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February 3, 2003

VIA FACSIMILE AND US MAIL

Ms. Carole J. Washburn, Executive Secretary
Washington Utilities and Transportation Commission
P.O. Box 47250
Olympia, Washington 98504-7250

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RECORDS MANAGEMENT
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STATE OF WASH.
UTIL. AND TRANSP.
COMMISSION

Re: Docket Nos. UE-011570 & UG-011571 Compliance Filing

Dear Ms. Washburn:

The purpose of this filing is to comply with the Commission's Twelfth Supplemental Order: Rejecting Tariff Filing; Approving And Adopting Settlement Stipulation Subject to Modifications, Clarifications, and Conditions; Authorizing And Requiring Compliance Filing in Docket Nos. UE-011570 and UE-011571 (the "Order"). The attached milestone report meets the requirement in the Commission's Order. The requirement for February 3, 2003, is the following:

Data Collection by February 3, 2003: Progress of data collection efforts; an interim assessment of the capability of the method(s) identified in the November 1, 2002, report to achieve the specified objectives; identified adjustments to the research design; and up-to-date observations regarding changes in consumption patterns and consumer acceptance resulting from the negotiated modifications to the program.

The submission of the attached document fulfills that requirement.

Sincerely,

E. E. Englet for

George Pohndorf
Director, Rates & Regulation

Attachment

cc: Simon J. ffitich
Kirstin Dodge
Service List

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Purpose of report:

This report is being submitted in compliance with the Commission's Twelfth Supplemental Order in Docket UE-011570/UG-011571. This Order required, on page 16, the following:

Data Collection by February 3, 2003: Progress of data collection efforts; an interim assessment of the capability of the method(s) identified in the November 1, 2002, report to achieve the specified objectives; identified adjustments to the research design; and up-to-date observations regarding changes in consumption patterns and consumer acceptance resulting from the negotiated modifications to the program.

As the Commission is aware, after residential customers were charged a portion of the costs of the program, pursuant to the negotiated modifications, the company reported that approximately 8 percent of customers on Time-of-Day rates chose to voluntarily exit the program from July 1 through October 31. The Company ended the program on November 18, 2002. This report will update the Commission on the progress of data collection to the point of termination and an overview of the cost-effectiveness analysis being undertaken by parties to the Collaborative.

Status of Data Collection effort

There currently is fifteen months of load shifting and load reduction data through August 2002. This data has been used for load shifting and load reduction analysis conducted by the Brattle Group.

The load *shift* analysis statistically compares actual consumption of each time block under the Time-of-use (TOU) pricing program with a modeled estimate of what consumption would have been if the program participants continued to be charged the current flat rate. The modeled estimate of what consumption would have been in the absence of the program was based on actual TOU usage patterns for a comparison group of residential customers who remained on the Personal Energy Management TOU information-only (IO) program. A second comparison group was also considered. This group was composed of customers with AMR meters who had participated in neither the TOU pricing pilot nor the information-only program, and for whom TOU information was collected. However, this second comparison group was not statistically robust, therefore was unable to be utilized for analysis.

The load shift analysis accounts for differences in housing type, electric/gas end uses (through a rate schedule designation), whether a customer is on budget billing (which may affect response to TOU pricing), and pre-program energy use (as a proxy for demographic and other non-program differences between the TOU and comparison groups).

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Load reduction (the combination of conservation, curtailment, and fuel-switching) effects are measured as the difference between overall electricity consumption in the current month and electricity consumption in the same month of the previous year. The analysis makes adjustments for weather's effect on load and differences in billing period length. Load-reduction effects are calculated for three groups: (1) TOU pricing customers, (2) IO customers, and (3) all other residential customers, i.e., customers not receiving TOU usage information. Completion of this analysis may require additional testing of the statistical significance of the difference in load-reduction impacts between the three statistical samples (TOU, IO, Other).

Implementation of the TOU pilot was hastened due to the energy crisis in 2001. A statistically representative control group was not established prior to implementation. Parties in the Collaborative have many concerns over the research design, which may or may not compromise parties' findings. Parties' concerns include: the lack of statistical analysis that would account for major causes of differences between test and control groups such as age, income and family size; the inability to isolate the effects of the energy crisis and the Conservation Incentive Credit on measurable program response; and whether consumers had unrealistic expectations of the economic savings based on program promotion. For context, parties may include a brief summary of load reduction results on a handful of other Washington utility systems in 2001 and 2002.

Description of Cost-Effectiveness Model Methodology

As noted in the Collaborative's November 1st filing, Charles River Associates (CRA) was retained by PSE to perform a cost-benefit analysis of the TOU pilot. CRA has developed a cost-effectiveness model that uses a codified set of formulas based on standard practice methodology from the California Standard Practice Manual for evaluating demand-side programs and innovative rate programs. This standard practice methodology has been adopted by regulatory commissions nationwide, and is being used in several foreign countries.

The CRA cost-effectiveness model produces net present values of the costs and benefits as measured by the following Standard Practice Tests: Participant Cost Test, Total Resource Cost Test, Ratepayer Impact Measure Test, and the Utility Cost Test. To perform the Standard Practice Tests, the model utilizes the inputs shown in Table 1. It does not measure consumer surplus effects (i.e., the extent to which consumers must make sacrifices in order to achieve the economic savings from load changes.)

CRA is running the model with variations of these inputs to show different case scenarios and sensitivity analyses as requested by parties in the Collaborative. Currently, we are in the process of reviewing the results of these model runs and identifying strengths and weaknesses of the model. Many of the CRA model runs are being done to test sensitivities of the inputs that are more difficult to quantify. These sensitivity analyses will enable the parties of the Collaborative to better understand the effect specific inputs have on the overall program cost-effectiveness.

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TABLE 1 – Inputs to CRA Cost-Effectiveness Model

Input	Description
Inflation Rate	Used to adjust prices or costs from 1 st year input. Parties using 2.75%. This factor can be applied to individual inputs.
Discount Rate	Used to measure present value of the streams of costs and benefits. Parties are using FSE's weighted cost of capital: 8.75% before-tax or 7.3% after-tax.
Line Losses	Accounts for differences between customer meter and generator bus bar resulting from T&D line losses. Inputs have been either on a system average or customer class basis.
Planning Horizon	Number of years over which to perform analysis. Initial case runs are 10 years.
Customer Participation	Number of customers assumed to be enrolled in the program, which can vary by year. Sensitivities are being performed.
Customer Elasticities and Usage	Usage is derived from Brattle Group data collection. Price elasticities (own, cross and complementary) are calibrated by CRA to be consistent with Brattle Group analysis and literature review, calculated by season. Elasticities result in shifts in TOU load and changes in total load. Sensitivities are being performed on inputs.
Incremental Load Reduction Savings	Average amount of incremental load reduction achieved by program participants, exogenous to elasticities. Sensitivities are being performed.
Marginal Generation Costs	Values can be input as a \$ per kWh--identifying year, season, and time-of-day differences. Costs can also be input on a \$ per kW basis, which can also be different by year. Parties agreed to use the output of the Aurora production cost model, as discussed below.
Marginal Transmission and Distribution Capacity Costs	Value of T&D capacity additions avoided. Parties agreed to use long-run value of \$35.32/kW-year, as discussed below. Sensitivities are being performed on the timeframe to achieve this long-run value.
Costs to Achieve Load Reduction	Additional cost to TOU participants to achieve the total load reduction. Sensitivities are being performed.
Environmental Adder	Recognizes benefits (or costs) of reducing (or increasing) environmental externalities. Environmental impacts can be input on a kWh or percentage basis. Input amounts can be run on all load shifts and/or on individual TOU periods (i.e., economy period). Sensitivities are being performed.
Utility Program Costs	Program costs include metering, billing, website, marketing and administration. Cost can be input on a per participant or fixed \$ basis. Sensitivities are being performed on input.
Retail Energy Rates	TOU retail rates. Inputs can show the variance of general rate levels and/or price differentials.

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Over the last several months, many of these inputs have been reviewed in detail by the Collaborative. There has been general agreement reached on the values to be applied for two key inputs—Marginal Generation Costs and Marginal Transmission and Distribution Capacity Avoided Costs. These are crucial inputs to this model and to the calculation of conservation program avoided costs. The values of these inputs were previously controversial.

First, the Collaborative came to the general conclusion that the Marginal Energy Cost data from Aurora contains the market value of the Marginal Generation Avoided Energy and Capacity Costs; therefore, the Collaborative agreed to utilize the Aurora model output. This process models energy prices per kWh--by year, season, and time-of-day--through the planning horizon. As capacity costs are included in the Aurora model output, no additional cost per kW-year is necessary. This reduces PSE's calculation of avoided cost for conservation by removing the additional \$8 per kW-year of production capacity costs. This change is provided for in paragraph 17, page 5, Exhibit F to the Settlement Stipulation in Docket UE-011570.

Second, the Collaborative came to the general conclusion that the Marginal Transmission and Distribution System Avoided Capacity Costs is \$35.32/ kW-year. This was a result of efforts by PSE distribution and transmission system engineers who reviewed ten years of capital budget expenses to identify the cost of projects related to growth in demand for capacity. This approach measures costs pertaining to transmission lines, substations, and feeders where work was done that added to or expanded the existing T&D system, and excludes the costs of new business and maintenance. This changes PSE's calculation of avoided cost for conservation by reducing the \$53.60 per kW-year to \$35.32 per kW-year of transmission and distribution benefits. This change is provided for in paragraph 17, page 5, Exhibit F to the Settlement Stipulation in Docket UE-011570.

Next Steps

As previously mentioned above, the parties to the Collaborative are currently reviewing model runs and sensitivity analyses. We will prepare our initial findings regarding the effects of the TOU program to be submitted by May 1, 2003, pursuant to the Commission order in UE-011570.