**EXHIBIT NO. \_\_\_(JAD-1T)
DOCKET NO. UE-121697/UG-121705
DOCKET NO. UE-130137/UG-130138
WITNESS:  DR. JEFFREY A. DUBIN**

**BEFORE THE**

**WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

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| WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant,v.PUGET SOUND ENERGY, INC.,  Respondent. | DOCKET NOS. UE-121697and UG-121705 (*consolidated*) |
| WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant,v.PUGET SOUND ENERGY, INC.,  Respondent. | DOCKET NOS. UE-130137and UG-130138 (*consolidated*) |

**PREFILED REBUTTAL TESTIMONY (NONCONFIDENTIAL) OF**

**DR. JEFFREY A. DUBIN
ON BEHALF OF PUGET SOUND ENERGY, INC.**

**DECEMBER 19, 2014**

**Revised**

**February 5, 2015**

significance level from one hundred percent give the probability that the hypothesis is not true. Because, even with a large sample, it is quite possible to obtain results differing from a coefficient’s true value, it is conventionally thought that there must be a very high probability that the coefficient is not zero before it can be conclusively claimed that the variable associated with the coefficient has a definite effect on the dependent variable.

This does not mean that only results significant at the five percent level should be presented or considered. Less significant results may be suggestive, even if not probative, and suggestive evidence is certainly worth something.38[[1]](#footnote-2)

Relaxing the confidence level (or raising the significance level used to test hypotheses) fails to address the fundamental problem with weak evidence. If a confidence interval provides considerable support for two opposing positions, it has little evidentiary value. Dr. Adolph’s proposal to this Commission to raise the significance level reflects a “flawed understanding”.

Q. Do you agree with Professor Fisher?

A. Absolutely.

Q. What standards are adopted by courts that the Commission might review regarding the relationship of preponderance of evidence and statistical significance levels?

A. According to Professor Michelle Mello, courts have generally required that statistical evidence of discrimination meet the 95% criterion for statistical significance in order to be deemed to have satisfied the plaintiffs burden of proof under the preponderance standard:

**Revised**

**February 5, 2015**

1. 38 *Multiple Regression in Legal Proceedings*, 80 Colum. L. Rev. at 717-18 (emphasis added). [↑](#footnote-ref-2)