



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Simpson, Brown, Helgeson, Manning and Mital

FROM: Roger Gray, General Manager; Debra Smith, Assistant General Manager; Erin Erben, Power Resources & Strategic Planning Manager; Cathy Bloom, Financial Services; Mark Freeman, Customer Service & Energy Management Manager; Dave Churchman, Power Operations Manager; Brad Taylor, Water Operations Manager; Mel Damewood, Engineering Manager

DATE: February 25, 2013

SUBJECT: Backgrounder/White Paper on EWEB Rate-Making Principles

Subject:

Management input and recommendations for Board policy level discussion and guidance on EWEB ratemaking principles for various classes of service including those that are different than standard customer tariffs.

Issue:

EWEB serves customers with water and electricity on both a retail and wholesale basis. The overwhelming majority of these sales (measured in dollars and customers) are served under standard retail tariffs (e.g. residential and various sizes of general service). Some retail and most wholesale services are provided under negotiated contracts. In October 2012, former Commissioner Ernst and Commissioner Helgeson requested information and background on what principles EWEB might use to depart from “standard tariffs”. This question arose in the electric service context to serve either a large new single load or to serve a new load at the Hynix site. More recently, including at the February 5, 2013 Strategic Planning work session, the Board discussed various “rate structure” concepts in the context of mitigating overall rate increases on limited income customers.

Management suggests that this is an important policy issue for the Board to consider and herein provides policy level guidance on general ratemaking principles to guide ratemaking decisions in the future in addition to addressing the specific question of new large loads. This question is particularly acute given the facts that EWEB currently has excess generating capacity and has adopted the position that it will meet future load growth through demand side management (specifically energy efficiency and demand response). Since ratemaking is a cornerstone item in the current Strategic Plan, it is important that the Board and Management be conversant in our options and their implications.

There are many inter-related and sometimes conflicting considerations that arise when thinking through utility rate design. The following list gives a feel for the breadth and diversity of considerations:

- Legal and regulatory obligations
- Cost of service principles
- Parity and fairness among retail rate classes
- Parity and fairness between wholesale and retail rate classes
- Obligation to serve principles
- Competitive markets and pricing issues
- Current and future relationship between embedded cost and marginal cost of supply
- Parity and fairness between existing and new customers of the same rate class
- General supply and system expansion issues (e.g. application of development charges and line extension provisions)
- Inability to use BPA designated resources to serve new customers classified as new large single loads
- Credit and risk
- Uniqueness of customer needs (i.e. the need for special tariffs)
- Cost and complexity to increase tariff and contract diversity
- Fundamental role of the publicly-owned utility (e.g. should EWEB be in the “economic development” arena)
- Revenue stability (i.e. does the rate design increase or reduce revenue volatility)
- Objectives associated with promoting conservation and conservation principles
- Objectives associated with defining and achieving “affordability”, particularly in the context of the impacts of rate increases on limited income customers
- Legal and regulatory obligations including the Public Utility Regulatory Policy Act

This memorandum serves to lay out Management’s perspective and recommendations on general ratemaking principles to both meet the background information requested by the Board specific to new loads, but also to provide a broad set of Management recommendations on ratemaking strategy for all applications. It is intended that the resulting policy discussion and any decisions would incorporate any previous related policy and take precedent for future ratemaking decisions.

Executive Summary:

Whereas:

- EWEB is currently prioritizing rate design and management of overall rate level as key facets of its strategic plan, and
- EWEB presently holds a generation portfolio in excess of its anticipated, existing retail customer demand for the foreseeable future, and
- There are large, vacant facilities in EWEB's service territory for which prospective customers seek rate estimates,

Management has provided an overview of general ratemaking principles, trade-offs, and considerations for use in future staff proposals and Board decisions regarding the pricing of its products and services.

Management recommendations fall into the following broad categories:

1. Continue to refine analytical tools and efforts to increase fixed cost recovery and identify the marginal cost of service (both utilities).
2. Use proposed Ratemaking Principles as guidelines to determine whether EWEB rates are just and reasonable without undue discrimination, including:
 - Sufficiency
 - Affordability
 - Efficiency
 - Cost-Basis
 - Equity
 - Gradualism
3. Adopt negotiated contract pricing principles to cost share where economic for both the customer and ratepayer as a foundation for use in negotiated contracts for new large loads or expansions of existing loads, including cost attribution of associated RPS compliance.
4. Use pilots to explore opportunities for future rate tariff/design changes and customer offerings.
5. Specific recommendations for near-term and long-term objectives for each of the general areas of rates (wholesale and retail, water and electric, residential and general service, new customers).

Background:

In a Board backgrounder dated March 9, 2011, Management provided a recommendation for pricing electricity for new large single loads (NLSL). This backgrounder is provided as Attachment 1. In response to the Board's questions raised in October 2012 on the basis for such pricing, Management believes that it is fitting and appropriate for the Board to revisit and affirm (or change) the approach for pricing special contract for electricity, but to also (i) provide additional policy and principle guidance for all classes (retail, wholesale, electricity, water, large and small), and (ii) to specifically discuss and address principles for new large loads. In the discussion section of this memorandum, Management addresses each major category of customers and recommends either confirmation of existing practices, suggests new policies and principles, or proposes additional follow-up work.

EWEB ratemaking is guided by a variety of principles, laws and regulations, past practice, and sound economic theory. Changes in market conditions for our commodities (in addition to the inputs that we use to provide them), EWEB's own supply resource situation (i.e. are we long or short?), EWEB's financial situation, and new technology such as AMI all raise questions about EWEB's future ratemaking practices. Section 7.6 of EWEB's adopted Strategic Plan also provides general guidance for ratemaking in a strategic context.

Discussion:

This memorandum presents information for both utilities (electricity and water) that EWEB currently provides services for either under tariff or contract rates, and provides general ratemaking principles and policy recommendations characterizing EWEB's approach to pricing services for each customer category.

The categories covered in this section include:

- General Ratemaking Principles
- Water Rate Overview
- Electric Rate Overview
- Wholesale Rates
- Standard Tariffs Residential and General Service Customer Classes
- Negotiated Retail Rate Contracts, New Large Loads, and Economic Development
- New Customer Connection Charges

General Ratemaking Principles

Utility ratemaking "(b)y and large... is that of adapting utility rates to a larger economic environment, including a universe of nonutility prices and wages on which these rates have only a limited repercussion" (Principles of Public Utility Ratemaking", Bonbright, Danielson Kamerschen, p. 71). It "is a general doctrine of American law, almost universal in its application to public utility companies operating under special franchises or certificates of convenience and necessity, that these companies are under a duty to offer adequate service at reasonable (or just and reasonable) rates. In addition, the governing state or federal statutes require that, in its rates of charge as well as its supply of services, a company must avoid unjust or undue discriminations or preferences among customers"

(ibid, p. 76). These statements represent the basic tenants of utility ratemaking.

Management proposes the following basic principles as guidelines to determine whether EWEB rates are just and reasonable without undue discrimination:

- Sufficiency
- Affordability
- Efficiency
- Cost-Basis
- Equity
- Gradualism

Each is discussed in turn below.

Sufficiency represents the principle that rates must be adequate to cover the cost of doing business. To not do so, not only jeopardizes the solvency of EWEB but creates an unfair burden on its utility ratepayers. Sufficiency can be measured both by assessing average cost and marginal cost. It is also a factor in the discussion of fixed cost recovery.

Affordability represents the principle that our basic products and services need to be affordable for the customers that we serve. All investment decisions and the subsequent impacts on overall utility revenue requirement need to be assessed through this lens. Up until the late 1970s, electricity was a declining real cost commodity, but that trend has changed and increasing costs can now take an increasing share of the customers' disposable income. In more recent years, water rates have also begun increasing across the nation, and at EWEB, due to a combination of replacement of aging infrastructure and reduced demand.

Efficiency represents the principle that, all else equal, rates should be set, both in aggregate and across and within rate classes, to result in the most net gain to customers overall. In other words, to minimize inefficiencies correctable through price signals. Efficient price signals help encourage rational usage and conservation. Employing appropriate cost recovery design principles for fixed cost components of service are another efficient pricing mechanism that promotes Efficiency and also helps to ensure Sufficiency.

Cost-Basis reflects the principle that rates generally should be cost based rather than value based, given the lack of competition for service provision. It also suggests that cost causation should be applied within and across rate classes. This is sometimes referred to as the "user pays" principle. It is often cited as a rationale for limiting non-policy based class subsidies. Cost based rates generally enhance product affordability. In some cases, such as the wholesale power market, sufficient competition has emerged along with more mature market structures and effective regulation such that market-based principles for pricing have largely replaced traditional cost-based principles. This approach is only effective when there is adequate competition to allow for an equilibrium price that is at or near cost-basis.

Equity represents the criteria used to manage undue discrimination. Since equity itself is a normative concept, it is probably the principle most subject to social values based interpretation. Some may measure Equity as Cost-Basis, others through ability to pay, or other social objectives. EWEB strives to reflect a balance of both in its application of the Equity principle. Equity concerns beyond Cost-Basis often spark conversations of subsidy.

Subsidization at some level is virtually impossible to remediate completely since customers with different load profiles are inevitably grouped together with similar, but not same, customers for which a given rate or tariff applies. In this way, the average cost of service varies for customers within the same rate class. Ratemaking principles aim to identify reasonable distinctions where possible and significant, in order to strike a balance between administrative overhead (Efficiency), Cost-basis, and Equity.

Gradualism reflects the notion that whenever possible, rate level and rate design changes should be implemented without creating dramatic shifts in cost and benefits to individuals or groups. This is often referred to as rate stability. It is a principle that EWEB recommends primarily as a tool to minimize impacts on customers as rate adequacy and rate design objectives are pursued. The result is that changes to rate design, or overall rate level, can be done incrementally over time to avoid rate shock to individual customers or groups of customers.

EWEB provides both water and electricity to customers. Each is measured and billed on a different unitary basis. However, the basic ratemaking principles described above apply to both. The following section highlights some key considerations that the Board will need to address in the upcoming year(s) for both utilities. It is important to contrast these retail concepts where cost-of-service principles generally apply to the wholesale power world where market-based principles often apply.

Water Rates Overview

Sufficiency and cost-basis are the two principles that were primarily leveraged in the last water rate proposal. Fixed cost recovery, overall rate level, and cost allocation based on elevation are a few of the items discussed that fit into these categories. It was clear from customers that Gradualism is a principle we need to better heed going forward, to help mitigate rate shock when we know we are in a rising average cost environment.

EWEB presently has adequate water to serve its foreseeable load growth. In fact sales have dropped, which is what exacerbated water utility financials due to the fact that cost recovery for this high fixed-cost infrastructure investment was largely being recovered in variable rate components (i.e. per kgal charges). Progress was made to help remediate this concern in the last rate action by moving some of the fixed costs into fixed rate components. Management recommends continuing to make progress toward this end in subsequent rate actions.

EWEB presently does not differentiate between large, medium or small general service retail water customers. In light of the current ample water supply situation, Management

does not recommend any differentiation between large and medium/small general service water tariffs at this time. However, with work and asset management systems such as WAM, staff will be able to better refine its cost causation tools (i.e. associated infrastructure costs to those that use them) and could propose class differentiation at some point in the future.

If an extremely large, new water customer (e.g. greater than 5% of total EWEB demand) were to come into the service territory, Management may recommend development of a negotiated contract for that customer to deal with a variety of associated issues such as supply, sales risk, credit risk, etc. However at this time negotiated retail water contracts do not exist.

One area Management is pursuing is in response to the Board's prioritization of an emergency water supply. In light of EWEB's present lack of a back-up water supply should its primary source be compromised, and its emerging (but extremely limited) emergency water supply program, it may make sense to develop special emergency rates and curtailment provisions to manage either supply disruptions or severe drought situations. This is an item staff will bring back to the Board for consideration at a future time.

Electric Rates Overview

While the water utility has a higher make-up of fixed costs than the electric utility, the provision of electricity is still a higher fixed cost business than most. To that end, for the reasons described above, it would be sound ratemaking policy to continue to make incremental progress toward rate design modifications that leave EWEB less exposed to sales volume risk and more closely align customer price signals with the underlying costs. It is important to use Gradualism, Efficiency, and Stability whenever such rate design changes are pursued. These can be managed within stated bounds by assessing possible customer rate impacts for various customer profiles during the design period. These should be shared with policy makers to help enable them to make judicious and balanced determinations on rates.

As with water, EWEB has ample electric generation resources to meet its foreseeable future retail customer demand. Since there is a competitive wholesale market for electricity and since generation must typically be purchased in large increments, it is a standard practice for utilities to sell their excess into wholesale markets until their retail load grows into the supply. In the case of EWEB, unless a new large load comes into the territory, we are unlikely to need all the generating resources that we currently own or hold rights to use.

Marginal cost and embedded cost pricing

EWEB has historically employed a cost-of-service based pricing model, which assigns embedded (historic) costs to customer classes (and EWEB's largest customers). However, it also makes sense from an economic perspective to consider the incremental costs of adding the next customer, or the marginal cost of service. Since production is typically the largest rate component of a retail customer's bill, marginal cost to serve is most impacted by the need to acquire or retire generation.

In a rising cost environment, such as the one the electric utility sector has faced for the past several decades, marginal (or incremental) price signals employed in rate design can serve

to improve the Efficiency of utility rates to consumers by providing a more accurate cost of energy on the margin. This is most often done through the use of Time-of-Use rates and Demand Charges. Time-of-use rates convey the reality of hourly variance in commodity price to retail customers. Demand charges (\$ per kW) convey the reality that the cost to serve (Cost-Basis) is largely driven by a customer's maximum usage over a period of time rather than simply their aggregate consumption over the month or year (\$ per kWh).

Some of the best price signals for customers incorporate both concepts in the form of "time-based demand charges". Because the utility can offer very low off-peak demand charges due to the excess capacity on the system (or marginal cost to serve) at those times, this can be a great cost reduction tool for large customers that can shift their usage off the high-cost peak periods, which also helps utilities manage their need to expand system infrastructure. Customers that use most of their energy off-peak actually improve overall efficiency (and lower average cost) by increasing load diversity on the system.

A prime example of this is on the water side is the recent change to make water rates less dependent upon sales volume to recover fixed costs by increasing the basic charge. Because water is a largely fixed cost business EWEB's past over-dependence on sales volume to recover fixed costs led to a situation where rates were being raised to cover declining sales volume which led to the need to raise rates further. By overstating the volumetric charge in rates, we send signal to customers that the cost to provide service depends on how much they use. When the majority of costs are infrastructure based for transport, rather than attributable to the actual commodity, this is neither an efficient nor cost-based price signal, and it creates a Sufficiency dilemma when customers make consumption choices based on those prices. Deployment of AMI meters and WAM will further allow EWEB to continue to innovate in this area.

For both cost-of-service (COS) and marginal cost ratemaking, better data means better price signals. Tracking historical data by asset type, by time period and by customer class provides the basis for determining cost-based rate attribution. As both water and electricity become more expensive it is important to send better price signals to encourage efficient use of both products and to better refine COS. This is a tradeoff between complexity and simplicity.

It is simplest, administratively, for a utility to lump all residential customers in to a single retail rate class; however COS principles might warrant reasonable differentiation between customers within a single class. For example, EWEB differentiates the base water charge based on meter size and a fairly recent example of greater differentiation was to assign higher fixed charges to different elevations in recognition that more infrastructure is dedicated to higher elevation customers (e.g. pumping stations dedicated to serving a small number of customers at the higher elevations) than base elevation customers. Separating large and small general service customers is another example of this. Another approach includes carving out TOU rate customers from flat rate customers, and yet another (not employed by EWEB) is the use of load factor rates, which serve to reward customers with more constant loads for their more efficient use of the system through an effectively lower average rate. These approaches are all supported by the Equity, Efficiency and Cost-Basis principles.

EWEB has differentiated customers by volume of consumption for a long time. This helps send the price signal that bigger customers require more dedicated infrastructure to serve. As EWEB is able to develop more detailed information that allows for the use of such constructs to encourage efficient consumption and conservation, it will likely make sense to continue to refine and differentiate among what are today single customer classes. Management recommends against the concept of extreme “customization” and creation of individual classes of small customers as the administrative cost to manage this increased variety likely would exceed the potential value to customers. An often unstated principle of ratemaking is also Simplicity. All else equal, the less complex approach is generally more understandable and has few unforeseen consequences upon implementation.

Wholesale Rates

Electric Generation

EWEB can buy and sell power in to the wholesale electricity marketplace. EWEB sells excess generation that it owns or has the rights to use when supply exceeds its retail customer demand. This is done so the net revenue earned can be used to help offset EWEB’s retail customer rates. EWEB sells either when there is a net financial gain to generate and sell the excess, or to balance load and resources during times that non-dispatchable generation exceeds customer load and cannot be reduced (regardless of price). There is existing Board policy, as well as Risk Management Committee (RMC) Guidelines and Procedures, that govern this work. In addition, all wholesale activity within the 0-5 year timeframe is monitored by Fiscal Services and summary information is reported to the RMC. Longer term portfolio decisions are directed and informed by the IERP. These deals are now reviewed by the RMC as well.

Notably, wholesale market electricity prices are market-based (or value-based) rather than cost-based. This generally means that the most expensive generation dispatched in any given hour sets the market price. EWEB’s Board and Management does not set nor influence these prices. Instead we make decisions to buy and sell in this market based on the potential benefit to EWEB customers. While EWEB’s financial situation is currently exacerbated by the fact that wholesale market prices have been low for some time, historically wholesale sales revenue provided tens of millions of dollars in extra revenue to EWEB. This was especially beneficial when resource costs were low and wholesale market prices high.

Now that resource costs are higher and wholesale market prices are lower, this activity is providing less revenue and net value. One bright spot is that active forward “hedge” trading has resulted in higher prices for power sold than spot market sales would have yielded. (In 2012, the revenue from forward hedges was \$12 million dollars higher than if EWEB had sold this energy in the daily wholesale market.) While the purpose of hedging price risk is not to yield excess revenues, but rather to smooth customer rate volatility over time, the gains have been a welcome cost-offset in a declining wholesale market.

Selling excess generation into the market when marginal operating costs are less than the prevailing market price still provides a net benefit to customers today, even though the overall gain is more modest. As a result, Management does not recommend changing EWEB’s participation or practices in this marketplace. Whether or not to sell excess

generation into the wholesale market when it is cost effective to do so is a separate decision than determining how much length to carry overall in EWEB's generation portfolio.

Electric Transmission

EWEB owns approximately 35 miles of 69kV and 95 miles of 115kV transmission lines, used primarily to transmit generation from our owned facilities into Eugene. On occasion, however, other utilities also use our lines and pay us wholesale rates for transporting their energy over the lines our customers paid to build. Similarly, we buy rights to use BPA network transmission and sometimes point-to-point service (primarily to facilitate wholesale transactions). Rate recovery is cost-based and represents roughly eight percent of a typical residential customer's bill. While larger customers may take service directly from the transmission lines, only two EWEB customers (that own their own substations) avoid some distribution charges in this way.

Wholesale Electric transmission rates are now regulated by FERC. FERC has highly defined policies for pricing of electric transmission. EWEB voluntarily chooses to offer a transmission tariff based on the FERC ProForma, though we are not jurisdictional and therefore not required to file rates with FERC. This is due primarily to the risk from transmission reciprocity (others don't have to offer open access if we do not). Today, EWEB only sells wholesale electric transmission to two customers (UO and SUB). Management recommends that EWEB continue to adhere to the standard FERC rate principles embodied in FERC's Pro Forma tariff.

Water Supply

For decades, EWEB has sold wholesale water to River Road and Santa Clara Water Districts and the Willamette Water Company under negotiated contracts¹. EWEB recently added a contract with the City of Veneta. Unlike wholesale power where EWEB can participate in a competitive (market-based) marketplace, wholesale water is not generally a competitive market today.

EWEB's wholesale water contracts provide either defined contract pricing or pricing that follows cost-of-service (COS) principles. Management recommends that we continue to follow these same general principles in the provision of this essential commodity to nearby communities. Pursuant to the Sufficiency ratemaking principle, as long as wholesale sales recover at least the marginal cost of service, any addition revenue becomes a direct benefit to EWEB retail customers.

However, Management also intends to carefully review the COS models and principles contained in existing contracts and, if applicable, new wholesale water contracts. This review will be done to help ensure that new EWEB retail customers that pay system development charges (SDCs) are not unfairly disadvantaged as compared to new customers served by adjacent water providers that EWEB serves on a wholesale basis. Management also will continue to examine rate design in the wholesale contracts to help ensure reasonable cost recovery of fixed costs similar to the retail water customer rates discussion above.

Standard Tariffs for Residential and General Service Customer Classes

¹ Santa Clara Water District, since 1956. River road Water District since 1941. Willamette Water Company since 1972.

Residential, commercial and industrial customers make up the vast majority a typical utility's load. In some regions agricultural load is separately specified and priced. In others, lighting load is also isolated. EWEB's customer mix is comprised roughly of 41 percent residential, 36 percent commercial, and 23 percent industrial, based on volumetric sales². These three customer classes are distinguished by size, the level of complexity of service configurations, their relative impact on system infrastructure requirements, and need for reliability. EWEB does not differentiate between commercial and industrial customers in application of its tariffs, but chooses to draw the distinction between business customers based on size. EWEB's ability to provide more accurate and detailed pricing depends on its ability to identify cost attribution information (such as through advanced metering infrastructure) and presently depends both on customer size, do to economies of scale, and the relative customer "sophistication" (or attention to their energy bill as a percentage of total expenditures).

Management continues to recommend that the primary principles used to allocate costs for both water and electricity to these customer classes be based on cost-of-service (COS) principles. Management recommends that new and existing customers not be treated differently as a matter of Equity, with the exception of new connection fees applicable to new customer hookups (contribution in aid of construction-CIAC or system development charges-SDCs). While in some regions, there exist instances where new customers must bear the full impact of increasing marginal cost to serve³, the principle of Equity most often prevails based on the premise that, at one point, all customers were "new" and their integration and supply costs were similarly averaged with existing customers.

However, Management also recognizes that the nature of costs for electricity, in particular, are changing and that new generation costs more than historical generation in most all cases. This applies to all customers. A tool for sending better price signals that reflect the increasing cost nature of our business is to set relative price levels based on marginal cost principles, and then scale the overall cost recovery to match COS-based, overall revenue requirement. This allows for a distinction in the relative price signals and improves rate Efficiency.

Within customer classes, there is always some degree of cross-subsidization. Good ratemaking principles seek to minimize these and when sufficiently significant differences emerge, a new customer class can be formed.

Rate Components:

Electric tariffs are generally split into three major categories:

1. Customer charges
2. Energy charges
3. Demand and facility charges

In a pure, cost-based ratemaking design, the first includes costs that are equally attributable to all customers within the class and generally include revenue cycle service

² EWEB also has a lighting class but the total sales are very small (approximately 0.5% of total sales).

³ BPA's Tier 2 rates provide an example of such a paradigm shift (that load growth be served by a different and distinct resource set).

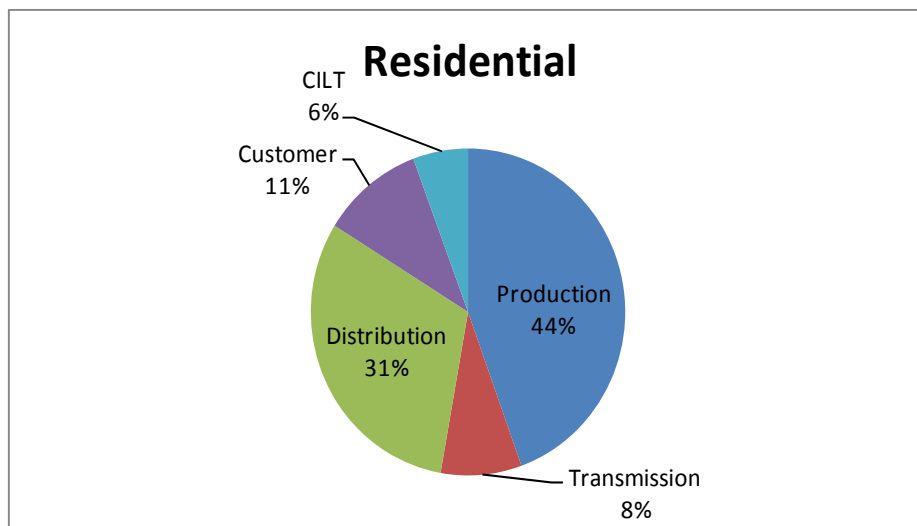
related costs (the meter, meter reading, billing, and sometimes dedicated customer service support). Energy charges reflect the unit cost of the commodity, which can vary by time of day and season (some of the insight gained by marginal cost studies and interval data meters). The last category is intended to reflect and recover the cost associated with large capital investments required to serve the customer at their time of peak need.

Since this equipment is long-lived, decisions based on expected usage are made only every decade or so and once invested become sunk independent of throughput (or sales volume). Since diversification across customers can help offset some of this investment, time-based demand charges can help send better price signals about the cost of the product and reward/allocate to customers lower prices for off-peak usage (times when using the excess capacity on the system is much lower cost).

Residential Customer Class

The Residential Customer class is EWEB's largest single class in terms of customer count, MWH sales, and revenue collected. There are approximately 79,000 residential customers, which represent roughly 40 percent of EWEB total MWH sales and roughly 50 percent of revenue collected.

Figure 1. Relative make-up of a typical residential customer's bill



An example of a social objective might be making critical services and products like water and electricity more affordable. Making something “cheaper” than it really is might help make it “affordable” but that begs a question for how the difference is made up and who pays for making it up. Making something cheaper with the objective of making it affordable can also fly in the face of rational economics and encouraging wise consumption of resources.

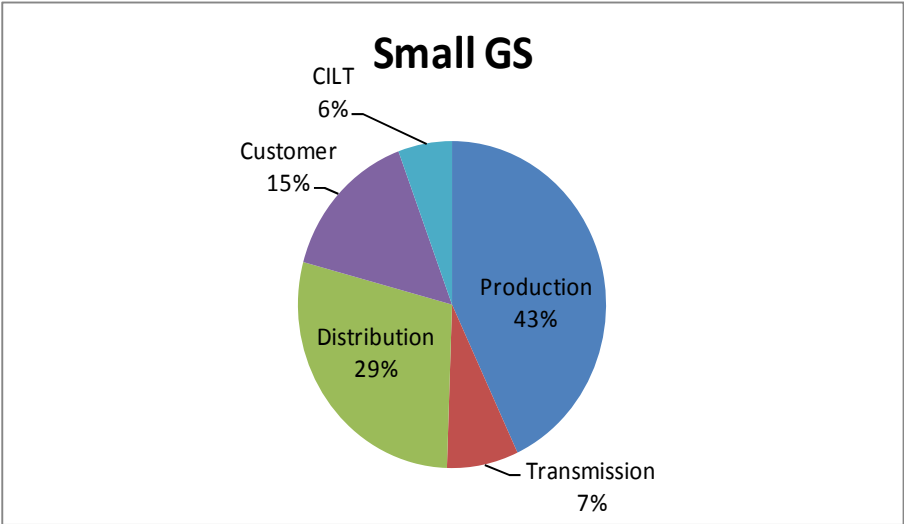
However, there still remains an important social equity issue. Sometimes this is achieved through a baseline usage tier that is priced lower to allow the community affordable access to basic electricity needs on a predictable (stable) basis. Another mechanism which seeks the same result but helps preserve the underlying price signal of a high fixed cost commodity is to provide a fixed credit to income eligible customers, which represents a similar overall economic benefit but also promotes conservation.

General Service Customer Classes

EWEB’s Commercial and Industrial customers are served by the General Service tariffs EWEB offers. Customers are grouped into different rate classes based on size as defined by the customer’s maximum kilowatts (kW) of demand.

The Small General Service Class is applicable for customers with up to 30 kilowatts of monthly billing demand. There are roughly 7,500 Small General Service customers, which includes both Single-Phase and Three-Phase Services with approximately a 60/40 split, respectively. The Small General Service customer class is comprised of lower demand and average usage customers, with an overall class capacity factor⁴ of approximately 0.40.

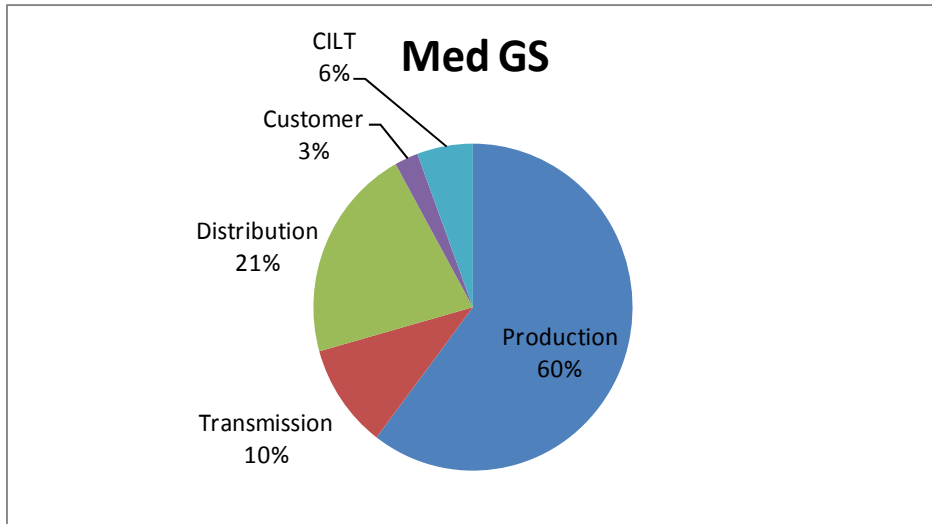
Figure 2. Relative make-up of a typical small general service customer’s bill



The Medium General Service Class is applicable for customers with monthly demand from 31 – 500 kilowatts. Approximately 1,850 customers are served under the Medium General Service rate schedule. EWEB serves Three-Phase Primary services (which is only available to customers with over 300 kilowatts of demand) and about (200) Single-Phase and (1,650) Three-Phase Secondary services. The Medium General Service customer class is comprised of higher demand and average usage customers, with an overall class capacity factor of approximately 0.55.

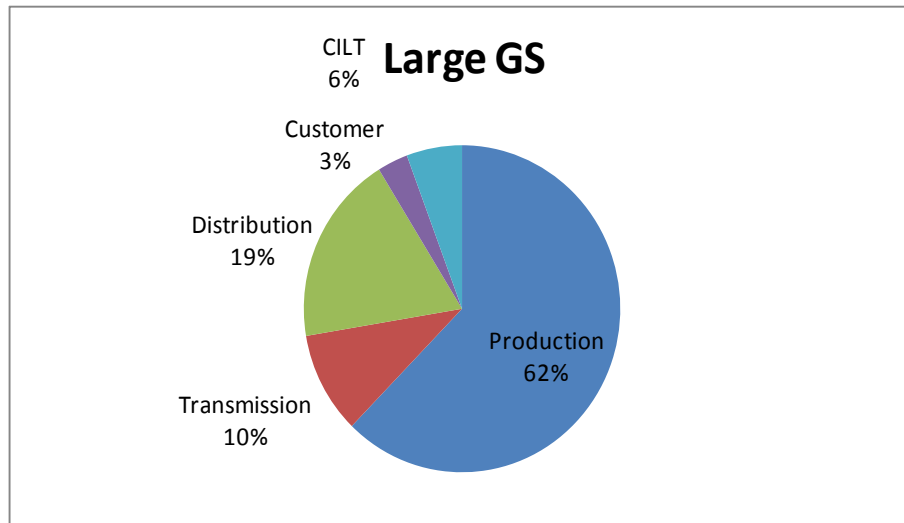
Figure 3. Relative make-up of a typical medium general service customer’s bill

⁴ Capacity factor is a standard measure of system use as defined by average usage over maximum usage. It can also be thought of as a system utilization factor or a measure of the peakiness of the customers' collective use profiles. In general, flatter load profiles (with correspondingly higher capacity factors, are lower cost to serve on an average cost per kWh basis.)



The Large General Service Class is applicable for customers with monthly billing demands from 501 -10,000 kilowatts of monthly billing demand. There are 55 active customers billed on the Large General Service rate schedule, which includes 10 Primary Service and 45 Secondary Services⁵. The Large General Service customer class is comprised of the highest demand and average usage customers, with an overall class capacity factor of over 0.60.

Figure 4. Relative make-up of a typical large general service customer's bill



The Very Large General Service Class is applicable for customers over 10,000 kilowatts of demand, or customers classified as “New Large Single Load” (NLSL) by the Bonneville Power Administration (BPA). There is currently one customer served on the Very Large General Service rate schedule, which was previously served under a negotiated contract rate. While the cost basis for the other General Service rates has been the embedded historical costs attributed to the rate class through the Cost of Service Allocation (COSA) study, the Very Large General Service tariff was constructed to reflect market based prices

⁵ Primary and Secondary Service reflect what voltage level the customer is served from, which is an indication of which parts of the distribution system should be allocated to that customer class.

initially, in anticipation of the NLSL designation by BPA, and was later updated to reflect the cost of EWEB resources not contractually committed to serving EWEB's load.

Other Considerations in Retail Ratemaking for Standard Tariffs

While Management advocates for all the stated objectives, including Sufficiency, Affordability, Efficiency, Cost-Basis, Equity and Gradualism, the reality is that these can often be competing criteria in practice. Often times, policies are made that harm progress toward one measure to improve progress toward another. This is why ratemaking is sometimes called an "art" rather than a science. In reality, it is a little bit of both. Within limits, there is no "right answer" to the optimal mix, but there are clearly best practices that can improve overall efficiency and well-being to the consumer base overall.

For example, one commonly used tool to promote Cost-Basis and Sufficiency is a fuel cost adjustor mechanism, which essentially serves as a pass through of costs largely outside of the utilities control. These are sometimes bounded by some cap but are generally implemented annually or semi-annually outside of a rate-setting proceeding, though the establishment of a pass-through charge would be done within a rate proceeding and subject to public review. This type of cost adjustment mechanism for costs the utility can only indirectly manage is looked on favorably by the bond rating agencies.

In general, EWEB Management supports the use of rates as a means to help innovate and provide value to customers in new ways. An example is creating reasonable price differentiation based on the time of consumption when it also meets other Board objectives (such as energy efficiency and demand response) and the use of pilot rates to test a concept before implementing new programs at full scale. Deployment of AMI meters will allow EWEB to continue to innovate in this area. Rates are sometimes used to achieve social objectives under the principle of Equity as well.

Tiered Rates and the balance between Policy Objectives and Fixed Cost Recovery

Tiered energy rates are generally used for one of the following purposes:

- 1) Fixed cost recovery (declining blocks)
- 2) Conservation (inclining blocks)
- 3) Low-income support (inclining blocks or baseline usage tier)
- 4) Cost allocation between peakier and flatter load shapes within a customer class (load factor blocks)

The reality is that which approach best aligns with underlying costs depends both on the existence of non-energy rate components that help recover fixed costs, and whether energy costs are increasing or decreasing at the margin. However, since rates are also used to support policy measures, it is important to understand the implications of such choices and evaluate any possible alternatives. For example, inclining block, price tiers applied to all customers within a rate class create additional variability in base revenue recovery (i.e. increase sales volume risk), since many costs are not avoided, at least in the short run) as a function of volume consumed.

Water and electricity are considered basic needs for human survival in today's society. As a result, there is generally some consideration for lower income customers to receive a price break as a matter of social policy. Some utilities implement this through the use of a low

cost first block (or price tier) to ensure access to basic usage at a lower rate. One result of this approach is that it generally applies to all customers and so a utility that does not recover its fixed costs in fixed cost components (especially true for the residential customer class since there are no demand charges) faces the trade-off between Sufficiency/Cost-Causation and Equity. Another result of this approach is that customers with gas-heated homes will be subsidized by customers with electric heat in an inclining block rate structure.

While inclining block rates may encourage conservation (one policy objective) they can create serious affordability issues for limited income customers (another policy objective). Tiered rates in-and-of-themselves are not necessarily an effective tool to help address limited income policy objectives. Generally speaking, limited income customers that run in to Affordability problems are not low-usage, or “tier 1” electricity consumers. In the wintertime, in particular, these customer are often well into EWEB’s most expensive tier 3 price block for power, because their homes are heated by resistance-heat and maybe poorly insulated. In instances such as these, non-rate solutions, such as low-income support in conservation programs, may be the most Efficient form of support the utility can provide.

A rate-based alternative to using a low first tier block for all residential customers, is to effectively limit access to the low cost first tier (or other form of rate support) to just income qualified customers, possibly through a low-income rate. Notably, it takes significant resources to screen and maintain eligibility and would require a separate rate structure to price and administer. A simpler approach, administratively, which also preserves the inherent conservation signal in an inclining tier rate structure, is to credit income-qualified customers a fixed amount on their bill. This can be managed through a rate rider and a line item credit on the bill which can be changed as a policy decision during rate proceedings to help manage bill impacts to these customers.

A rate rider is not conceptually much different than EWEB’s current customer care concept where certain qualifying customers receive certain kinds of bill assistance. Whether a special rate or bill assistance, these approaches do not solve what often is the underlying problem with many limited income customers which is that they may live in energy inefficiency homes or apartments and do not either own them or have sufficiency savings to invest in energy efficiency.

Conservation and Efficient Price Signals

Conservation is another area where social policy, Sufficiency and Equity often compete in rate design. Inclining block prices, when the marginal cost of energy is increasing, is an efficient, cost-based price signal. However, since fixed costs are generally also being recovered in energy charges, the end result is to send a distorted price signal to the consumer which over-values the internalized, avoided costs of conservation. When this happens, using less energy will result in higher rates since fixed costs still need to be recovered. The syndrome of under-collecting revenue which results in rate increases applied to volumetric rates (versus fixed charges) that results in less consumption (due to higher rates) and then causes further rate increases, is sometimes referred to as the “death spiral.”

While not directly attributable to conservation measures, this is, in essence, what happened to the water utility over the past several years. Customers used less but costs did not go

away, and so rates needed to be increased. The use of avoided cost for net metering rates is another instance where this can occur.

The impact of rate design choices on fixed cost recovery is a critical element of long term utility financial health. In the example of the water utility this is particularly important. As stated above, water is largely a fixed cost business (i.e. 85-90 percent of the costs are fixed and don't vary much on sales volume). If utility cost increases are loaded in to volumetric sales charges and the base or demand charge is left alone (in the name of keeping low usage bills lower), this sends a price signal for all customers to consume less. This actually defeats the purpose and results in under-collection of revenue requirements which in turn leads to another rate increase. Furthermore, this creates a significant political issue for the utility when customers feel "punished" by higher rates for consuming less.

Negotiated Rate Contracts, New Large Loads, and Economic Development

Negotiated Rate Contracts

EWEB has a handful of large general service customers that are served under negotiated contracts. These include UO, IP, and Flakeboard. Negotiated rates have in concept been based on cost causation and allocation principles and customer choice.

EWEB also established a default Large General Service electric tariff that covers any new customer greater than 5 MW⁶, or customers historically defined by BPA as New Large Single Load (NLSL), such as Hynix. The March 9, 2011 memorandum covers many policy issues related to the situation. It is important to understand the historical context of the situation (shortage) that led to the BPA NLSL concept versus the situation EWEB and the region face today (excess).

Most of the negotiated rates that presently exist were just renewed for an eight-year period. Preemptively, before the next time retail contracts are up for renewal, EWEB could spend some time reviewing the nature of the existing contracts, the basis for providing new ones, and compare these criteria to the existing Large and Very Large GS tariff to see if they can be made more competitive to allow EWEB to perhaps move some special contract customers back to standard tariffs. For example, the use of rate riders for specific tariff modifications could standardize the implementation of minor differences in rates.

New Large Loads

Historically, the marginal cost of new electric resources was typically far greater than the price of legacy BPA power (which is in limited supply) such that for BPA customers to serve new load was considered more expensive. This was codified in the congressional Acts which govern BPA, wherein BPA was required to charge new loads the incremental price to serve so as not to unfairly advantage the region in economic development through the provision of low-cost power generated from federal hydro-generation assets. From this, BPA's New Large Single Load (NLSL) standard was born, whereby new large loads are

⁶ The Large General Service rates were updated and approved on December 4, 2012 (resolution number 1223) to be applicable to customers up to 10 MW, effective May 1, 2013.

subject to the higher marginal cost of supply.⁷ Ironically, today, the market price is actually lower than Tier 1 BPA rates, which creates a separate host of issues related to new large loads.

This approach of segregating new loads as a rate class generally departs from traditional utility ratemaking where all resources are blended for all similarly situated customers, pursuant to the no undue discrimination charter of public utilities. In-other-words, costs may be differentiated by customer class based on the facilities and costs necessary to serve them, but customers of the same class are not differentiated by existing versus new.

Given the impact a new large customer can have on the cost profile of a utility, particularly the smaller ones, when it comes to pricing for large new loads there are three distinct approaches or principles:

- 1) All generation and transmission resources serve all customers (most common)
- 2) New customers are served by marginal resources (i.e. the BPA model of NLSL)
- 3) New customers are served by a defined set of existing resources (e.g. this approach has been taken to “peel off” a utility’s least expensive resources to attract new load under the driver of business development).

Assuming the relationship where the marginal/incremental cost of new resources exceeds the average/embedded cost of existing resources, Table 1 depicts the relative impacts of each of the three approaches listed above.

Table 1. Customer Impacts from Alternative Approaches to New Large Load Pricing

| Approach | Impact on Existing Customers | Impact on New Customers |
|--|---|---|
| 1. All resources (existing and new) serve all customers | Some dilution of benefit to existing customers as more expensive marginal cost resources are added to accommodate new customers | New customers are essentially treated the same as existing customers. |
| 2. New customers served by more expensive marginal costs resources | Existing customers are neutral to growth caused by new customers | New customers bear 100% of the added marginal cost. |
| 3. New customers served by less expensive existing resources | Existing customers rates go up since they lose the benefit of less expensive existing resources | New customers receive 100% of the benefit of less expensive existing resources. |

⁷ Tier 1 rates represent the cost of BPA’s existing system when HWM handed out. Tier 2 rates are intended to cover the full cost of any additional power need to meet above HWM load (i.e. load growth). The New Resource (NR) is designed to serve NLSL and for IOUs to sell directly to consumers.

There are a couple of dimensions to the topic of cost allocation principles for a new large load, including both power supply costs to meet demand and renewable portfolio standard (RPS) requirements. EWEB presently owns or contracts for renewable generation resources in excess of its existing customer need. Part of the decision to acquire these resources was to be prepared to serve future retail load growth and to also be prepared for EWEB's potential resulting obligations under the Oregon RPS standards. These decisions assumed a cost-sharing method for pricing new loads, which was much more reasonable in the higher-cost, wholesale market price reality that existed at the time. Since part of a business' decision on where to locate is a function of utility costs and wholesale prices have dropped so far, most prospective new customers are anticipating utility price offers closer to the current wholesale market price level.

This impact is compounded for EWEB based on its recent IERP decisions to meet existing customer load growth with conservation resources. If we match anticipated load growth one-for-one with new conservation acquisition, what this means is that the only way EWEB will have a future need for its existing excess generation would be if a new large load comes into the service territory. This cost sharing potential gives EWEB and its customers an incentive to try and work with prospective customers on a mutually beneficial pricing solution that could represent a combination of portfolio and market based pricing. An argument can be made that a similar approach can be considered beneficial to the entire customer base when faced with the potential expansion or loss of an existing large load.

Each of these approaches has very distinct policy drivers, supporting principles, and implications. An important change that now exists for EWEB is that the marginal cost of new resources in the marketplace is presently less than the embedded costs of EWEB existing resources. Additionally, EWEB has surplus resources and is expected to be surplus for many years to come. This is further complicated by the existence of renewable energy standards which state that utilities must have a given amount of renewable resources in their generation portfolio, sometimes regardless of the need for new resources. In Oregon, there is a size threshold that creates additional complexity since many utilities not subject to an RPS today, would be in the event a new large load locates in their service territory tomorrow. EWEB falls into this category.

Due to the public utility charter that states we have an obligation to serve, utilities cannot deny customers service simply because they will be expensive to serve. However, there is an argument that can be made on the basis of cost-causation that the new customer, having triggered a compliance requirement for the utility due to their size, has now imposed upon all customers a cost that didn't exist before. This scenario squarely pits Cost-Basis against Equity in the proposed ratemaking principles. EWEB Management advocates for a hybrid approach to address such a situation in the event a new large customer locates within our region, which is explained in more detail below.

RPS Obligations and Associated Cost Responsibility

If EWEB chooses to offer market-based prices again, it needs to be clear on the implications and pricing considerations associated with the potential associated RPS obligation.

There are three general approaches for how to allocate such costs between customers:

1. Allocated all associated costs to the new load
2. Allocate as a share of regulatory obligation, probably based on load
3. Allocate all costs to existing customers

If a new large customer were offered market-based prices, say as an economic development incentive, with no additional provisions for RPS compliance costs, #3 above would be the effective outcome. The principle of Cost-basis can be used to support both #1 and #2. Overlaying the principle of Equity causes staff to lean more closely to #2.

Management's recommendation is that if a new customer participates in the current EWEB portfolio, then it is sharing in the costs associated of its existing renewable resource base, then the customer base should likewise share the cost of additional future RPS obligations as that customer grows. However, if the customer pays market-based prices, then the cost of RPS compliance needs to be borne by that customer in some other way. EWEB could either purchase RECs or renewable resources specifically for that customer, or send a price signal in the rate that reflects an allocated portion of costs EWEB incurs to be in compliance resulting from the increase in load. A consideration in this scenario is that there is an opportunity cost to EWEB of retiring RECs to meet the state obligation as they can also be sold to generate revenue to offset other retail costs reflected in rates or held as a hedge against future RPS requirements for existing load growth. EWEB currently does both.

Economic Development

Economic development is often an objective of many communities and sometimes utility rates are used as a support tool. However, utility rates cannot be discriminatory and cross-class subsidization of allocated costs is generally deemed an unacceptable outcome.

If new retail customers pay more for existing resources than the price that EWEB currently sells surplus electricity for in the wholesale market, then retail customers are better off if a new load shares in the cost of the existing utility generation portfolio. However, this is a tough sell for new business when they see the low wholesale market prices. The key is that current wholesale market prices are near-term price views. Utilities acquire long-term resources to ensure reliability to customers and help smooth prices (Stability). Reliability and Stability in exchange for cost recovery (Sufficiency) is the underlying pact between a utility and its customers.

This raises an important policy decision for the EWEB Board to consider - which rate principles take precedence and are most applicable to new large retail customers given our current economic reality. Do EWEB and its customers need incremental revenue more than they need Rate Equity between new and existing customers or are they willing to pay extra for these principles? To avoid gaming the system, once a retail customer chooses (if given the right to do so), it is in the utility's best interest to make it a one-time decision. Otherwise, consumers will take the benefit of the lower wholesale market when it exists and leverage the cheaper utility generation portfolio when it is lower. This does not support the principles of Sufficiency or Equity.

EWEB's current situation actually creates an opportunity to meet both the interests of existing and new customers in a way that is mutually beneficial rather than the historical

situation where the issue was about who should benefit. If new customers are given the opportunity to be served, at least in part, by the same set of resources as existing customers, EWEB would likely generate more revenue from these retail sales than it presently derives from the alternate use which is to sell surplus power in a weak wholesale market. EWEB could actually “discount” to new customers (discount relative to a standard retail rate) and as long as that price is still higher than the alternate wholesale price, existing customers are better off (see lower rates, promoting Affordability). This, however, could raise a possible social policy or fairness issue (Equity) among existing large customers about the fairness of such a discount. This situation would be the flip-side of the historical practice of giving NLSL the higher marginal cost resource when the marginal cost was higher.

Because the current situation is expected to exist for many years (EWEB surplus and weak wholesale market prices) it makes economic sense and lowers costs to all utility customers to sell additional retail power if the related revenue exceeds both the marginal cost to serve (direct costs) and the wholesale revenue alternative (opportunity cost). Management, therefore, recommends that any significantly large new retail customer (or possibly even large expansion by an existing retail customer) be provided an option of being either treated like an existing customer (blending of all resources) or negotiating a possible discount relative to standard retail tariffs provided that the supply-related revenue exceeds the wholesale market alternative.

Either of these approaches would benefit existing customers more than the current practice of selling excess into the short-term wholesale markets. EWEB’s IERP suggests that new load would be served by market purchases once the existing resource base is fully allocated. If, alternatively, a new large load were allowed to bypass the generation portfolio, then a sale of EWEB generation assets would likely be in the long-term best interest of customers as existing load growth is not likely to require additional resources given the other IERP charter of meeting load growth with conservation.

An important feature of this approach, however, is that new customers would not be able to switch between these options. In-other-words, if a new customer wanted the discount approach that discount would be established much like a wholesale contract and would last only as long as the contract period. At the end of that period, EWEB would be under no obligation to provide electricity at that contract price or at the standard tariff rate. For example, if the wholesale market price later exceeded standard tariffs that would be the option for a “contracted customer”. Management believes that it would be imprudent and unfair to give new customers the ability to “tariff jump” between two worlds as this would create subsidies and subsidy exposure to existing customers.

The concept above could reasonably be construed to be an “economic development” concept. Management believes that EWEB can support this approach as just and reasonable. A key element, however, would be whether EWEB would offer a contracted rate to a similarly situated customer. The question becomes the definition of “similarly situated” and can raise the question of whether EWEB can use factors other than traditional factors such as load characteristics, delivery voltage, consumption volume and other technical attributes of the load.⁸

⁸ As an example, assume there are two new proposed manufacturers of “widgets” with identical technical and load characteristics and similar business credit worthiness. One manufacturer does not provide medical

Table 2 summarizes the impacts on existing and new customers of providing different rate approaches to new large customers, based on the assumption that EWEB is surplus and its alternative is to sell that surplus electricity in to the wholesale market.

Table 2. Impacts of new customer pricing options on new and existing customers under low market price conditions

| Approach | Impact on Existing Customers | Impact on New Customers |
|--|--|---|
| 1. All resources (existing and new) serve all customers. New customer priced the same as existing customers (melded). | Existing customers are better off as long as the new retail supply revenue exceeds the wholesale revenue. | New customers are essentially treated the same as existing customers. |
| 2. New customers discounted below existing customer supply cost, but are not allowed to switch to embedded cost later if wholesale prices go up. | Existing customers are still better off as long as the new retail supply revenue exceeds the wholesale revenue. No long-term risk to existing customers since new customers bear the market risk. | New customers are better off than existing customers if their power is discounted, but bear the risk of wholesale prices being higher after their initial contract period ends. |
| 3. New customers discounted below existing customer supply cost, but are allowed to switch to embedded cost later if wholesale prices go up. | Existing customers are better off in the short-term as long as new retail supply revenue exceeds the wholesale revenue. Existing customers may be worse off in long-term if wholesale market goes above embedded costs and new customers are allowed to switch back to embedded costs. | This gives new customers a permanent benefit and protection relative to existing customers. |

The notion of setting criteria by which EWEB would consider negotiated contract rates for a specific customer requires the Board and staff to think about the size threshold of a given customer, or prospective customer, for engaging in such a discussion. This cut-off can be aligned with the proposed Cost-Basis principle by aligning the size threshold with when significant investment decisions would be made by the utility in order to serve. Without additional analysis, this probably best aligns with the Large General Service customer class definition.

benefits to its employees and the other does. Can EWEB use this “non-utility” factor as a basis for pricing differently or not? This is both a legal question that Management needs to explore further, but it is also a potential policy question if the legal conclusion was that EWEB could price differently. As a general notion, however, Management recommends that EWEB not wade in to this territory because of the potential complexities and controversies that it could cause. Historically, the use of mainstay COS principles has served the utility industry well by creating some level of objectivity to govern rate-setting policy.

Recommendations

Management recommends that EWEB consider offering new customers a one-time option of selecting either approach 1 or 2 above, whether deemed as BPA-designated NLSL or not. However, Management specifically recommends against either approach 3 or allowing new customers to switch between approaches 1 and 2 over time.

Management recommends such an approach would be applicable only to the Large General Service customer class and be applicable to both new load and the large expansion of existing load. Questions of existing customer retention, should they be a consideration, would be brought to the Board as an independent consideration, though the basic economics behind the concepts described above would likely apply. In addition, establishing specific contract criteria (for either new or expansion load) can be part of future direction.

For all customers (new and existing) Management also recommends that EWEB continue to explore other alternative rate and service concepts that may make sense. Rather than lumping all customers of a certain load size in to a single tariff, it might make sense to differentiate service options. For example, some customers might find an option of an interruptible tariff attractive. The concept of an interruptible tariff would be that customers in this class of service would receive some discount below the standard tariff for giving EWEB the right to interrupt electric service. EWEB in turn is not obligated to plan to serve this load in its future resource acquisition strategies.

This concept is fairly common throughout the utility industry. Of course, not all customers can accept this reduction in reliability of supply and so it would be optional. Other customers, such as those that are more price sensitive or have back-up power generation, might find this option attractive. It would also benefit EWEB and other existing customers by providing EWEB an alternative to supplying 24x7x365 power to all customers. This is also the underlying premise of demand response resources. Management believes this is an area where EWEB can continue to innovate to provide options to customers.

While EWEB continues to hold a "long" position in generation resources and market prices are less than our average generation portfolio cost, ratepayers will benefit from any sale in excess of wholesale market prices less incremental costs. The benefit to customers is greater price certainty over the longer run and shared RPS costs with the existing customer base. At which time EWEB's load resource mix is more closely balanced, ratepayer risk of future price uncertainty could be reduced by offering only market based rates to new large loads.

New Customer Connection Charges

Contributions In Aid of Construction (CIAC)

Since the 1980's EWEB has collected CIAC for both Water and Electric Facilities that are constructed to support growth in our community. New development or redevelopment of land is the primary driver for this charge. Currently, EWEB has a philosophy that EWEB's customers will not subsidize development through rates, and that developers should pay 100 percent of the cost to support their development for utilities.

For water, the basic premise is that developers will pay for capacity needed for their development “to and through” their properties. For Electric, all costs associated with the loads to be served to that property will be borne by the developer. These charges are based upon engineering estimates for labor, material, equipment and overheads.

For services to serve or upgrade individual parcels EWEB has various methods for charging customers the installation of either water or electric service. For water, there are scheduled charges for the installation of a 5/8 inch meter through a 2-inch meter. These charges are based upon average actual costs experienced and they are updated periodically to keep up with inflation and rising costs. Anything larger than a two-inch meter and service is estimated by engineering.

For electric, all service drops are charged on an engineering estimate, which is based upon average costs for labor, material and equipment and overheads for both Overhead and Underground Services. These estimates are based upon set administrative rates for common components. EWEB’s Customer Policies and Procedures outline the conditions of extensions and services to both our Water and Electric System. For Electric, Policy E-I through E-IV and for Water, W-I through W-III are the relevant policies to Contributions in Aid of Construction.

System Development Charges (SDC)

SDC’s are only applicable to the Water Utility. The purpose of the SDC is to fund capital improvements to meet increased demands on the system caused by new users. The System Development Charge is separate and in addition to any applicable line extension charges, service and meter installation fees. EWEB has charged SDC’s since July 1, 1997.

The SDC are developed and approved by EWEB in accordance with the requirements of ORS 223.297 to 223.314. SDC’s are charged customers based upon a set schedule for 5/8 inch through two-inch services, and are estimated for high demands or demands that require greater than a two-inch service. EWEB’s Customer Policies and Procedures outline the conditions of SDC in W-V. An inefficiency associated with negotiated rate contracts is the overhead they require to negotiate and administer.

Management Recommendations:

Management recommendations fall into the following broad categories:

1. Continue to refine analytical tools and efforts to increase fixed cost recovery and compare marginal and embedded costs of service (both utilities)
2. Adopt, upon review and discussion, the following six Ratemaking Principles discussed in this memorandum:
 - Sufficiency
 - Affordability
 - Efficiency
 - Cost-Basis
 - Equity

- Gradualism
3. Specific to the initial request from Commissioner Helgeson and former Commissioner Ernst, Management requests the Board adopt its Proposal for New Large Load pricing under a negotiated contract scenario. Adopting contract pricing principles to cost share where economic for both the customer and ratepayer as a foundation for use in negotiated contracts for new large loads or expansions of existing loads, including cost attribution of associated RPS compliance. Such an approach would be applicable only to the Large General Service Customer Class
 4. Continue to leverage pilots to explore opportunities for future rate design changes to expand customer choice, improve Cost-Basis for customer cost allocation, and prepare the utility and its customers for AMI implementation.
 5. In addition to pursuing incremental progress toward the general principles stated above, Table 3 summarizes at a very high level Management’s specific recommendations by customer segment.

Table 3. Summary of Specific Management Proposals for Rate Design Objectives

| Customer Class | Short-term Recommendation | Future Direction |
|-----------------------------|---|--|
| Retail Residential Water | <p>Continue fixed cost recovery improvement and work to moderate future price increases.</p> <p>Continue to refine COS studies and seek more efficient price signals.</p> | <p>Continue to explore elevation-based and other possible criteria for customer class distinctions.</p> <p>Develop possible emergency rate and tariff provisions to manage water supply emergencies or severe droughts.</p> |
| Retail Residential Electric | <p>Continue fixed cost recovery improvement and work to moderate future price increases.</p> <p>Continue to refine COS studies and seek more efficient price signals.</p> | <p>Explore possible new tariff concepts using pilot concepts to prepare for future needs and opportunities, which may include:</p> <ol style="list-style-type: none"> 1) TOU 2) EV charging 3) Baseline use package (or some other approach) to address affordability, predictability, and comfort. |
| Retail General Service (GS) | Continue fixed cost recovery | Possible better allocation of |

| | | |
|--|--|---|
| Water | improvement and work to moderate future price increases. Continue to refine COS studies and seek more efficient price signals. | costs that better refine COS (e.g. higher infrastructure costs at higher elevations). Develop possible emergency rate and tariff. |
| Retail GS Water Large Customers <i>(Does not currently exist)</i> | No immediate action needed. | Develop possible contracted water option for large customers (e.g. > 5% of total demand) to manage supply and business risks. |
| Retail Small/Medium General Service Electric | Continue fixed cost recovery improvement and work to moderate future price increases. Continue to refine COS studies and seek more efficient price signals. | Explore possible new tariff concepts using pilot concepts to prepare for future needs and opportunities: 1) TOU 2) Expand use of demand charges 3) EV charging 4) Alternative services such as interruptible tariff |
| Retail Large General Service Electric (existing customers) | No major changes to existing contracts. | Possibly explore alternatives similar to large new customers. Explore possible new alternatives such as TOU and interruptible tariffs. |
| Wholesale Power | No changes. Market based. | No changes. Market based. |
| Wholesale Transmission | No changes. FERC-aligned. | No changes. FERC aligned. |
| Wholesale Water | Continue fixed cost recovery improvement and work to moderate future price increases. Continue to refine COS studies and seek more efficient price signals. | Insure that EWEB retail customers are not disadvantaged due to wholesale contract structure (i.e. SDCs , etc.) |
| CIAC / SDC | No policy change. | Revisit periodically to ensure full cost recovery. |

Management recommends the Board review and approve these Rate Design Objectives to help govern and assess future work during rate adjustment proceedings.

Board Action:

Management recommends Board approval of the proposed Ratemaking Principles and Objectives to be used by staff to guide future rate-setting proposals and negotiated contract provisions, and by the Board to guide its decision-making and review of the specific proposals submitted for approval.

Given the current state of both the electric and water utilities and lack of AMI, Management further recommends that no major rate design activities take place in the short-term. Rather, Management recommends that EWEB continue the principle of Gradualism in the shift from volumetric to fixed cost recovery, particularly for Water utility rates, and that the Electric Utility use pilots to explore the effectiveness of different rate designs in anticipation of the availability of AMI.

In direct response to the Board's concerns regarding use of rate design changes to mitigate impacts of overall rate increases on limited incomes customers, Management recommends against such a rate redesign and requests additional time to present more effective options to the Board in the near future.



M E M O R A N D U M

EUGENE WATER & ELECTRIC BOARD

Power Resources Division

Rely on us.

TO: Commissioners Brown, Simpson, Cassidy, Ernst and Cunningham
FROM: Clay Norris and Debra Smith
DATE: March 9, 2011
SUBJECT: BPA 2011 Power Cost Allocation

Issue

Should EWEB follow the lead of BPA in allocating new power supply costs to customers or maintain our existing power cost allocation philosophy with some updates? This issue is relevant because large customer contracts are set to expire on September 30, 2011 and Staff seeks assurance that the pricing approach to be negotiated is consistent with the Board's desires.

Background

EWEB's current cost of service methodology allocates the cost of power across customer classes based on the following philosophical principles:

1. All existing customers and all new customers under 5MW, except for International Paper and Hynix, are allocated power supply costs based on the melded cost of our portfolio.
2. IP's rates are based on BPA power costs since IP is given a special status in our BPA contract.
3. Hynix does not get any allocation of BPA power since it is classified by BPA as a New Large Single Load (NLSL).
4. The default for all new customers over 5 MW is a market-based rate unless something different is negotiated in a special contract.

Discussion

BPA's Tiered Rate Methodology allocates the benefits of the legacy federal system to existing customer loads and requires utilities with load growth either to acquire their own new power supplies or to contract with BPA and pay the marginal cost of new power supplies acquired by BPA. While this gives a strong incentive for utilities to conserve, it also shifts the burden of economic development from the BPA utility customers as a

group to each individual utility. As EWEB implements the new BPA contract, we have the option of mirroring BPA's approach or applying our own. Staff has identified two primary alternatives for allocating BPA legacy power.

Alternative A – Mimic BPA

If EWEB were to implement an allocation system like BPA, then the benefits of EWEB's BPA power and legacy resources contractually committed to load would be allocated to customer classes based on current load within the class and load growth within each customer class would determine the allocation of new (more expensive) power supply to that class.

For new large customers, it would mean that EWEB would charge the marginal cost of new power supply to new customers. This would make attracting new and expanding businesses more difficult.

Alternative B – Current Allocation Philosophy with Adjustments

Keep the current cost allocation methodology as embodied in philosophical principles 1 and 2 above and modify principles 3 and 4 for larger load customers as follows:

- New loads above 5 MW but which do not meet the BPA definition of a new large single load (NLSL) would be contract loads with a power supply cost based on some mix of market-based pricing including the cost of RPS compliance and average cost of the EWEB portfolio. The Board could exercise some discretion on the specific mix based on application of a triple bottom line (TBL) analysis.
- Loads classified as NLSL by BPA would be contract loads with a power supply cost based on some mix of the average cost of resources not contractually committed to serving EWEB's load and market-based pricing including the cost of RPS compliance. Again, the Board could exercise some discretion on the specific mix based on application of a TBL analysis.

Recommendation

Alternative B would be easier to administer in the long term and would provide more flexibility for the Board to consider a TBL analysis of the impacts of new large loads in determining appropriate power supply cost pricing. Alternative B also provides flexibility in supporting the community's economic development efforts and the attraction of new business and jobs.

Requested Board Action

Maintain support for current philosophies regarding rate design. For new large loads under special contracts, consider changes to the mix of power resources used for pricing based on a TBL analysis.