

REDACTED

Docket No. UE-227

Exhibit PPL/500

Witness: Rick T. Link

**BEFORE THE PUBLIC UTILITY COMMISSION
OF THE STATE OF OREGON**

PACIFICORP

Redacted Rebuttal Testimony of Rick T. Link

July 2011

1 **Q. Please state your name, business address and present position with**
2 **PacifiCorp (the Company).**

3 A. My name is Rick T. Link. My business address is 825 NE Multnomah St., Suite
4 600, Portland, Oregon 97232. My present position is Director, Structuring &
5 Pricing.

6 **Qualifications**

7 **Q. Briefly describe your education and business experience.**

8 A. I received a B.S. in Environmental Science from the Ohio State University in
9 1996 and a Masters of Environmental Management from Duke University in
10 1999. I have been employed in the commercial & trading area of PacifiCorp
11 since 2003 where I have held positions in market fundamentals, structuring, and
12 planning. Currently, I direct the work of the market assessment group, the
13 structuring & pricing group, and the integrated resource planning group. Prior to
14 joining the Company, I was an energy and environmental economics consultant
15 for ICF Consulting (now ICF International) from 1999 to 2003.

16 **Purpose and Overview of Testimony**

17 **Q. Please explain the purpose of your testimony and provide an overview of**
18 **your conclusions.**

19 A. My rebuttal testimony will show that the concerns raised by the Industrial
20 Customers of Northwest Utilities (ICNU) in Mr. Donald W. Schoenbeck's June
21 24, 2011 testimony and July 5, 2011 supplemental testimony pertaining to the
22 Company's forward price curve (FPC) and hourly price scalars (Scalars) are
23 unfounded. Specifically, my rebuttal testimony shows:

- 1 • ICNU’s claim that the Company treats the official FPC used to determine net
2 power costs (NPC) as highly confidential is false, and as such, this claim does
3 not support its recommendation to use a third party source for the FPC.
- 4 • Relying upon a third party source for the FPC would not give parties the
5 ability to more precisely track how forward market movements would impact
6 NPC, and as evidenced by ICNU’s own analysis, parties can reasonably
7 approximate such impacts without the Company developing a FPC off of third
8 party data.
- 9 • The Company’s method for developing its official FPC is reasonable and
10 requires no modification.
- 11 • Removing hour-to-hour price variability from the Company’s Scalar
12 calculation ignores actual market trends and is not valid.
- 13 • Reducing the period over which historical price data are used to derive Scalars
14 could introduce volatility to NPC when updated.
- 15 • The Company’s method for calculating Scalars is reasonable and requires no
16 modification.

17 **Forward Price Curve**

18 **Q. Please summarize ICNU’s concerns related to the source of the Company’s**
19 **FPC.**

20 A. ICNU claims that the Company relies on internally generated highly confidential
21 monthly electricity and natural gas prices to establish NPC. It is primarily
22 concerned with the perceived highly confidential designation for the FPC as used
23 to establish NPC.

1 **Q. Does the Company designate the FPC it uses for determining NPC as highly**
2 **confidential?**

3 A. No. The official FPC used in this docket to determine NPC was provided to Staff
4 and interveners in supporting workpapers, as required by the Transition
5 Adjustment Mechanism Guidelines (TAM Guidelines).¹ The Company
6 designates the official FPC as confidential and does not designate it highly
7 confidential.

8 **Q. Please describe how the Company produces the official FPC that is used to**
9 **establish NPC.**

10 A. The official FPC is developed by the Company's front office at market close for a
11 given quote date consistent with where the forward market was trading on that
12 day. In the Company's initial filing, the quote date for the official FPC is
13 December 31, 2010. For the rebuttal update filing, the quote date for the official
14 FPC is June 30, 2011. When producing the FPC, the front office takes into
15 consideration market price quotations from energy brokers, exchanges, direct
16 communication with market participants, and actual transactions executed by the
17 Company. [REDACTED]

18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED] When this criterion is met, the
23 front office FPC is "locked down" and becomes the official FPC for that quote

¹ See Order No. 09-274, Appendix A at p. 17 (Section A(2)(c)).

1 date. The official FPC is established on the last trading day of each quarter and
2 for any FPC used to determine NPC.

3 **Q. Does the Company make available to parties the risk management validation**
4 **of the front office FPC?**

5 A. Yes. Under TAM Guidelines, the Company is required to provide the risk
6 management validation for the final update that shows how the official FPC
7 compares to broker quotes.²

8 **Q. What specific recommendations does ICNU offer as it relates to the FPC**
9 **used to determine NPC?**

10 A. ICNU recommends that:

11 [A]n independent (or third party) source be used to eliminate any concerns
12 regarding the possibility of gaming, lessen disputes over the highly
13 confidential treatment of the associated prices, and to allow for a more
14 precise tracking of how forward market movements would impact the
15 Company's NPC.³

16 Specifically, ICNU recommends using transactional data from the
17 IntercontinentalExchange (ICE) as the source of the FPC.

18 **Q. Has ICNU found any evidence of gaming?**

19 A. No. ICNU conducted an analysis in which it compared a sample of Company
20 FPCs with forward prices from ICE on the same quote dates. The results of this
21 analysis showed only minor differences between the Company's FPC and those
22 reported by ICE. Further, in response to Data Request 3.1, attached as Exhibit
23 PPL/501, ICNU states:

² See Order No. 09-274, Appendix A at p. 5 (Section D(2)).

³ See ICNU/100, Schoenbeck/3, lines 8-12.

1 For the fifteen days examined by Mr. Schoenbeck, he did not believe he
2 observed any gaming for the Company's forward hubs where third party
3 data was available.

4 **Q. Do you agree that ICNU's recommendation would lessen disputes over the**
5 **highly confidential treatment of the Company's official FPC?**

6 A. No. As I have described above, the Company does not treat the official FPC used
7 to determine NPC as highly confidential, and thus ICNU's statement is not valid.

8 **Q. What FPC materials does the Company treat as highly confidential?**

9 A. The Company updates its FPC at the end of each trading day. Official FPCs are
10 designated confidential. However, the Company treats the FPC for all other quote
11 dates as highly confidential to protect information that could indicate prices the
12 Company would pay or accept in its commercial activities. The Company has
13 adopted this approach, which strikes a balance between protecting commercially
14 sensitive information while at the same time facilitating discovery when the FPC
15 is used to calculate NPC.

16 The dispute with ICNU over the highly confidential treatment of the FPC
17 stemmed from its Data Request 2.11, which requested that the Company provide
18 FPCs for all quote dates beginning January 1, 2011 through the latest date
19 available at the time, which was March 31, 2011. In response to this request, the
20 Company made available to ICNU the March 31, 2011 official FPC as a
21 confidential attachment and ultimately provided to ICNU through a supplemental
22 response to Data Request 2.11 redacted daily FPCs through March 31, 2011,
23 designated as confidential. In the supplemental response, the Company agreed to
24 classify these daily forward prices for points of delivery with substantial liquidity

1 as confidential. The Company also provided the highly confidential daily FPCs
2 for the illiquid points of delivery under the terms of a Modified Protective Order
3 adopted by the Commission in Order No. 11-265. The Company continues to
4 consider the most current daily forward prices as well as the prices for the illiquid
5 points of delivery as highly confidential. ICNU has not alleged that the
6 protections in the Modified Protective Order limited its ability to review the
7 highly confidential FPC data, which were not used to determine NPC,
8 undermining the argument that a lower level of protection is appropriate.

9 **Q. If ICE were used as the source of the FPC, would this allow for a more**
10 **precise tracking of how forward market movements would impact the**
11 **Company's FPC?**

12 A. No. When asked to provide the analysis showing that a third party forecast would
13 serve this purpose, ICNU responded to Data Request 3.2 by stating that no
14 analysis was done to support this statement. ICNU adds in its response:

15 [H]aving the exact forward price curve series from an independent third
16 party source would allow a party to precisely know the impact on the
17 Company's net power cost.⁴

18 **Q. How do you respond?**

19 A. There is no third party source that provides forward price curves for each of the
20 electricity and natural gas market hubs that are critical to determining NPC, and
21 as such, use of a third party provider will not provide any party with a precise
22 indication of how market movements impact NPC. For instance, no third party
23 source provides burner tip gas prices for each of the Company's natural gas-fired
24 resources. Similarly, ICE does not publish forward electricity prices for the

⁴ See Exhibit PPL/501.

1 California Oregon Border, Four Corners, Mead and Mona market hubs.

2 **Q. Does ICNU claim to resolve this problem by using a second source of data?**

3 A. Yes. ICNU suggests that the Company could simply rely on a source such as
4 Platts Megawatt Daily to derive historical basis spreads for the California Oregon
5 Border, Four Corners, Mead, and Mona electricity market hubs that would then be
6 applied to forward prices.

7 **Q. Is this a reasonable alternative?**

8 A. No. Historical price spreads are not a suitable replacement for forward price
9 spreads informed by market price quotations on a specific trading day from
10 energy brokers, exchanges, direct communication with market participants, and
11 actual transactions executed by the Company. Moreover, data for these market
12 hubs are not always available. For instance, ICNU provided a sample of the July
13 8, 2010 Platts Megawatt Daily with the workpapers that accompanied its
14 testimony, attached as Confidential Exhibit PPL/502. This document shows that
15 there were no on-peak transactions for the Mona market, and no off-peak
16 transactions for the Mona, Mead, and Four Corners market hubs.

17 **Q. Does ICNU identify in its recommendation any solutions for deriving burner
18 tip natural gas prices for the Company's natural gas-fired resources that are
19 not reported by any third party provider?**

20 A. No.

1 **Q. Considering it is not possible for a party to *precisely* know how forward**
2 **market movements impact NPC even if a third party source were used for**
3 **the FPC, can parties reasonably approximate the impacts without requiring**
4 **the Company to utilize a third party provider?**

5 A. Yes. [REDACTED]
6 [REDACTED], it would be reasonable to expect that a
7 third party source would publish forward prices that are similar to those produced
8 by the Company. In fact, this is precisely what ICNU found when its consultant
9 compared a sample of the Company's FPC with ICE data, which showed that in
10 most cases, the difference between the two price curves was less than 0.5%. As
11 such and if so desired, parties could reasonably approximate the impact of
12 forward market movements on NPC by using in their own analysis a third party
13 provider such as ICE.

14 **Q. What other problems are there with using a third party provider as the**
15 **source for the Company's FPC when determining NPC?**

16 A. The Company relies on the same forward price curve to establish NPC as is used
17 in daily operations and in financial reporting. It is not reasonable for the
18 Company to have one FPC derived from a third party provider to determine NPC
19 in Oregon and another FPC that it uses in daily operations and financial reporting.
20 In fact, a Stipulation in Docket UE 116 on direct access implementation among
21 Commission Staff, ICNU, and the Company expressly provides that the Company
22 will use the same FPC for Company operations and for determination of transition
23 adjustments:

1 The Company represents that the forward price curves it will base the
2 transition credit and buyback calculations on are the Mid-C forward price
3 curves generally used by the Company in all aspects of its business.⁵

4 **Q. Does ICNU’s proposal raise additional concerns with respect to NPC-related**
5 **dockets in other states?**

6 A. Yes. The Company relies upon its official FPC to set NPC in all states. The use
7 of different FPCs in Oregon from that used in the Company’s other five states
8 could cause inconsistent results and would introduce a new layer of complexity to
9 NPC-related proceedings.

10 **Q. What do you recommend?**

11 A. I recommend that the Commission reject the recommendations made by ICNU to
12 use a third party provider as the source for the Company’s FPC.

13 **Hourly Scalars**

14 **Q. Please briefly describe Scalars and how they are applied to the FPC.**

15 A. Scalars are multipliers that get applied to forward monthly prices to arrive at an
16 hourly price profile. These multipliers are unique for every hour for a given day
17 type (*i.e.*, weekdays excluding holidays, Saturdays excluding holidays, and
18 Sundays/holidays), and therefore yield hour-to-hour price variability that is
19 consistent with historical price data. Scalars greater than one would result in an
20 hourly price for a given day type that is higher than the monthly forward price,
21 and price multipliers that are less than one would result in an hourly price for a
22 given day type that is lower than the monthly forward price. The hourly price
23 profile that is a result of applying Scalars to forward monthly prices yields hourly

⁵ See Stipulation on Standard Offer and Transition Credit Among OPUC Staff, PacifiCorp and ICNU, Docket UE 116 at p. 3 (June 19, 2001).

1 prices that, when averaged across a given month, precisely equal the forward
2 monthly prices in the FPC.

3 **Q. Please summarize ICNU's position related to Scalars.**

4 A. ICNU asserts that the Company's highly confidential treatment of Scalar data is
5 not required. ICNU also recommends two alternatives for calculating Scalars.

6 ICNU prefers that the Commission require the Company to remove hour-to-hour
7 price variability from its Scalar methodology. In the alternative, ICNU
8 recommends that the Commission require the Company to [REDACTED]

9 [REDACTED]

10 **Q. How do you respond?**

11 A. I emphatically disagree with each of ICNU's recommendations pertaining to the
12 Company's Scalars. First, the Company considers its derivation of Scalars to be
13 commercially sensitive and the highly confidential treatment of the Scalar
14 methodology is applied to ensure the Company is not disadvantaged in its
15 commercial activities. Second, ICNU's preferred alternative for calculating
16 Scalars would remove entirely the hour-to-hour price variability that the Company
17 knows with absolute certainty is a defining characteristic of the hourly electricity
18 market. Third, ICNU's second alternative to [REDACTED]

19 [REDACTED]

20 [REDACTED] and introduce volatility to Scalar updates.

21 **Q. Please explain why the Company believes its methodology for developing
22 Scalars is commercially sensitive.**

23 A. The forward markets routinely transact on standard products, which include trades

1 for 25 MW blocks of power delivered either on-peak, off-peak, or on a flat
2 pattern. On-peak products are delivered for hours ending 7 through 22 excluding
3 Sundays and holidays. Off-peak products are delivered for hours ending 23
4 through 6 for Monday through Friday, and all hours on Sundays and holidays.
5 Flat products are delivered for hours ending 1 through 24 including all Sundays
6 and holidays. For these types of standard products, there is a high level of market
7 transparency and trading volumes among nearly all points of delivery in western
8 wholesale power markets, and consequently there is less risk that the Company
9 would be disadvantaged in prospective commercial transactions for these types of
10 standard products. In fact, the Company's official FPC represents forward prices
11 for these types of products and is treated as confidential as I described earlier in
12 my testimony.

13 In contrast, there is less forward market transparency and smaller trading
14 volumes for non-standard products, which often include structured transactions
15 for products that have delivery patterns outside of the standard definitions for on-
16 peak, off-peak, and flat products. As an illustrative example, the Company might
17 consider a structured transaction in which power is delivered from hours ending
18 14 through 18 with a counterparty. If this counterparty were aware of the
19 methodology the Company uses to derive Scalars, they could duplicate the
20 Company's calculations and use that information to their advantage in negotiating
21 the price for such a non-standard transaction. In turn, the Company would be
22 disadvantaged in this negotiation, which by extension, could introduce cost risk to
23 customers. For this reason, the Company considers the methodology used to

1 develop its Scalars to be commercially sensitive and has traditionally ascribed
2 highly confidential treatment for this information.

3 **Q. Does ICNU have full access to the highly confidential information related to**
4 **Scalars under the Modified Protective Order adopted by the Commission in**
5 **Order No. 11-265?**

6 A. Yes.

7 **Q. Why does ICNU recommend that the Company modify its Scalar**
8 **methodology to remove hour-to-hour price variability?**

9 A. ICNU offers two basic arguments to support its preferred recommendation. First,
10 ICNU goes into great length to describe its analysis that shows [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED] Second, ICNU states that the Company transacts more often in the forward
14 market than in the real time or “spot” market, which is inappropriately used to
15 justify removing the hour-to-hour price variability that results from the
16 Company’s calculations.

17 **Q. Is ICNU’s discussion of low or missing trade volumes in historical pricing**
18 **data inconsistent with its testimony related to the Company’s FPC?**

19 A. Yes. As I noted earlier in my testimony, ICNU recommended using Platts
20 Megawatt Daily price information for purposes of deriving forward price spreads
21 for those markets hubs not published by ICE. Interestingly, the sample of the
22 Platts Megawatt Daily document that ICNU chose to submit as work papers
23 showed no trades for on-peak prices at Mona, and no trades for off-peak prices at

1 Mona, Mead, and Four Corners. Apparently, ICNU believes it is reasonable to
2 use pricing data with no recorded trade volumes to support its recommendations
3 related to the official FPC while at the same time arguing that pricing data with
4 limited or no recorded trade volumes is a reason to alter the Company's Scalar
5 methodology.

6 **Q. Is the [REDACTED] used by the Company valid?**

7 A. Yes. [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED] Without question, the Company would

11 ideally prefer to have a price index with enough breadth to capture all trade

12 volumes; however, no such source exists. As such, the Company relies on [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 **Q. Is ICNU's preferred approach for deriving Scalars valid?**

23 A. No. ICNU's preferred approach would entirely remove hourly price shapes from

1 the derivation of Scalars. As a result, the price for all on-peak hours for a given
2 day-type (*i.e.*, all Mondays) in a given month would be the same. Likewise, the
3 price for all off-peak hours for a given day-type in a given month would be the
4 same. Such an approach completely ignores the fact that there is, with absolute
5 certainty, hour-to-hour price variability in the hourly market. Consequently,
6 ICNU's approach would produce hourly price profiles that would deviate from
7 known market trends, and any resulting NPC implications would, by extension, be
8 suspect.

9 **Q. How do you respond to ICNU's claim that it is more reasonable to remove**
10 **hour-to-hour price variability in the Scalar calculation because the Company**
11 **trades in the forward market more so than in the spot market?**

12 A. This argument is misguided. [REDACTED]

13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED] In truth, the
17 Company uses an hourly shaped *forward* price curve for the test period, and this
18 hourly price profile is precisely consistent with the hourly price profile used by
19 the Company to evaluate non-standard structured commercial opportunities.

20 **Q. Why do you disagree with ICNU's alternate recommendation to [REDACTED]**

21 [REDACTED]
22 [REDACTED]
23 A. ICNU's alternate recommendation is certainly an improvement to its preferred

1 method in that it yields a price profile that maintains hour-to-hour variability
2 consistent with actual market trends. However, this alternate approach remains
3 inferior to the Company's Scalar calculation.

4 **Q. Please explain.**

5 A. The Company has chosen to [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]

15 [REDACTED] As a result, changes to NPC resulting
16 from quarterly updates to Scalars would likely become more volatile – at times
17 higher and at times lower than the NPC established with prices derived from the
18 Company's Scalar methodology.

19 Second, when the Company calculates Scalars, [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 [REDACTED]

1



2 **Q. What do you recommend?**

3 A. I recommend that the Commission reject ICNU's recommendation that would
4 alter the Company's designation of Scalar data as highly confidential. I further
5 recommend that the Commission reject both of ICNU's recommendations to
6 impose alternate Scalar calculation methodologies.

7 **Q. Does this conclude your testimony?**

8 A. Yes.