
Special Report



Washington Research Council

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Taxing Power: Electric Utility Taxes in a Competitive Environment

Overview

Nationally, deregulation of the electric utility industry and the prospect of retail competition present states with questions of fairness affecting residential and business consumers, taxpayers, and utility providers. Because the provision of electricity has long been treated as a “natural monopoly”, direct competition among providers has been minimized. The era of not-always-peaceful coexistence, however, is about to end.

Impending deregulation forces lawmakers to confront the patchwork of regulatory and tax policies governing the state’s \$4 billion electric utility industry. To an uncommon degree, electricity in Washington is provided by government-owned and -operated utilities, operating largely outside the regulation of the Washington Utilities and Transportation Commission and benefiting from federal and, to a lesser degree, state tax advantages.

In shaping the newly competitive environment, regulators and lawmakers will decide whether, and how, to establish a level playing field. In doing so, they will have to address tax preferences, recovery of “stranded costs,” service to “high cost” customers, and access to inexpensive federal power. Many of these issues are being addressed by the federal government, which plays a dominant role in industry regulation.

The legislature, however, will have to examine state and local tax policy to assure consumers access to a fair, competitive marketplace.

Following a brief review of the industry, the issues associated with deregulation, and the importance of electrical power to Washington business, the Washington Research Council in this paper reviews the state and local tax environment in Washington for the electric utility industry.

History

In April 1881, New York City awarded Thomas Edison a franchise that allowed the Edison Electric Illuminating Company to distribute electricity through wires which passed underneath the streets of the city. The company built a generating facility at Pearl Street, and on September 4, 1882, the first power flowed to customers. Thus began the electric utility industry.

As the industry developed initially, competition between distributors was common. By the turn of the century, however, franchised monopoly was the dominant form of supply nationally. Then, the prevailing view was that economies of scale in both generation and distribution made the provision of electricity a “natural monopoly,” and so it was treated for the next 95 years.

With economies of scale, production and distribution costs are minimized for a single supplier, but in the absence of competition customers do not necessarily enjoy the full benefit of these efficiencies. The traditional remedy, then, has been government intervention, either through regulation or direct service provision. Under a regulated monopoly structure the government typically grants a private firm the exclusive right to provide service in a designated geographic area.¹ In exchange for this privilege, the firm allows the regulator to set a rate schedule for service. Alternately, the monopolist may be publicly owned. The electrical industry of Washington state is currently composed of both public and private providers.

Electric utilities engage in three primary activities: *generation*, or the actual production of electricity; *transmission* of electricity between generators and distribution networks; and *distribution* of electricity to consumers. These three activities differ in the extent that they are subject to scale economies. It was once believed that economies of scale in any one activity would make the whole industry a natural monopoly. More recently, however, it has been recognized that conditions of natural monopoly for one of these activities need not preclude competition in another, culminating in the current push to restructure the industry.

Current efforts to deregulate focus on generation and extending competition to the retail customer. Transmission is generally accepted to be a natural monopoly; experts, however, disagree on whether local distribution is.

Deregulation

Currently, twenty-three states are involved in significant legislative and regulatory activity designed to change the structure of the industry, with that number increasing steadily. The Washington legislature has not previously addressed the issue of retail competition. Until legislation is passed, control over the local distribution lines remains with the existing utility.

Several federal actions prompted the current debate.

In 1978, still contending with the residue of the energy scare, Congress passed the Public Utility Regulatory Policy Act (PURPA) requiring utilities to buy power from independent producers at a price equal to the utility’s marginal production cost. PURPA began to open the transmission grid to outside use for the first time.

Federal Energy Regulatory Commission (FERC) Order 636 in the early 1990s was the last of a sequence of initiatives which collectively deregulated natural gas commodity and pipeline capacity transactions. This action drastically reduced the cost of natural gas and, similarly, the cost of generating electricity using gas-driven turbines.

The National Energy Policy Act (EPAAct) of 1992 required utilities to open their transmission lines to all wholesalers.

¹ Investor-owned electric utilities in Washington do not have exclusive franchise regions. However, in 1969 the Washington legislature declared that the duplication of facilities that accompanies competition in the distribution of electricity is “contrary to the public interest,” and authorized providers to enter into agreements to establish boundaries between their service areas.

FERC Orders 888 and 889 of 1996 opened the wholesale industry to full competition, establishing rules forcing utilities to administratively separate generation and transmission.

The cumulative effect of EPAct and the FERC orders is to require that utilities operate their wholesale transmission systems much like common carriers, providing comparable access and rates to sellers and buyers without discrimination. These orders effectively created the electricity marketer, who earns profits by acting as a broker between generating firms and retail firms. These power brokers, who are emerging as major new players in the energy marketplace, present unique issues in tax policy, as will be discussed later.

Unresolved Issues

Several issues will be faced by regulators and lawmakers as the electric utility industry makes the transition from a regulated monopoly to full retail competition. Among these are the recovery of stranded costs, provision of service to high-cost customers, the competitive advantages and preferential treatment given to some utilities, and the interactive effects of taxation and the competitive process.

Stranded costs are those costs incurred, often as a result of regulatory requirements, which would have been recovered over time under the regulated rate-of-return regime. Typically, these are costs associated with nuclear plant construction and operation or with the long-term contractual obligations to buy power from alternative providers under PURPA. Most authorities support full recovery of stranded costs associated with wholesale power (primarily generation) and incurred as a result of regulation. Nonetheless, the determination of which costs are the result of legitimate compliance with the regulatory compact (and therefore should be fully recoverable) and which are the result of unfortunate business and investment decisions (and therefore are the utility's bad luck) will not necessarily be straightforward.

High-cost consumers (e.g., those in remote locations) have been protected by the traditional monopoly environment. Under regulation, the high cost of serving some customers has been subsidized in the rates charged other, more profitable, consumers. This cross subsidization will not necessarily occur in a completely competitive market, and some fear that suppliers will "cherry-pick" the high profit customers, offering them lower rates while less profitable markets may face higher rates or reduced quality of service. This is not the inevitable (or even the most likely) outcome of deregulation, but constructing the necessary mitigation systems may require lawmakers to develop a more in-depth understanding of the industry.

Competition

Competitive advantages and preferential treatment provided select utilities mattered less when electricity was provided by regulated monopolies. There was no competition. Now, however, what previously had been merely *differences* in regulation, taxation, and access to federal power are about to become substantial *competitive advantages*. For most of the century, the significant difference has been between government utilities and investor-owned utilities (IOUs). With the advent of retail competition, the tax-favored treatment of out-of-state providers represents an additional challenge facing the industry.

Taxation directly affects the competitive process by creating distortions in the efficiency of the industry. The importance of these distortions increases as the industry nears full competition.

Federal Tax Preferences - Briefly

Most of the preferences affecting government utilities originate with the federal government. These preferences, however, ripple through to state and local taxes.

Federal policy favors government utilities by extending three substantial benefits: exemption from income taxes, the ability to issue tax-exempt securities, and preferential access to federal power. In a 1994 study for the Edison Electric Institute, the consulting firm of Putnam, Hayes, and Bartlett (PHB) estimated that the presence of these three preferences (along with the less significant state and local tax preferences) allows government-owned utilities to offer electricity for about 17% below unsubsidized cost.² An analysis of the PHB report for the association of government-owned utilities challenges this finding, concluding that "less than half" of the difference between the IOU rates and the government utility rates is explained by the preferences.³ The rebuttal is less persuasive than the original report; regardless, the advantages are substantial.

Gross receipts taxes, like those imposed by state and local government in Washington, magnify these preferences. Utilities not receiving the subsidies must charge higher prices, resulting in higher revenues to which the gross receipt taxes are applied. Assume, for example, that a 9.25% gross receipts tax (about the sum of Washington's state public utility tax and municipal utility tax) is applied to two utilities operating at equal efficiency. If subsidies allow Utility A to sell electricity at a price 15% below that charged by Utility B, the state and local tax advantage to Utility A is a further 1.5% cost advantage.⁴

These subsidies have been criticized by advocates of deregulation, including President Clinton's Council of Economic Advisers. The Council writes: "For competition to work well, it must take place on a level playing field: competition will be distorted if producers are given selective privileges... As competition grows, increasing distortions may result from some entities having access to special privileges such as federally tax-exempt bonds or other preferential treatment."⁵

Arguably, fair competition cannot be realized until such preferences are eliminated.

Electrical Power in Washington: Providers

Nearly 80 billion kilowatt hours were sold in Washington in 1995, representing retail sales of nearly \$3.5 billion.⁶ In Washington, retail electric power is sold by public utility districts (PUDs), municipalities, investor-owned utilities (IOUs) and rural electric cooperatives (RECs). Each class of utility is subject to different regulatory and tax treatment and has different access to federal power from the Bonneville Power Administration (BPA). As Figure 1, on page 5, shows, most electricity sold in the state is sold by government-owned utilities.

² "Subsidies and Unfair Competitive Advantages Available to Publicly-Owned and Cooperative Utilities," Putnam, Hayes & Bartlett, Inc. for the Edison Electric Institute.

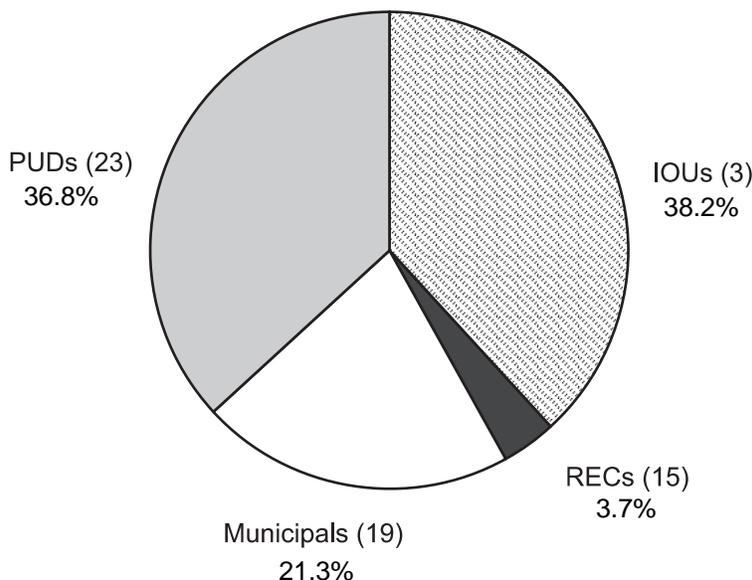
³ A report to the American Public Power Association, "Explaining Public Power's Low Rates: A critical Review of the EEI-Sponsored Report: "Subsidies and Unfair Competitive Advantages Available to Publicly Owned and Cooperative Utilities," by MSB Energy Associates, April 5, 1996.

⁴ Let T equal the tax advantage. $T = 0.0925 \times (15 + T) \Rightarrow T = 15 \times (0.0925/1-.0925) \Rightarrow T = 15 \times 0.1019283 = 1.5289$. The tax advantage equals 1.53%.

⁵ *The Economic Report of the President*, Washington, 1996. Pages 188-189.

⁶ These figures do not include sales from the BPA directly to the DSIs.

Figure 1
Breakdown of Washington Retail Electrical Industry by Type of Supplier
1995 Sales kwh



Source: WRC Survey

The 23 Public Utility Districts provide 36.8% of the retail sales of electric power in Washington. They vary in size, with the largest being the Snohomish County PUD (also among the nation's largest). They typically serve county-wide populations though they have authority to sell power "within and without" county boundaries. Rates are set by a commission elected by voters.

The 19 municipal utilities, which include Seattle and Tacoma, provide 21.3% of retail sales. While neither municipals nor PUDs are regulated by the Utilities and Transportation Commission, municipals must comply with the general provisions outlined in statute for IOUs. Rates for municipals are set by their governing body.

The 15 Rural Electric Cooperative utilities (RECs) operating in the state of Washington account for 3.7% of all retail sales of electric power. RECs are non-profit entities that supply electricity to rural areas. They are owned by their customers and the rates charged by RECs are not regulated by the state.

There are three Investor-Owned Utilities (IOUs) operating in Washington State — Puget Sound Power and Light, Washington Water Power, and PacifiCorp — accounting for 38.2% of retail sales. IOUs in operation in Washington, which differs in this respect from most states, do not have exclusive territories. That is, there is no "franchise" (a certified physical area) in which the three IOUs must operate. (In practice, however, they generally have served discrete geographic regions.) They are free to sell power anywhere in the state. The Washington Utilities and Transportation Commission (WUTC) sets rates for the IOUs.

BPA

BPA, a federal power marketing agency, sells the electricity generated by the federal dams on the Columbia River. As a branch of the federal government, BPA is exempt from all federal, state, and local taxes. BPA divides its Northwest customers into three categories, according to the preference given them for access to power. They are: (1) preference customers, consisting of municipal utilities, PUDs, cooperatives and federal agencies; (2) direct service industries (DSIs), a group of energy-intensive industrial consumers, which includes six large aluminum plants, and (3) investor-owned utilities.

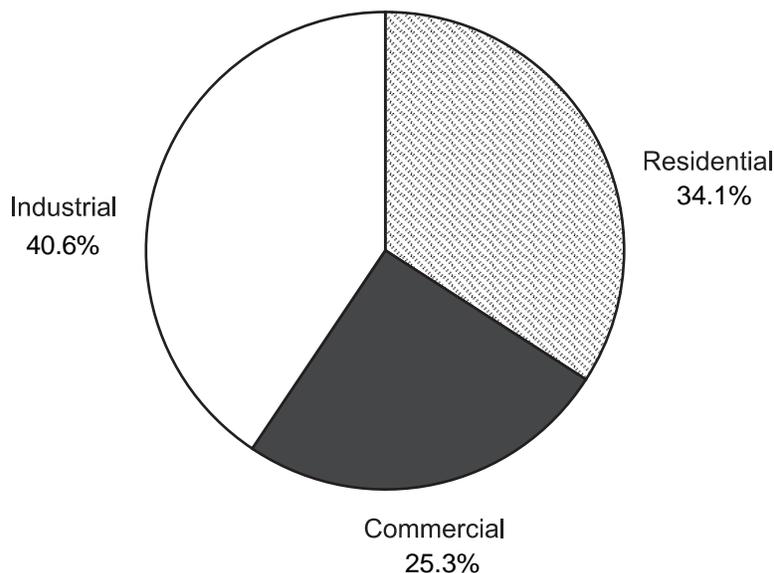
Due to the large volume of power available for sale by BPA, preference customers effectively have access to an unlimited supply of BPA power if they so choose. Similarly, DSIs (while subject to a high limit) have generally met their needs with BPA power. (Recent falling energy prices have led the DSIs to reduce their reliance on BPA). Because the federal power is not limitless, the IOUs are able to meet only a portion of their needs through the use of federal power. A residential/farm credit program established with BPA allowing the IOUs to provide certain residential and farm customers with cheaper power is being phased out. Such programs, while temporarily benefiting some consumers, do nothing to level the competitive playing field between firms.

The high volume of electricity consumed, the constant (even) demand structure, and the low maintenance involved with DSI supply, allow BPA to offer them power at a low rate. BPA sales to the DSIs represented more than 15 million megawatt hours and nearly \$400 million in sales in FY95.

Electrical Power in Washington: Consumers

There are three distinct types of consumers of electrical power. They are: residential, commercial, and industrial (including DSIs).

Figure 2
Energy Use by Sector, 1993



Source: Energy Information Administration

The abundance of hydroelectric power has been the major lure to the state for certain business. The most recent Washington Input-Output model provides a picture of the energy use by Washington industries in 1987. Overall, the cost of electricity amounted to 1.8 percent of business revenue. The use of electricity varies tremendously among businesses. Heavy use is concentrated in a limited number of industrial companies. (For example, the electrolytic process involved in the manufacture of aluminum makes electricity a virtual component of the product.) For these companies the cost of electricity is a major determinant of competitive success. Of the 62 industries broken out in the Input-Output Model, there are six (besides electrical generation itself) for which the cost of electricity represents more than 4 percent of revenues (see Figure 3).

Overall, for Washington industries in 1987, the amount spent on electricity was only 6% of the amount paid to employees. As Figure 3 shows, for the energy intensive industries, the ratio of energy costs to labor costs was much higher. For the aluminum industry, energy costs actually exceeded labor costs. The table also shows the direct employment of these industries in 1995, as well as the industry job multiplier.⁷

Figure 3
Washington's Electricity Intensive Industries⁸

	Energy/Labor Ratio	Employment	Job Multiplier
Pulp mills	0.52	1,413	9.3
Paper Mills	0.30	8,572	7.0
Glass products	0.47	2,818	3.2
Aluminum	1.03	7,536	4.6
Primary metals	0.19	3,619	3.3
Pipelines	0.72	99	9.4

Source: Washington State Office of Financial Management, *Washington State Input Output 1987 Study*, September 1993. Washington State Employment Security Dept.

⁸ Excluding the electric utility industry itself.

State and Local Taxes on the Electric Utility Industry

The major taxes paid by electric utilities are state public utility tax, municipal electricity tax, property tax, and PUD privilege tax. The two largest taxes — the state public utility tax and the municipal electricity tax — apply to all utilities, regardless of ownership, and with no rate differentiation.

⁷ A multiplier of 3.0 means that for each job in the industry, 2.0 additional jobs are created in the economy. Note: The employment multiplier for manufacturing overall is 3.0; for natural resources, 1.9; for trade and services, 1.3.

The state **public utility tax** is an excise tax, levied in lieu of the business and occupation (B&O) tax, calculated on gross revenues from intrastate power sales and delivery in the state. It is levied uniformly on all utilities at a rate of 3.873% of gross revenues. (Note: Utilities pay the B&O tax on all revenue from non-power and non-wheeling (transmission) activities, e.g., initial hook-up charges.)

The **municipal electricity tax** is levied by cities and towns on firms selling electricity to retail customers within their boundaries. The tax is calculated on gross revenues from sales within municipal boundaries. Most cities have tax rates between five and six percent, with the average rate being 5.38 percent. If a city wishes to increase its rate beyond the six percent threshold, it must have voter approval.

State and local **property taxes** are levied on property owned by IOUs and RECs. The state constitution prohibits the taxation of property owned by public agencies, including municipal electrical utilities and PUDs. Property subject to taxation includes plants, transmission lines, buildings, and other real and personal property. In cases where property spans more than one taxing district, the department of revenue prepares the assessments and apportionment of tax revenue among jurisdictions.

The **PUD privilege tax** is levied on PUDs in lieu of state and local property taxes (municipal utilities pay no similar in lieu tax). The privilege tax uses a two-part rate structure: 2.14% of gross revenues plus 5.35% of the first four-tenths of a cent per kilowatt hour generated by the PUD.

In addition to these major taxes, utilities must pay sales and use taxes. IOUs and RECs pay motor vehicle excise taxes on the cars and trucks that make up their motor pools; government-owned utilities are exempt.

Figure 4 shows tax collections allocated among the classes of provider.

Figure 4⁹
Tax Revenue Generated by Major State and Local Taxes in \$Millions (1995)

	<u>IOU</u>	<u>PUD</u>	<u>Municipal</u>	<u>REC</u>	<u>Other</u>	<u>Total</u>
Public Utility Tax	\$58.1	\$31.9	\$22.7	\$5.1	\$2.9	\$120.7
Property Tax	35.9	0.0	0.0	1.8	N/A	37.7
PUD Privilege Tax	0.0	26.1	0.0	0.0	0.0	26.1
Municipal Tax	44.0	15.0	36.0	N/A	N/A	95.0
Total	\$138.0	\$73.0	\$58.7	\$6.9	\$2.9	\$279.5

Source: Department of Revenue and AWC.

⁹ Municipal tax collections are approximations only. The Association of Washington Cities (AWC) does not calculate the amount of Municipal Electricity Taxes paid by individual suppliers. It is possible, however, to identify cities supplied by municipal utilities, PUDs, and IOUs. N/A is not available.

The tax structure described above was designed more than fifty years ago and applied to an industry characterized by vertically integrated monopolies. With competition, the system becomes more complex, particularly with the introduction of power marketers. For instance, the U.S. Constitution prohibits states from restricting interstate commerce. Courts have held that states may not tax entities without “nexus” (i.e., a physical presence, such as plant, equipment or employees) in the state. An out-of-state firm using existing transmission lines for wheeling would not need nexus to deliver power, thereby avoiding the public utility and municipal electricity taxes levied on in-state providers.

Tax Incidence

The question of who ultimately bears the burden of a tax (economic incidence) goes beyond who is responsible for paying the tax (statutory incidence). While it is clear who writes the check, the true burden of a tax is often hidden. It is probable that the various taxes on electricity are passed on to consumers. In the current state regulatory environment, taxes are passed on to consumers in their entirety through the rate-of-return rate structure.

It is useful to distinguish between progressive, proportional or regressive taxes.¹⁰ The public utility taxes on electricity represent 0.21% of the annual income for a family of four earning \$15,000. This burden lessens consistently as income increases, to a low of 0.0358% of annual income for a household earning \$150,000 per year. The taxes on electricity are the second most regressive taxes in the state (behind cigarette and tobacco taxes). They also represent a relatively small proportion of state revenue collections, about 1.4% of general fund revenue for fiscal 1996.¹¹

Conclusion

Overall, two issues confront policymakers attempting to deal with deregulation. First, there is the issue of competitive advantage, differences in tax and regulatory treatment at both the state and federal level. Second, there is the larger question of the overall level of energy taxes in Washington.

Regarding the first issue, we find state tax policy exacerbates the preferences granted by the federal government. Taxes based on product price are higher for the investor-owned utilities which do not benefit from the federal subsidies allowing government utilities to price their product substantially below unsubsidized cost. The additional tax burden represented by the gross receipts tax is approximately 1.5% of revenues. (Although replacing the *ad valorem* tax with a unit-based tax (e.g., kilowatt hour) would eliminate this compounding effect, the Washington Research Council has not analyzed this alternative.)

In addition, the property tax exemption granted municipal utilities, which pay no privilege or in-lieu property tax, represents a significant competitive advantage for them. The PUD privilege tax similarly may fall short of fully off-setting the benefit to PUDs of their property tax exemption, although the extent to which this

¹⁰ For a more in depth discussion of tax incidence and tax burden, please see the Washington Research Council's Special Report *Understanding Washington State Taxes* August 19, 1996.

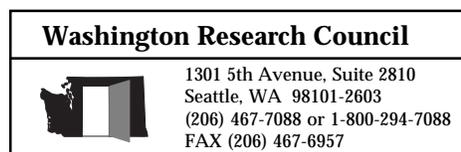
¹¹ General fund revenue represented 57% of all state revenues.

is true is uncertain. (We would have liked to see more consistent and comprehensive data on local taxes and exemptions.) As competition among utilities intensifies (and in view of rising concern regarding the distribution and level of property taxes in Washington), policymakers may wish to explore the basis for the exemption of local government's *business* property, that is, property supporting those activities of government which are in direct competition with private enterprise. As part of such analysis, policymakers should also explore the appropriate role of government with regard to such business activity.

Second, the level of energy taxes appears high. In 1993 (the most recent year for which data are available), per capita public utility taxes (including all utilities, not just electricity) in Washington amounted to \$76.26, ranking the state ninth highest, well above the U.S. average of \$57.05.¹² Although the figures include other utilities (e.g., water, natural gas), the data suggest that our traditional low energy costs have enabled relatively high rates of taxation. At 3.873% of gross revenue the state public utility tax is imposed at a significantly higher rate than the highest business and occupation tax rate. A deregulated, competitive, national market may well erode the regional price advantage and bring the tax level into sharper focus. Although a thorough comparison of interstate energy taxes was beyond the scope of this analysis, business climate and tax equity considerations make such an examination critical.

As the state confronts the deregulation of the electric utility industry, competing interests will doubtless seek to retain existing competitive advantages, or to obtain new ones. To the extent they succeed, the majority of consumers are likely to suffer, as the tilting of the playing field reduces competition. A uniform set of tax policies would appear to be a minimal step toward fair competition. As national competition grows more fierce and brings a host of new entrants into the Washington state marketplace, tax policy toward utilities will grow in importance. Reducing tax preferences and easing the tax burden placed on energy providers and their consumers should be among the steps taken by policymakers to meet the challenge of deregulation.

¹² U.S. Dept. of Commerce, Bureau of the Census, by Internet.



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