

Building Owners and Managers Association (BOMA)

**WUTC v. Puget Sound Power & Light Company
Docket Nos. UE-920433, UE-920499 and UE-921262**

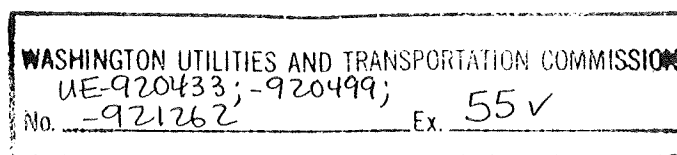
Response to Puget Sound Power & Light Company Request No. 558

Request:

Please provide a copy of the study of classification and allocation methods referenced on page 13 line 14 of Mr. Saleba's testimony.

Response by Mr. Saleba:

Results of the survey completed by EES in 1989 are attached. The first page is a summary of the original responses which was compiled for this case. It includes only those responses from the U.S. and the percentage split reflects the total number of responses for each item rather than the total number of parties responding. Additional summary tables from the survey follow.



1989 ECONOMIC AND ENGINEERING SERVICES, INC.
SURVEY OF CLASSIFICATION AND ALLOCATION METHODOLOGIES

Classification of Distribution Plant & Expenses - Summary
Modified to Reflect US Survey

Number of Respondents

Item	Number of Respondents				
	Traditional Minimum System Analysis	Modified Minimum System Analysis	100% Non- Coincident Peak Demand	Zero Intercept	Other
Substations	4	4	14	1	7
Poles, Towers & Fixtures	9	4	8	6	6
Conductors	11	4	6	6	6
Transformers	12	4	6	5	6
Services	10	4	3	3	16
Meters	7	4	2	1	18

Percentage of Respondents

Item	Percentage of Respondents					Traditional Minimum System Modified Minimum System Zero Intercept		100% Non- Coincident Peak Demand Other	
	Traditional Minimum System Analysis	Modified Minimum System Analysis	100% Non- Coincident Peak Demand	Zero Intercept	Other	Zero Intercept	Other	Demand	Other
Substations	13.3%	13.3%	46.7%	3.3%	23.3%	30.0%	70.0%		
Poles, Towers & Fixtures	27.3%	12.1%	24.2%	18.2%	18.2%	57.6%	42.4%		
Conductors	33.3%	12.1%	18.2%	18.2%	18.2%	63.6%	36.4%		
Transformers	36.4%	12.1%	18.2%	15.2%	18.2%	63.6%	36.4%		
Services	27.8%	11.1%	8.3%	8.3%	44.4%	47.2%	52.8%		
Meters	21.9%	12.5%	6.3%	3.1%	56.3%	37.5%	62.5%		

Other Methods includes:

1. Number of Customers
2. Direct Assignment
3. Replacement Costs
4. Fuel Offsets

Total Usable Us Agencies = 29

SURVEY OF CLASSIFICATION AND
ALLOCATION METHODOLOGIES

A. INTRODUCTION

Economic and Engineering Services, Inc. (EES) conducted a survey of regulatory commissions and agencies relative to electric cost of service classification and allocation methodologies used by those bodies. This survey was conducted in an effort to determine generally accepted classification and allocation methods for electric cost of service studies. The following sections provide a brief description of the survey, the tabulated results (included in the Appendices) and a summary.

B. SURVEY PROCESS

Survey forms along with a cover letter (Appendix A) were sent to each state and provincial (Canadian) regulatory agency, the Federal Energy Regulatory Commission (FERC), and other agencies involved with the regulation and monitoring of electric utilities in North America. The methods or approaches to cost of service cost classification and allocation listed on the survey forms are approaches generally recognized in the utility industry. Additionally, an "Other" category was provide to give the respondent the opportunity to describe a particular, more specific approach, where appropriate.

Sixty-nine survey forms were sent out and ultimately responses were received from 40 (58%) regulatory agencies. Of the 40 respondents, 7 responded that either the survey was not relevant to their agency or that the information requested on the form was not applicable to their agency. Thirty-three of the 40, or 48% of the total, responded in a fashion that was meaningful and consistent with the survey form and those are the agencies to which the remainder of this discussion applies.

C. TABULATION OF RESULTS

The tabulated results of the survey are shown on Exhibits 1 through 4 of Appendix B. These exhibits present the tabulated responses that correspond to the four pages contained in the survey. Each exhibit shows the number of agencies indicating the use of a certain methodology and the percent of the agencies using or accepting that approach relative to the total responding.

Exhibit 1A shows the number and percent of the agencies that use the various methods listed in the survey to classify production plant and expenses. It also indicates how many agencies recognize some form of time of day or seasonal classification approach. Exhibit 1B is a listing of various other methods used or accepted for classifying production plant and expenses, as provided by the responding agencies.

Exhibits 2A and 2B show the same information as Exhibits 1A and 1B, except they relate to the classification of transmission plant and expenses. Two

approaches, "As Production Plant" and "100% CP Demand", were indicated to be accepted or used by 36% and 33% of the respondents, respectively, with another 33% indicating the "Other" category.

The distribution of the accepted and utilized methods for the classification of distribution plant and expenses is shown on Exhibits 3A and 3B. While the accepted approaches are fairly distributed among the methods listed on the survey form, it is interesting to note that 58% of the responding agencies accepted an approach falling in the "Other" category for "Services" and 67% were in the "Other" category for "Meters".

Exhibits 4A and 4B show the relative acceptability of methods utilized in the allocation of plant and expenses. Exhibit 4A also provides the number of responding agencies that accept or utilize some form of time differentiated allocation technique. It is worth noting the wide degree of variance in the accepted approaches and the number of agencies indicating that they will accept some other approach than those listed.

D. SUMMARY

Based on an examination of Exhibits 1 through 4 and from the comments provided by the respondents on the survey forms, it is quite apparent that many approaches to the classification and allocation of utility costs in a cost of service study are acceptable to regulatory agencies. In fact, a majority of the responding agencies commented that they tend to view each rate filing on a case-specific

basis and evaluate approaches according to the particular circumstances involved. Therefore, while the information obtained during this survey is useful and informative, it does not provide any particular basis for implying that one particular approach or methodology for the classification or allocation of specific costs in a cost of service study is more or less appropriate than another approach.

APPENDIX A



ECONOMIC AND ENGINEERING SERVICES, INC.

2000 1st Avenue, Suite 1000
Seattle, Washington 98101
206-461-1000

= e =

May 26, 1989

Dear :

Economic and Engineering Services, Inc. is in the process of developing a survey of commonly used and accepted electric cost of service methodologies. This survey is being sent to all State Regulatory Commissions in the United States and Provincial Regulatory Boards in Canada. EES would appreciate you, or a member of your technical staff taking the time to respond to this survey.

Upon return of this survey, the information will be compiled in a database. In consideration of your participation in this survey, a copy of the tabulated survey results will be sent directly to you.

Thank you for taking the time to complete this survey. Should you have any questions about this survey, or its purpose, please call me directly.

Sincerely yours,

ECONOMIC AND ENGINEERING
SERVICES, INC.

Keith W. Knitter
Project Manager

KWK:teg
Enclosure

SURVEY OF CLASSIFICATION AND ALLOCATION METHODS

Purpose of Survey: - This is a national survey of the various classification and allocation methods used in electric cost of service analyses. In responding, please list the recommended approach by the Commission.

Respondent:

Name of Commission or Utility: _____

Name of Respondent: _____

Telephone Number: _____

Should you have any questions about this survey or its purpose, please contact:

Keith Knitter or Tom Gould

Economic and Engineering Services, Inc.
P.O. Box 4046
Bellevue, Washington 98009
(206) 451-8015

Thank you for your assistance in completing this survey.

Classification of Production Plant and Expenses

<u>Methods</u>	<u>Steam & Nuclear</u>	<u>Hydro</u>		<u>Pur. Power</u>
		<u>w/ Storage</u>	<u>w/o Storage</u>	
Fixed/Variable	_____	_____	_____	_____
Plant Factor	_____	_____	_____	_____
System Load Factor	_____	_____	_____	_____
Peak Credit	_____	_____	_____	_____
Base-Int.-Peak (BIP)	_____	_____	_____	_____
100% - CP Demand	_____	_____	_____	_____
100% - NCP Demand	_____	_____	_____	_____
100% - Energy	_____	_____	_____	_____
As Pur. Pwr. Bill	_____	_____	_____	_____

Other - Please Specify

Is the classification of production plant time differentiated?

By seasons (e.g. winter vs. summer) Yes _____ No _____

By time of day (e.g. on-peak vs. off-peak) Yes _____ No _____

Classification of Transmission Plant and Expenses

Methods

As Production Plant _____
Fixed/Variable _____
Plant Factor _____
System Load Factor _____
Base-Int.-Peak (BIP) _____
Peak Credit _____
100% - CP Demand _____
100% - NCP Demand _____
%-CP Dem. - % Energy _____
%-NCP Dem. - % Energy _____
100% - Energy _____

Other - Please Specify

Classification of Distribution Plant and Expenses

<u>Item</u>	<u>Traditional Min. Sys. Analysis</u>	<u>Modified Min. Sys. Analysis</u>	<u>100% NCP Demand</u>	<u>Zero Intercept</u>	<u>Other</u>
Substations	_____	_____	_____	_____	_____
Poles, Towers & Fixtures	_____	_____	_____	_____	_____
Conductors	_____	_____	_____	_____	_____
Transformers	_____	_____	_____	_____	_____
Services	_____	_____	_____	_____	_____
Meters	_____	_____	_____	_____	_____

Note: Traditional minimum system analysis classifies costs between demand and customer cost components. The modified minimum system analysis classifies costs between demand, energy and customer cost components.

Other Classification Methods - Please Specify

Allocation of Plant and Expenses

<u>Item</u>	<u>Average & Excess</u>	<u>1 CP Peak Respons.</u>	<u>12 CP's Sum of Peaks</u>	<u>NCP Demand</u>	<u>Other</u>
Power Supply - Steam/Nuclear	_____	_____	_____	_____	_____
Hydro	_____	_____	_____	_____	_____
Pur. Power	_____	_____	_____	_____	_____
Transmission -	_____	_____	_____	_____	_____
Distribution - Substations	_____	_____	_____	_____	_____
P, T, & F	_____	_____	_____	_____	_____
Conductors	_____	_____	_____	_____	_____
Transformers	_____	_____	_____	_____	_____
Services	_____	_____	_____	_____	_____
Meters	_____	_____	_____	_____	_____

Other Methods - Please Specify

Is the allocation of production plant time differentiated? Yes _____ No _____

By seasons (e.g. winter vs. summer) Yes _____ No _____

If yes, are the seasons weighted? Yes _____ No _____

By time of day (e.g. on-peak vs. off-peak) Yes _____ No _____

APPENDIX B

1989 SURVEY OF CLASSIFICATION AND ALLOCATION METHODOLOGIES

Exhibit 1A

Classification of Production Plant and Expenses – Summary

Methods	Hydro				Hydro			
	Steam & Nuclear	With Storage	Without Storage	Pur. Power	Steam & Nuclear	With Storage	Without Storage	Pur. Power
Fixed/Variable	10	6	7	6	30%	18%	21%	18%
Plant Factor	1	0	1	0	3%	0%	3%	0%
System Load Factor	5	2	3	2	15%	6%	9%	6%
Peak Credit	2	2	2	2	6%	6%	6%	6%
Base-Int.-Peak (BIP)	5	2	2	1	15%	6%	6%	3%
100% – CP Demand	6	7	7	3	18%	21%	21%	9%
100% – NCP Demand	3	2	2	2	9%	6%	6%	6%
100% – Energy	3	1	1	3	9%	3%	3%	9%
As Pur. Power Bill	0	0	0	11	0%	0%	0%	33%
Other	18	15	15	16	55%	45%	45%	48%
Seasonal	12				36%			
TOD	11				33%			

NOTES: See Exhibit 1B for List of "Other" Methods.

Percentages Represent the Ratio of Commissions Allowing a Method to the Total Number of Agencies Responding to the Survey. An agency may allow more than one method, therefore, percentages do not necessarily sum to 100%.

EXHIBIT 1B

OTHER METHODS FOR CLASSIFYING
PRODUCTION PLANT AND EXPENSES

1. The average load portion of the system peak load (average for 12 monthly peaks) is allocated on basis of energy. The balance is allocated on basis of NCP demand. All production plant is allocated uniformly.
2. 12 CP and 1/13th weighted average demand
3. Equivalent peaker
4. 75% CP and 25% energy
5. Capacity utilization
6. Staff system planning
7. Hourly costs
8. 50% demand and 50% energy

1989 SURVEY OF CLASSIFICATION AND ALLOCATION METHODOLOGIES

Exhibit 2A

Classification of Transmission Plant & Expenses - Summary

Methods	#	%
As Production Plant	12	36%
Fixed/Variable	2	6%
Plant Factor	2	6%
System Load Factor	3	9%
Base-Int.-Peak (BIP)	0	0%
Peak Credit	1	3%
100% - CP Demand	11	33%
100% - NCP Demand	2	6%
%-CP Dem. - % Energy	4	12%
%-NCP Dem. - % Energy	1	3%
100% - Energy	0	0%
Other	11	33%

NOTES: See Exhibit 2B for List of "Other" Methods

Percentages Represent the Ratio of Commissions Allowing a Method to the Total Number of Agencies Responding to the Survey. An agency may allow more than one method, therefore, percentages do not necessarily sum to 100%.

EXHIBIT 2B

**OTHER METHODS FOR CLASSIFYING
TRANSMISSION PLANT AND EXPENSES**

1. Capacity Utilization
2. Fuel offset

1989 SURVEY OF CLASSIFICATION AND ALLOCATION METHODOLOGIES

Exhibit 3A

Classification of Distribution Plant & Expenses - Summary

Item	Trad.	Modified	100%	Zero	Other	Trad.	Modified	100%	Zero	Other
	Mln. Sys. Analysis	Mln. Sys. Analysis	NCP Demand	Inter.		Mln. Sys. Analysis	Mln. Sys. Analysis	NCP Demand	Inter.	
Substations	6	4	16	2	9	18%	12%	48%	6%	27%
Poles, Towers & Fixtures	12	4	9	7	8	36%	12%	27%	21%	24%
Conductors	14	4	7	7	8	42%	12%	21%	21%	24%
Transformers	14	4	8	6	8	42%	12%	24%	18%	24%
Services	12	4	4	4	19	36%	12%	12%	12%	58%
Meters	8	4	3	2	22	24%	12%	9%	6%	67%

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NOTES: See Exhibit 3B for List of "Other" Methods

Percentages Represent the Ratio of Commissions Allowing a Method to the Total Number of Agencies Responding to the Survey. An agency may allow more than one method, therefore, percentages do not necessarily sum to 100%.

EXHIBIT 3B

**OTHER METHODS FOR CLASSIFYING
DISTRIBUTION PLANT AND EXPENSES**

1. **Number of customers**
2. **Direct assignments**
3. **Replacement costs**
4. **Fuel offset**

1989 SURVEY OF CLASSIFICATION AND ALLOCATION METHODOLOGIES

Exhibit 4A

Allocation of Plant and Expenses – Summary

Item	1 CP					12 CP's				
	Average & Excess	Peak Respons.	Sum of Peaks	NCP Demand	Other	Average & Excess	Peak Respons.	Sum of Peaks	NCP Demand	Other
Power Supply –										
Steam/Nuclear	12	7	12	4	17	36%	21%	36%	12%	52%
Hydro	10	7	9	3	14	30%	21%	27%	9%	42%
Pur. Power	7	5	8	3	22	21%	15%	24%	9%	67%
Transmission –	11	10	12	6	16	33%	30%	36%	18%	48%
Distribution –										
Substations	5	3	6	20	13	15%	9%	18%	61%	39%
P,T & F	5	3	4	18	20	15%	9%	12%	55%	61%
Conductors	5	3	5	17	21	15%	9%	15%	52%	64%
Transformers	5	3	4	16	20	15%	9%	12%	48%	61%
Services	5	3	3	9	28	15%	9%	9%	27%	85%
Meters	5	3	3	5	29	15%	9%	9%	15%	88%
Time Differentiated	14					42%				
Seasonal	11					33%				
Weighted	8					24%				
TOD	10					30%				

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NOTES: See Exhibit 4B for List of "Other" Methods

Percentages Represent the Ratio of Commissions Allowing a Method to the Total Number of Agencies Responding to the Survey. An agency may allow more than one method, therefore, percentages do not necessarily sum to 100%.

EXHIBIT 4B

OTHER METHODS FOR ALLOCATING
PLANT AND EXPENSES

1. KWH usage
2. Customers
3. NCP demand and customers
4. 12 CP and 1/13th average demand
5. Equivalent peaker
6. 4 summer months CP and average of 12 monthly CP
7. Average of 12 CP's
8. Capacity utilization
9. 50% NCP and 50% customers
10. 2 CP