

RNP “Strawman” Proposal for Section 15 Alternative Compliance Payment

I. Design Objectives: RNP notes that the statute provides explicit direction as to one design objective of the Alternative Compliance Payment (ACP) mechanism prescribed by Section 20 of SB 838:

“In establishing the alternative compliance rate, the commission shall set the rate to provide adequate incentive for the electric company or electricity service supplier to purchase or generate qualifying electricity in lieu of using alternative compliance payments to meet the renewable portfolio standard ...” (Section 20(2)).

That is, the ACP rate must be set sufficiently high so that it incentivizes procurement of bundled renewable electricity or unbundled renewable energy credits (RECs) before reliance on the ACP. The ACP should therefore be designed to be the compliance option of last resort under normal market situations.

The ACP clearly has another implicit objective, although it is not explicitly stated in the statute: the ACP should be designed to serve as a hedge against market volatility for the other two compliance options – bundled renewable electricity and unbundled RECs. The ACP should be set at a rate that provides utilities with an alternative to purchasing renewable electricity or RECs in situations where market prices for either have diverged significantly from expected levels.

We therefore present these two guiding design principles for the ACP:

- 1. The ACP should be the compliance option of last resort under normal market conditions.**
- 2. The ACP should serve as a hedge against market volatility and provide an alternative to bundled renewable electricity or RECs when market prices for either have diverged significantly from expected levels.**

II. The Compliance Options and Pricing the ACP: In initial discussions at the March 17th AR 518 Workshop, parties expressed divergent opinions about whether or not the ACP should be based on the price of unbundled RECs and the *incremental* cost of bundled renewable electricity, or on the *full* price of renewable electricity. We argue that the ACP should be set at a price that serves as a functional alternative – given the two goals above – to either unbundled REC purchases, or the *incremental* cost of purchasing or generating bundled renewable electricity. We present the following two different scenarios and the options for compliance under each to explain why. In both scenarios, we make the following assumptions for illustrative purposes about the expected cost of RECs and power:

- Unbundled RECs are valued at \$10/MWh
- Bundled renewable electricity is valued at \$70/MWh
- Non-qualifying electricity is valued at \$60/MWh

Scenario 1: the utility is resource sufficient.

Under this scenario, the utility has three options for compliance:

- 1) Purchase unbundled RECs at a cost of \$10/MWh
- 2) Purchase bundled RECs and power at a cost of \$70/MWh and sell the underlying power at a value of \$60/MWh for a net cost of \$10/MWh;
- 3) Pay an ACP.

In this scenario, in order for the ACP to serve as the compliance option of last resort, it should be set at a value higher than compliance options 1) and 2), or given these assumptions, at a value greater than \$10/MWh. Note that in this case, the ACP value does not need to be set at a value higher than the full cost of bundled renewable electricity, only at a value higher than the incremental cost of renewable electricity compared to non-qualifying electricity.

Scenario 2: the utility is resource deficient.

Under this scenario, the utility has three options for compliance:

- 1) Purchase unbundled RECs at a cost of \$10/MWh and non-qualifying electricity at a cost of \$60/MWh for a total cost of \$70/MWh.
- 2) Purchase bundled renewable electricity at a cost of \$70/MWh
- 3) Pay an ACP and purchase non-qualifying electricity at a cost of \$60/MWh

In this scenario, in order for the ACP to serve as the compliance option of last resort, it should be set at a value such that the sum of the ACP cost and the cost of non-qualifying electricity exceeds the total cost of compliance options 1) and 2). Again, given these assumptions, that would dictate a value greater than \$10/MWh. If set at a value higher than \$10/MWh, the total cost of compliance option 3) would exceed that of compliance options 1) and 2) and the ACP would serve as the compliance option of last resort. Note that in this case, as in Scenario 1, the ACP value does *not* need to be set at a value higher than the full cost of bundled renewable electricity, it merely needs to be set at a value higher than the incremental cost of renewable electricity compared to non-qualifying electricity.

III. Proposed ACP Methodology: RNP notes that the statute states that the ACP rate shall be “based on the cost of qualifying electricity, contracts ... for future delivery of qualifying electricity, and the number of unbundled renewable energy credits that the company or supplier anticipates using in the compliance year to meet the renewable portfolio standard...” (Section 20(2)). We therefore propose the following methodology, which we believe is consistent with the direction in the statute:

- The utility files an Implementation Plan on January 1st of each calendar year after 2010 containing a plan for at least the next compliance year. The plan contains, as per statute, “the estimated cost of meeting the annual targets, including the cost of ... qualifying electricity ... and the cost of acquiring renewable energy certificates” (Section 11(1)(b)).

- The Commission establishes the ACP rate for each utility for the following compliance year by July 1st of each calendar year after 2010. The Commission utilizes the information provided in the Implementation Plan to determine an two ACP rates for each utility as follows:
 - An unbundled-REC-based ACP rate set at an increment of X% above the expected cost of unbundled RECs as filed in the utility’s Implementation Plan. A utility may elect to use this unbundled-REC-based ACP rate to the extent that the sum of unbundled RECs and ACP payments made at this rate do not exceed 20% of the utility’s compliance obligation for that year.
 - A qualifying-electricity-based ACP rate set at an increment of Y% above the expected incremental cost of qualifying electricity compared to an equivalent amount of reasonably available non-qualifying electricity as filed in the utility’s Implementation Plan.

This methodology is consistent with the statute and provides each utility with an appropriate hedge against significant divergences from expected costs of compliance using unbundled RECs and/or qualifying electricity in each compliance year. If market prices diverge considerably from expected costs between filing of the Implementation Plan and the subsequent compliance year, the utility may elect to pay the ACP instead and “bank” the funds for future approved uses (as per Section 20(5)).

RNP is not ready at this time to propose a specific increment (the X% and Y% above) that would make the ACP function as an appropriate hedge against market volatility while also adequately incentivizing the other compliance options under normal market conditions.

However, in the absence of a transparent, liquid market for RECs, we would propose basing the increment for the unbundled-REC-based ACP rate (and perhaps for consistency, the qualifying-electricity-based rate as well) on the observed volatility of the electricity spot market. Utilities frequently deal with a certain amount of volatility in the electricity market and observing electricity market variability and volatility can offer a guide as to where to set the ACP to offer an appropriate hedge against large divergences from average or expected values (rather than simply pulling the ACP increment “out of thin air”).

To that end, we have examined a data set of daily average market prices at the Mid-Columbia Trading Hub available from IntercontinentalExchange, Inc.¹ We examined daily averages prices for day-ahead spot purchases from January 1st 2005-January 1st 2008, for both on-peak and off-peak power. The first two tables below present the percentile of daily prices that fall below, or are “captured” by various premium levels (expressed as percentages above average prices for the period). The second two tables present the converse, the various premium levels necessary to capture a given percentile of daily prices. We suggest using this data as a starting point for discussion among stakeholders to determine an appropriate increment or premium at which to set the ACP.

¹ See <https://www.theice.com/marketdata/naPower/naPowerHistory.jsp>

Table 1: Mid-Cs On-Peak Price Volatility – Percentile “Captured” by Various Premium Levels

Year	Average Price	10% Premium Percentile*	20% Premium Percentile*	30% Premium Percentile*
2005	\$62.73	\$69.00 67.5	\$75.28 76.7	\$81.55 81.0
2006	\$50.63	\$55.69 63.3	\$60.75 77.5	\$65.81 87.0
2007	\$56.97	\$62.67 77.7	\$68.36 91.3	\$74.06 95.8
2005-2007	\$55.66	\$61.22 69.2	\$66.79 80.3	\$72.36 86.7
Range		63.3-77.7	77.5-91.3	81.0-86.7

*Refers to percentile of price volatility that falls below or is “captured” by price premium.

Table 2: Mid-Cs Off-Peak Price Volatility – Percentile “Captured” by Various Premium Levels

Year	Average Price	10% Premium Percentile*	20% Premium Percentile*	30% Premium Percentile*
2005	\$51.12	\$56.24 67.8	\$61.35 73.6	\$66.46 78.1
2006	\$38.29	\$42.12 46.7	\$45.95 60.9	\$49.78 78.5
2007	\$43.68	\$48.04 63.9	\$52.41 77.2	\$56.78 90.1
2005-2007	\$44.46	\$48.91 67.1	\$53.36 77.4	\$57.80 84.0
Range		54.5-71.3	60.9-77.4	78.1-90.1

*Refers to percentile of price volatility that falls below or is “captured” by price premium.

Table 3: Mid-Cs On-Peak Price Volatility – Premium Level Needed to “Capture” Various Percentiles

Year	Average Price	70 th Percentile Percent Premium	80 th Percentile Percent Premium	90 th Percentile Percent Premium
2005	\$62.73	\$69.79 10.8%	\$80.19 27.3%	\$88.72
2006	\$50.63	\$58.35 15.3%	\$61.35 21.2%	\$68.22
2007	\$56.97	\$60.83 6.8%	\$63.71 11.8%	\$67.65
2005-2007	\$55.66	\$61.40 10.3%	\$66.51 19.5%	\$76.08
Range		6.8%-15.3%	11.8%-27.3%	18.7%-40.1%

Table 4: Mid-Cs Off-Peak Price Volatility – Premium Level Needed to “Capture” Various Percentiles

Year	Average Price	70 th Percentile Percent Premium	80 th Percentile Percent Premium	90 th Percentile Percent Premium
2005	\$51.12	\$58.39 14.2%	\$68.07 33.1%	\$80.24
2006	\$38.29	\$47.63 24.4%	\$51.32 34.0%	\$55.82
2007	\$43.68	\$49.78 14.0%	\$53.28 22.0%	\$56.67
2005-2007	\$44.46	\$50.29 13.1%	\$54.86 23.4%	\$63.03
Range		13.1%-24.4%	22.0%-34.0%	29.8%-57.1%