

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

Docket Nos. UE-121697 and UG-121705  
Puget Sound Energy, Inc. and NW Energy Coalition  
Joint Petition for Approval of a Decoupling Mechanism

PUBLIC COUNSEL DATA REQUEST NO. 066

PUBLIC COUNSEL DATA REQUEST NO. 066:

Re: Testimony of Dr. Michael J. Vilbert, Exhibit No. MJV-1T, p. 28, II. 7-16.

- a) Does Dr. Vilbert agree that the March 2014 Brattle Group publication on the impact of decoupling on electric utility cost of equity capital studies qualifying electric companies from 2005 through 2012? (see p. 11 of that study)
- b) Does Dr. Vilbert agree that the March 2014 Brattle Group publication on the impact of decoupling on electric utility cost of equity capital finds that decoupling causes a reduction in the overall cost of capital of about 40 to 50 basis points? (see p. 18 of that study)
- c) Please explain why it was necessary to re-calculate for this proceeding the impact of decoupling on electric utilities though 2012, when Brattle had already calculated and published those data?
- d) Are the results of the March 2014 study cited anywhere in Dr. Vilbert's testimony in this proceeding?
- e) Please provide a complete copy of the March 2014 Brattle Group study on the impact of decoupling for electric utilities.
- f) Please provide the spreadsheet workpaper(s) that support the analysis contained in the March 2014 Brattle Group study on the impact of decoupling for electric utilities (similar in format to that provided in Dr. Vilbert's workpapers in this proceeding for the gas utility decoupling analysis: "UE-121697 et al PSE Vilbert direct workpapers - Gas\_Brattle Sample Selection (PSE) (11.05.2014).XLSX").
- g) Is it correct that the March 2014 Brattle Group study on the impact of decoupling for electric utilities was filed by Brattle and Dr. Vilbert as testimony on behalf of Hawaiian Electric Utilities in Docket No. 2013-0141, filed on May 20, 2014?

**Response:**

- a) The period of study for the March 2014 publication was First Quarter of 2005 until the Fourth Quarter of 2012.
- b) Please see Puget Sound Energy, Inc.'s ("PSE") Response to Public Counsel Data Request No. 050(b).
- c) In the Hawaiian proceeding referenced in part g) of this data request, Brattle's study on the effect of decoupling on the cost of capital was criticized by the Hawaiian Consumer Advocate for a number of reasons. The update of the study for this proceeding was in part a response to address some of the concerns from that proceeding as well as to implement the test using the multistage version of the discounted cash flow ("DCF") model, add fixed-variable rates as decoupling, and add more data points by bringing the analysis up to date.
- d) No. The updated study results are reported in this proceeding because these results incorporate refinements to the model that Dr. Vilbert believes provide a more accurate estimate of the effect of decoupling on the cost of capital for the sample companies.
- e) Attached as Attachment A to PSE's Response to Public Counsel Data Request No. 066 is a copy of the March 2014 Brattle Group study on the impact of decoupling for electric utilities.
- f) Please see Attachment B to PSE's Response to Public Counsel Data Request No. 070.
- g) The March 2014 study by The Brattle Group was referenced in testimony filed by Dr. Vilbert and other Brattle partners in the Hawaiian proceeding and was attached as an exhibit in that proceeding.

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PUBLIC COUNSEL DATA REQUEST NO. 050

PUBLIC COUNSEL DATA REQUEST NO. 050:

Re: Testimony of Dr. Michael J. Vilbert, Exhibit No. MJV-1T, p. 5, II. 2-5.

- a) Please explain what is meant by the phrase “no statistically significant evidence.”
- b) Does Dr. Vilbert agree that his studies of the electric utility industry and decoupling show that decoupling lowers the overall cost of capital between approximately 25 basis points ((Exhibit Nos. MJV-12, and MJV-13) and 40 basis points (“The Impact of Revenue Decoupling on the Cost of Capital for Electric Utilities: An Empirical Investigation, The Brattle Group, March 20, 2014), but those indications, statistically, do not exceed the 95% confidence level? If not, please explain why not.

Response:

- a) “No statistically significant evidence” means that the null hypothesis, which in this case is that decoupling does not decrease the cost of capital, is not rejected by the evidence at the standard significance levels. The coefficient on the decoupling index that quantifies the impact is so uncertain that, when compared with its standard error using the standard practices of statistics, the impact cannot be distinguished from 0. This is a typical application of statistical inference: the data are examined to determine whether they are consistent with the null hypothesis, which, in this case, is that there is no (0 basis points) negative impact on the cost of capital from the adoption of a decoupling policy. This is a double negative, but it is entirely standard.

When making a statistical inference from empirical evidence, accepting or rejecting a null hypothesis is associated with a level of confidence to be correct (confidence limit) or a probability to make a wrong conclusion (p value). The most popular level of confidence targeted for statistical hypothesis testing is 95% (or p value of 5%). In some cases, 99% confidence limit is used when a higher level of precision is required. While 90% confidence limit is used when a higher chance of error is tolerable, it is quite rare to see a case of setting a confidence

limit lower than 90% when performing statistical tests in the real business world. The empirical data and statistical analysis presented in Dr. Vilbert's testimony and exhibits clearly indicate that the null hypothesis should not be rejected with 95% confidence limit (or p value of 5%), and not even with 90% confidence limit (or p value of 10%). This is the case for all three models that Dr. Vilbert presented in this proceeding.

- b) No. Although the coefficient on the electric decoupling index is -26 bps, the evidence is also consistent with a zero effect or even a slight increase in the cost of capital because the coefficient is not statistically significant. For the shorter period through 2012 Q4, the point estimate is -25 bps, but the evidence of p value of 0.17 is also consistent with a zero effect.