

1 recommends that Cascade should include data on variables, such as income, price, family
2 size and attributes of housing and their impact on the consumption of natural gas, in its
3 weather normalization methodology.

4
5 **V. COST OF SERVICE STUDY**

6
7 **Q. Please explain the meaning of a cost of service study.**

8 A. A cost of service study is a detailed and comprehensive economic, engineering and
9 accounting study that allocates the total cost of providing service to various classes
10 of customers. It measures the utility's costs incurred to serve each class of customer,
11 including a reasonable return on investment for a specified period of time.

12
13 **Q. Please describe how a cost of service study is implemented and its purpose in a
14 general rate case filing by a utility company.**

15 A. The implementation of a fully allocated or embedded cost of service study involves a
16 three-step approach: functionalization, classification and allocation.

17 In the first step, total costs (rate base, or investment, and expense items) of a utility,
18 as maintained in accordance with the FERC's Uniform Systems of Accounts, are
19 assigned to four cost functions with which they are closely associated: production,
20 storage, transmission, and distribution.

21 In the second step of the cost of service study, classification, each functional
22 cost item is further divided by cost-causation. There are four categories or classes

1 that are related to measurable cost-defining characteristics of providing gas service:
2 demand (capacity), commodity (energy), customer, and revenue.

3 Once the functionalized costs are classified into cost-causing categories, the
4 allocation step develops factors that are used to allocate costs to classes of customers
5 or rate schedules through the allocation process. The cost of service study enables the
6 analyst to determine whether or not the revenue provided by a class of customers
7 recovers the cost to serve those customers.

8

9 **Q. Do you agree with the cost service model employed by the company in this**
10 **proceeding?**

11 **A.** No. Staff does not agree with the classification of mains and main-related items,
12 customer contributions in aid of construction and customer advances, and
13 administrative and general costs.

14

15 **Q. Please discuss the changes staff proposes regarding Cascade's cost of service**
16 **study.**

17 **A.** In previous fully litigated rate cases such as Docket Nos. UG-940034 and UG-
18 940814, the Commission approved a natural gas cost of service study that has
19 become known as a Commission basis cost of service study (the "Commission
20 Basis" methodology). PSE, Avista and Northwest Natural Gas Company generally
21 follow the gas cost of service study approved in the above dockets. Staff believes
22 that Cascade's cost of service model must change so that it reflects the Commission

1 Basis methodology. Cascade's model did not allocate all distribution mains and
2 administrative and general expenses using the method in the Commission Basis
3 study. Furthermore, Cascade has not presented a study that supports the assignment
4 of customer contributions for construction and customer advances to all customers.
5 In Docket Nos. UG-940034 and UG-940814, the Commission has determined that
6 these costs should be allocated to residential customers.

7 Staff proposes that: 1) the peak-and-average method be used to allocate
8 distribution main costs, 2) administrative and general expenses should be allocated
9 on the basis of 50 percent O&M and 50 percent throughput, and (3) customer
10 contributions for construction and customer advances be assigned to residential
11 customers.

12

1 **Q. What are the results of your cost of service study?**

2 A. The cost of service study results using the commission basis approach are shown
3 below (excluding gas cost) compared to Cascade's result (see Table 1).

4
5

Table 1. Results of Cost of Service Study

Rate Schedules	Revenue to Cost Ratio (excl. Gas Cost)	
	Cascade	Staff
503	0.866	1.00
502	1.216	1.36
541	0.855	0.77
504	0.959	0.86
512	3.225	2.63
511	1.472	1.22
505	0.922	0.78
570	1.135	1.23
577	1.28	1.28
663	2.246	2.55
664	0.93	1.16
901	1.512	0.75

6

7 **Q. Does this conclude your direct testimony?**

8 A. Yes.

9