup>20</sup> See also Ex. 1 and 10, at IV-76, lines 17-18.

<sup>21</sup> The Commission should take notice of the monthly reports that Southern California Edison (SCE) has filed in this docket on the costs of the 250 MW of new peaking units that the Commission ordered it to build in August 2006, and that are nearing completion today. These peakers are expected to cost \$275 million for 250 MW of capacity (i.e. \$1,100 per kW). See SCE’s seventh monthly status report on its 2007 peaker projects, filed April 3, 2007 in this docket and R. 05-02-013.

<sup>22</sup> PG&E also refers to a presentation on some of the initial results from the IAP Study, at Ex. 1 and 10, page IV-76, footnote 70.

case to capture existing infrastructure in 2006, (2) 2010 Tehachapi case with 20 percent [renewables] and 3000 MW of new wind capacity in Tehachapi, (3) 2010 accelerated case planning toward 33 percent renewable (an interim analysis case to help evaluate transmission constraints and to consider technology impacts as development proceeds toward the 2020 goal), and (4) 2020 case with 33 percent renewables.<sup>23</sup>

She also provided some detail on the preliminary results of the IAP's work, as presented at a workshop in February 2007:

These findings showed that even with 33 percent renewables (with over 12 GW of wind in CA ISO area) at the hourly level there were no significant operational problems observed. In all scenarios studied, during summer peak conditions, the statewide electrical system had sufficient flexibility and adequate resources with 20 percent and 33 percent renewables. Where intermittency does have some noticeable impact was during off-peak and morning load rise conditions. These impacts though small were quantified in the study and suggested mitigation options were provided.<sup>24</sup>

These preliminary results are very promising, and strongly suggest that California can achieve its ambitious goals for renewable development without the need to install back-up generation, even with a very significant penetration of intermittent renewables, including large amounts of wind.

CalWEA agrees with the CEC and PG&E that additional study of the impacts of integrating large amounts of intermittent renewables is needed, with particular emphasis on how any impacts can best be addressed. However, until policy makers can complete that review, it would be contrary to ratepayer interests and the state's renewable energy goals for this Commission to authorize PG&E to build \$500 million in new peaking capacity based on the utility's interpretation of nine data points on hourly wind generation on the PG&E system. Given that the CEC is in the process of finalizing the comprehensive IAP Study of wind integration issues, and that the initial results from the IAP Study appear to show no need for the back-up generation that PG&E proposes, the Commission should hold off on authorizing the procurement of new peaking generation as a back-up to expected wind generation.

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<sup>23</sup> CEC / Raitt, Ex. 63e, at 21-22.

<sup>24</sup> *Ibid.*, at 22 (emphasis added).

Similarly, CalWEA supports the positions of the CEC and TURN that there is no basis in the current state of knowledge which justifies PG&E's request to limit the penetration of intermittent renewables on its system to 10% of its bundled sales. PG&E has proposed such a limit until it is clear that higher penetrations of intermittent renewables can be integrated into the California grid.<sup>25</sup> The IAP Study, for example, has considered much higher than 10% statewide penetrations of intermittent renewables,<sup>26</sup> and, as noted in the CEC's testimony, the preliminary results of that work have flashed no "red lights" that raise concern with the system's ability to integrate those levels of intermittent renewables. Until significant integration issues are identified, the Commission should not impose artificial constraints on the future development of renewable energy in California.

## VI. CONCLUSION

The Commission should reject PG&E's request for authorization to build 500 MW of new peaking capacity, at a cost of \$500 million or more, to back-up the expected levels of wind generation on the PG&E system in 2016. PG&E's far-reaching proposal is based on data on wind output during just nine peak hours; the utility concludes from that limited and highly selective data that wind's capacity value is just 3% of installed capacity. PG&E's analysis is contrary to the much more sophisticated and comprehensive evaluations of the value of wind capacity that the Commission has approved as part of the RA and RPS programs. Those analyses have shown that wind has significant capacity value in near-peak hours, even if wind output is low during a few peak hours. PG&E should not be allowed to undermine the Commission's adopted RA and RPS policies in this case, based on an analysis that even it conceded was "simple."

California has made a significant effort to understand the impacts of integrating intermittent wind generation into the California grid. The results of the 2003 Integration Study

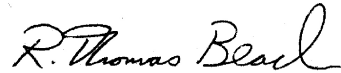
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<sup>25</sup> Ex. 1 and 10, at IV-32.

<sup>26</sup> The IPA Study's 2010X "accelerated" case of 33% renewables in 2010, which Ms. Raitt references (Ex. 63e, at 21-22), includes 12,500 MW of wind and 2,600 MW of solar, resulting in more than 15% of statewide generation from these intermittent renewables.

are reflected in the Commission's adopted RA and RPS policies. Renewable integration studies are continuing, in the form of the CEC's major IAP Study, now nearing completion. To date, none of those studies, including the preliminary results of the IAP Study, has shown a need for new peaking resources to back-up additional wind generation. Given what we know today, it would be a costly mistake for the Commission to authorize PG&E to procure half a billion dollars of back-up generation for its future wind resources. The Commission should also reject PG&E's attempt to limit intermittent renewables to no more than 10% of its bundled sales.

Respectfully submitted,



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

August 1, 2007

## CERTIFICATE OF SERVICE

I hereby certify that I have this day caused to be served a copy of the foregoing document, **Opening Brief of the California Wind Energy Association**, by Electronic Mail where possible and First-Class Mail where not, on all known parties to R. 06-02-013, named on the service list attached to the original certificate of this document pursuant to the Commission's Rules of Practice and Procedure.

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

Executed at Berkeley, California, Wednesday, August 1, 2007.

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Christa Goldblatt