

✓ Men. Ack  
sent 3/8/06

✓ To A.V.

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**Jean Jewell**

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**From:** Ed Howell  
**Sent:** Wednesday, March 08, 2006 3:53 PM  
**To:** Jean Jewell; Ed Howell; Gene Fadness; Tonya Clark  
**Subject:** Comment acknowledgement

WWW Form Submission:

Wednesday, March 08, 2006  
3:52:58 PM

Case: pac-E-05-9  
Name: Gary Seifert  
Street Address: PO 1625, MS 3810  
City: Idaho Falls  
State: id  
ZIP: 83415-3810  
Home Telephone: 2085218385  
E-Mail: sei@inel.gov  
Company: PacifiCorp  
mailing\_list\_yes\_no: yes  
Comment\_description: Comments on Schwendiman;

I am an electrical power engineer at the INL. My comments are based on my knowledge base and 25+ years of working in this field.

I have reviewed this contract. You have my comments on file from the earlier review of the contract you rejected. None of these have changed and all still apply. Following are my comments for this submittal, Case PAC-E-05-9.

1. The inclusion of the 90/110 banding meets your requirements of rejection. This language will impact cash flow for Schwendiman and in effect reduce the cost of electricity for ratepayer's, a point I have to assume you were trying to achieve with your earlier rejection.
2. Because this contract meets your requirements, I strongly suggest approving it.
3. That said, I have two more comments that are aimed at long range wind contracts in Idaho. First is the mis-perception that 90/110 will ensure better forecasting and be an incentive for performing and delivering power. This is incorrect. All it does is create a negative incentive for forecasting. Because of the penalties, this contract will always receive low performance estimates. Based on discussions with over half of the people looking at Idaho PURPA's, they all plan on projecting power with at least a 10% margin to avoid hitting the 90% band number and the onerous penalties incurred. (ie - forecast their power at 90% as 100% to give a margin). There have been rate cases and analysis's performed in regional states, and all have one common conclusion. Anytime forecasts are too low, the utility places more power on reserve and pays for that cost of spinning reserve and as a rule never uses that power. IE - spending money for no added value. Therefore, the 90/110 band penalizes the wind farmer and the utility. The utility has to recover costs and overhead and therefore, the cost eventually get's blended in and passed on to the consumer. Ergo - the 90/110 band costs both ratepayers and wind farmers, not what I assumed that you planned with this incentive based rate. Therefore, using a system like the 90/110 band means that the utility is always paying too much if they follow the forecasts. And if they do not follow the forecasts then what's the value of the band and why pay to administer a band that brings no value to Idaho ratepayers?
4. The real issue is good forecasting. All utilities use accurate and real time forecasting methods where monthly, weekly, daily, and hour ahead numbers are evaluated and wise decisions made based on real numbers constantly adjusted due to daily conditions. Both Pacificorp and Idaho Power have modern powerful SCADA systems. Both SCADA systems have the option to integrate forecasting tools. Current wind forecasting is friendly with utilities needs for weekly, daily, hourly forecasting and offers accuracies well within normal estimating limits currently used. Wind forecasting at the utility level exceeds the level of confidence they have on forecasting consumer load and water flows. If they are uncertain about integrating these tools, then commercial services are available. Regardless, I assume that Idaho utilities would rather have control of their forecasting

tools rather than depending on a small agriculture based entity.

Comment summary -

- kill 90/110 and direct the utilities to perform their own forecasting and
- put a maintenance-based incentive on the wind farm to keep them operational. The old MAG approach appears to be a better deal for the ratepayer.

Thank you for your time and consideration.

Gary Seifert EE PE  
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sent 3/8/06

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**ENergy**  
 **VISION LLC**

*"Envisioning a sustainable future"*

Glenn S. Ikemoto  
Principal

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VIA EMAIL

March 8, 2006

President Paul Kjellander  
Commissioner Dennis Hansen  
Commissioner Marsha Smith  
Idaho Public Utilities Commission  
472 West Washington Street  
PO Box 83720  
Boise, ID 83720-0074

Re: Comments on PAC-E-05-09

Dear Commissioners:

In late December, the developers of the Schwendiman Wind Project asked me if I would help them negotiate a compromise 90/110 mechanism, as directed by the Commission. That effort resulted in the contract you are now being asked to approve. I believe the new mechanism is far more economically efficient than the prior version. That is, delivering a dollar of savings to the ratepayer will cost the project a dollar. Because of price volatility, there is a much larger cost to the projects than associated benefit to the ratepayers under the prior mechanism. In the long run, this loss is not in either party's interest.

My real purpose in writing this letter is to commend the efforts of PacifiCorp's representatives and the Commission's Staff. I have negotiated power contracts from both the utility and developer sides of the table for over 25 years. This negotiation was one of the most positive and reasonable I have ever been involved with. I would like to particularly highlight the efforts of Bruce Griswold of PacifiCorp. He was extremely responsive and gave up many hours on nights and weekends to meet a very tight schedule. He conducted himself in good faith and effectively focused the resources of his company on solving problems as soon as they arose.

Your Staff also provided critical support at key times during the negotiation. While they made it clear that they would not dictate an outcome or prejudice any results, they unflinchingly urged the parties to seek compromise. Without this moral support, I don't believe we would have succeeded. You can be justifiably proud of their professionalism.

The Schwendiman project deserves to go forward. The development team has invested years of effort bringing the project to this point. This time and money was invested in the reasonable belief that a market for clean energy existed in Idaho. For the developers, the final form of the contract does not really represent a compromise, it is a pure concession. The new 90/110 mechanism will result in an unavoidable reduction in project revenue compared to the original contract. There was only a small overlap between the requirements of the project's financiers and the Commission's directions. I hope we have succeeded in finding it.

Best regards,

A handwritten signature in black ink, appearing to read 'Glenn Ikemoto', with a long horizontal flourish extending to the right.

Glenn Ikemoto  
Principal

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sent 3/8/06

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**Jean Jewell**

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**From:** Ed Howell  
**Sent:** Wednesday, March 08, 2006 12:54 PM  
**To:** Jean Jewell; Ed Howell; Gene Fadness; Tonya Clark  
**Subject:** Comment acknowledgement

WWW Form Submission:

Wednesday, March 08, 2006  
12:53:51 PM

Case: PAC-E-05-09  
Name: Paul Dawson  
Street Address: 5180 S. Forest Floor Ave.  
City: Boise  
State: ID  
ZIP: 83716  
Home Telephone: 208-863-0561  
E-Mail: pdawson@boisestate.edu

Company: Idaho Power  
mailing\_list\_yes\_no: yes

Comment description: I am a professor of Mechanical Engineering at Boise State University. I have a background in Meteorology and thermal-fluid sciences in Mechanical Engineering. I wanted to offer a comment on the 90/110 rule.

As a research professor who has studied meteorological modeling, I know how difficult it is to forecast weather, particularly winds in the atmospheric boundary layer. I have been trying to forecast temperature, relative humidity, and winds in the Treasure Valley of Idaho during winter for the last 3 winter seasons. The above-surface winds tend to be the most difficult to forecast, even one day in advance, using the state-of-the-science mesoscale weather research and forecasting (WRF) model, currently being used in the research and forecasting communities. Trying to provide an accurate wind forecast is difficult, if not impossible, beyond 48 to 72 hours. The forecast gets more difficult the longer the forecast period. For a forecast 3 months in advance, the best approach is to use statistical data and statistical averages. But this data varies from year to year and is influenced by phenomena such as El Nino and climate change dynamics. The latter phenomena tend to make statistical studies less reliable, as recent studies and journal publications indicate.

I hope this comment has been helpful in judging whether the 90/110 rule is a fair rule for wind energy proponents and developers.

Paul Dawson, PhD

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sent 3/8/06

✓ To AV.

✓ To Comments  
; Staff

**Jean Jewell**

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**From:** Ed Howell  
**Sent:** Wednesday, March 08, 2006 9:07 AM  
**To:** Jean Jewell; Ed Howell; Gene Fadness; Tonya Clark  
**Subject:** Comment acknowledgement

WWW Form Submission:

Wednesday, March 08, 2006  
9:06:30 AM

Case: PAC-E-05-09  
Name: Dr. David Lubitz  
Street Address: 85 Behr Ave #204  
City: San Francisco  
State: CA  
ZIP: 94131  
Home Telephone: 415-753-2130  
E-Mail: wdlubitz@ucdavis.edu  
Company: Idaho Power  
mailing\_list\_yes\_no: yes

Comment\_description: I am submitting the comments below in regard to case PAC-E-05-09. I am commenting specifically on the 90/110 banding requirement included in the agreement. I submit these comments as an individual with an extensive background in wind energy forecasting, and an interest in encouraging economical energy production in the state of Idaho.

I have had extensive experience forecasting the energy production of wind plants during the last several years. There has been a long term interest in wind energy forecasting in California, and the California Energy Commission (CEC), in partnership with the Electric Power Research Institute (EPRI) have supported two multi-year projects to improve the forecasting of wind energy production at wind plants in California. These studies contracted with leading wind energy forecasting companies and the University of California, Davis, to produce energy forecasts for several wind plants in different regions of California. I performed research at the University of California, Davis in support of these studies, and also designed an operational wind energy forecasting system. The goal of these projects was to improve the accuracy of "short-term" forecasting, which is the prediction of wind energy production between zero and 48 hours in advance. These projects have documented a marked improvement in wind energy forecasting accuracy, for time periods up to 48 hours in advance. The results of the first project have been published by EPRI (EPRI Technical Report 1007339. California Wind Energy Forecasting System Development and Testing. Phase 2: 12-Month Testing. Palo Alto, CA, USA, July 2003) and the final report for the more recent study, the California Regional Wind Energy Forecasting System Development project, is in preparation and will be published shortly. These studies have documented that wind energy forecasting up to 48 hours in advance has improved markedly in California. Other research has suggested that the improvements seen in California short-term forecasting are typical of the improvements in the short-term forecasting ability of the forecasting industry as a whole.

It should be noted that the wind energy forecasting industry is focused on producing forecasts between zero and 48 hours in advance, typically for hourly power production. Most of the demand from the power generation industry has been for forecasts in this time frame, as the "next hour" and "next day" forecasts provide a good combination of forecast accuracy and operational usefulness. The next day forecasts are used to assist in contracting of power and planning generation, while forecasts between zero and three hours in advance are used by power grid operators to balance generation and demand. Forecasting more than 48 hours in advance is difficult to do with useful accuracy, and has less practical value for most stakeholders. Because of this, there is little research or development focused on forecasting wind energy production weeks or months in advance, and few forecasting products are available for this type of forecast.

I believe the 90/110 banding requirement places a significant burden on wind plant operators. Based on my experience, forecasting the monthly energy production of a wind

plant a quarter in advance, while consistently guaranteeing forecast error of less than 10% on a monthly basis, is not possible with current forecasting tools. Given the difficulty of weather forecasting in general over these time frames, it is unlikely that this will be achievable in the near term. Since the wind energy forecasting industry has a variety of products available for shorter-term forecasts that are continually improving in accuracy, consideration should be given to replacing 90/110 banding with a requirement for next day energy forecasting. The next day forecasting products available may provide a better combination of greater operational benefit, accuracy and cost-effectiveness, given the accuracy limitations of longer-term forecasts and the difficulty of producing them. If the 90/110 banding is retained, it might be possible to reduce the burden on wind plant operators by making further adjustments to the 90/110 requirements, such as allowing a larger error band or changing the financial incentives.

Thank you.  
David Lubitz, PhD

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