



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Carlson, Mital, Helgeson, Schlossberg and Brown
FROM: Sue Fahey, Assistant General Manager/CFO; Deborah Hart, Finance Manager; and Adam Rue, Fiscal Services Supervisor
DATE: September 23, 2019
SUBJECT: Cost of Service Analysis for Upriver Service Territory
OBJECTIVE: Information Only

Issue

EWEB services both the City of Eugene and adjacent areas, as well as areas along the McKenzie River between the cities of Walterville and Vida (Upriver). These two service territories are not physically contiguous, and Commissioners requested that staff prepare a separate cost of service analysis for the Upriver Service Territory.

Background

EWEB prices electric service differently based on both customer demand based on kilowatt thresholds and type (i.e. residential, commercial, and street lighting). The allocation of costs among customer rate classes and recovery within classes by different billing components (e.g., basic, energy, and demand charges) is informed by the Cost of Service Analysis (COSA). The COSA allocates costs among customer classes and provides details to support rate design within the classes. The model also provides pricing for contract customers to ensure equitable pricing.

In addition to the COSA model, staff also uses marginal cost studies to facilitate cost allocation and rate design. Marginal cost studies are effective for determining efficient price signals for incremental usage, matching customer load and conservation savings with EWEB realized savings, and designing distributed generation prices.

Methodology Overview

The COSA incorporates the annual budget and customer class characteristics to allocate the total revenue requirement among the customer classes. The primary factors used to allocate costs are energy consumption, demand factors, and customer and meter factors. For example, energy commodity costs are allocated on a projected energy consumption basis, while customer specific costs are allocated on a customer basis. The COSA primary cost categories are production costs, transmission, distribution, and customer costs. Historically, the costs have been viewed as one system and not allocated to classes on a locational basis.

Discussion

Upriver Cost of Service Analysis

The Upriver COSA incorporates elements of the marginal cost study, which can establish costs on a locational basis and incorporate them back into the traditional COSA model to further allocate costs within the customer classes to the in-town and upriver territories.

The table below illustrates the cost allocation for the tradition COSA which currently applies to all EWEB customers and the further allocation to EWEB Upriver customers. The cost of production is assumed to be comparable for all customers regardless of location. The transmission and distribution costs differ for in-town vs. upriver based on miles of transmission and distribution lines, transformers, and other equipment for the respective customer segments, which need to be operated and maintained, as well as due to future capital cost projections. Customer specific costs differ due to length of meter reading routes.

Table 1: Allocation Factors

Cost Type	In Town	Upriver
Production	Kilowatt hours based	Same cost
Transmission	Kilowatt demand based	Infrastructure to serve
Distribution	Kilowatt demand based	Infrastructure to serve
Customer	Customer based	Meter reading costs

Results

The results of the Upriver COSA indicate some costs are comparable and many of the costs are higher for customers based on their location. The production costs (i.e. generation and purchased power) and transmission to EWEB system (largely purchased from BPA transmission system) are comparable for both in-town and upriver costs. The upriver territory requires higher capital investment and ongoing maintenance per customer than in town, as well as higher meter reading expense. The existing and projected investments per residential customer for distribution infrastructure in terms of distribution miles, transformers, and poles are approximately two to three times higher than in town customers. The meter reading costs are roughly two times higher. The impact of these higher costs results in an increased delivery charge and basic charge.

Bill and Revenue Comparison

The upriver customers represent approximately 3% of total customer base with slightly higher than average usage. The higher costs for upriver service is generally related to costs recovered in the delivery charge. The delivery charge is billed on a per kilowatt hour basis. Therefore, different consumption levels are impacted differently. The bill impact of the cost differential associated with the Upriver analysis is approximately a 10-15% higher cost for upriver customers which would correspond with a rate reduction of approximately 0.5% for in town customers.

Amongst EWEB comparators, only two utilities price based on locations.

- The City of Seattle has different customer rates on a locational basis but it is a function of franchise agreement pass through rather than based on utility cost of service.
- Emerald People's Utility District has two different rates 1) for its standard service territory and 2) for customer previously served by Springfield Utility Board and transferred to Emerald

PUD. If an existing customer moved from the address, the new customer is billed at the standard Emerald PUD price schedule.

Feasibility of Implementation

It is feasible to create an upriver customer class and price services differently. By working with consultants to ensure rate models follow industry standards, significant progress has been made to update pricing tools and more effectively price electric services. This includes updating the existing COSA model and performing a marginal cost study. These tools supported the analysis for the Upriver COSA. The methodology to allocate upriver costs; however, is not completely aligned with current business practices. Staff would need to modify and streamline budgeting, plant in service and cost tracking, as well as adjust the COSA model, if Commissioners chose to create an upriver customer class. These changes would need to be implemented prior to developing a location based customer class.

If the Board chooses to pursue implementing a separate residential price for upriver customers, management would engage a consultant to review the existing COSA model and business practices, and to assist in developing an equitable cost allocation.

Recommendation/ Requested Board Action

This material is provided for information only.