



Taxation and Regulation of Public Utilities

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Prepared by

Rick Olin and Rory Tikalsky

Wisconsin Legislative Fiscal Bureau
One East Main, Suite 301
Madison, WI 53703
<http://legis.wisconsin.gov/lfb>

Taxation and Regulation of Public Utilities

Introduction

This paper provides information on the taxation and regulation of public utility corporations in Wisconsin. These companies are subject to state taxation on the basis of gross receipts or property value (ad valorem), in lieu of local property taxes. In addition, information is provided on the regulatory responsibilities and functions of the state Public Service Commission.

Several factors combine to make the public utility sector different than that of most other corporations. The public services provided are relatively exclusive in nature and the component industries are dominated by relatively few, large corporations. One consequence of these characteristics is that each industry is subject to a regulatory system that, in turn, has had significant implications for their tax treatment. In addition, rapid economic and technological changes, alterations in the energy use mix due to price changes and conservation efforts, and changes in company ownership or company structure all have major effects on the taxation and regulation of different types of utilities.

State Utility Taxes

Historical Development

Public utilities in Wisconsin are subject to state taxation in lieu of local general property taxation. The state tax takes one of two general forms, depending on the type of company: (a) an "ad valorem" tax based on the assessed value of company property within the state; or (b) a tax or license fee based on the gross revenues or receipts of the

company generated in Wisconsin. The history of these tax provisions is varied for each type of company, but generally reflects the replacement of local with state taxation.

Almost since the state's creation, a recognition has existed that certain public utility property may be difficult to tax locally. An 1854 law exempted railroads from the property tax, and, instead, the state imposed a tax based on the railroads' earnings. In 1904 and 1905, that tax was phased out and replaced with an ad valorem tax based on the statewide average tax rate. The state ad valorem tax was extended to street railway companies with connected light, heat, and power operations in 1908 and to all light, heat, and power companies in 1917, provided they operated in more than one municipality. Previously, the state preempted local taxation of conservation and regulation companies (owners of dams and reservoirs used for hydroelectric power generation), which became subject to the state's ad valorem tax in 1915. Subsequently, the tax was imposed on commercial airlines in 1946 and on gas and oil pipeline companies in 1950.

As evidenced by the state's early taxation of railroad companies, the gross revenues tax has been an alternative to the state's ad valorem tax for most of the state's history. Starting in 1883, gross revenues license fees were imposed on telephone companies at graduated tax rates, and separate toll and exchange rates were extended in 1931. A gross revenues based tax was extended to car line companies (lessors of passenger and freight railroad cars) in 1931 and to rural electric cooperatives in 1939.

Since 1986, the basis of taxation has shifted for a number of utilities, but the two basic forms of taxation continue. The tax basis for light, heat, and

power companies was changed from ad valorem to gross revenues in 1986. In the same year, telegraph companies were recognized as providing telecommunications services and also were shifted from ad valorem to gross revenues taxation. In addition, all other companies providing telecommunications services to the public (such as resellers) were made subject to the gross revenues license fee.

The gross revenues license fee on telecommunications services was subsequently discontinued, and since 1998, all telephone companies have been taxed on an ad valorem basis. As part of the shift to an ad valorem tax, a transitional fee was imposed on certain telecommunications service

providers in 1999 and 2000, based on the tax that would have been due under the gross revenues license fee. The ad valorem tax on telephone companies differs from the state ad valorem tax imposed on other public utility property. A separate value of the property of telephone companies is determined within each local taxing jurisdiction where telephone company property is located, and the tax is based on the prior year's net property tax rate of the corresponding local taxing jurisdiction.

Both types of tax are administered by the Department of Revenue (DOR). Table 1 summarizes the type of utility tax, the tax base, and the tax rate that currently applies to each type of Wisconsin utility company.

Table 1: Summary of Utility Tax by Type of Utility

	Tax Base	Tax Rate
Utilities Subject to Ad Valorem Taxes		
Air Carrier Companies Conservation and Regulation Companies Municipal Electric Companies Pipelines Railroad Companies	All real and personal property, including all franchises, title, and interest of the company used or employed in its operations; value as a unit	Average net property tax rate in state
Telephone Companies	Real property and tangible personal property; value within the local jurisdiction where it is located	Net property tax rate in jurisdiction where property is located
Utilities Subject to Gross Revenues License Fee		
Car Line Companies	Gross receipts from the operation of car line equipment	Average net property tax rate in state
Electric Cooperative Associations	Gross revenues, less certain deductions, from: - the sale of electricity for resale - all other sources	1.59% 3.19
Municipal Light, Heat, and Power Companies	Gross revenues from outside the municipality, less certain deductions, from: - the sale of gas services - the sale of electricity for resale - all other sources	0.97 1.59 3.19
Private Light, Heat, and Power Companies	Gross revenues, less certain deductions, from: - the sale of gas services - the sale of electricity for resale - all other sources	0.97 1.59 3.19

Ad Valorem Group

Utilities subject to ad valorem taxation include: (a) air carrier companies; (b) conservation and regulation companies; (c) municipal electric companies; (d) pipeline companies; (e) railroad companies; and (f) telephone companies.

Air Carrier Companies. The statutes define an air carrier company as any person engaged in the business of transportation in aircraft of persons or property for hire on regularly scheduled flights. There were 18 air carrier companies subject to tax in 2018 including American Airlines, Delta Airlines, Federal Express Corporation, Frontier Airlines, SkyWest Airlines, Southwest Airlines and United Continental Holding. Airline company utility taxes are categorized as segregated revenue and deposited in the transportation fund. Beginning in 2001, an exemption from ad valorem taxes was extended for any air carrier that operates a hub facility in Wisconsin. Although Frontier Airlines qualified for the exemption in 2010 through 2012, no airline has qualified for the exemption since that time.

Conservation and Regulation Companies. A conservation and regulation utility is any person organized under the laws of the state for the conservation and regulation of the height and flow of water in public reservoirs in the state. This is done by impounding the rivers' headwaters into various reservoirs during times of heavy rainfall and then releasing the stored water during subsequent periods. These companies normalize river flow and the stored water is used for hydraulic power generation by various light, heat, and power companies. The Chippewa & Flambeau Improvement Company and the Wisconsin Valley Improvement Company have been established to conserve runoff waters in the Chippewa River and Wisconsin River watersheds.

Municipal Electric Companies. Under the state statutes, any combination of municipalities may contract to create a public corporation for the

joint development of electric energy resources or for production, distribution, and transmission of electric power or energy, wholly or partially, for the benefit of the municipalities. In 2018, three municipal electric companies were subject to ad valorem utility taxes -- Badger Power Marketing Authority of Wisconsin, Upper Midwest Municipal Energy Group, and WPPI Energy.

Pipeline Companies. State law defines pipeline company as any person that is engaged in the business of transporting or transmitting gas, gasoline, oils, motor fuels, or other fuels by means of pipelines and that is not a light, heat, and power utility. Of the group of utilities subject to ad valorem taxes, pipeline companies generate the second highest amount of general fund taxes. In 2018, eleven pipeline utility companies operated in Wisconsin. The largest carriers, in terms of their property value allocated to Wisconsin, were Enbridge Energy and Southern Lights Pipeline, which transport oil products, and ANR Pipeline Company, Great Lakes Transmission, Guardian Pipeline, and Northern Natural Gas, which transport natural gas.

Railroad Companies. A railroad company is any person, other than a local unit of government, owning and/or operating a railroad in the state or owning or operating any station, depot, track, terminal, or bridge for railroad purposes. In 2018, there were ten railroad companies in Wisconsin subject to tax. The major carriers were the Burlington Northern and Santa Fe Railway Company, Soo Line Railroad Company, Union Pacific Railroad, and Wisconsin Central Ltd. Railroad utility taxes are categorized as segregated revenue and deposited in the transportation fund.

Telephone Companies. A telephone company is any person that provides telecommunications services to another, including the resale of services provided by another telephone company. "Telecommunications services" means the transmission of voice, video, facsimile, or data messages. Telegraph messages are specifically included in this

definition, but cable television, radio, one-way radio paging, and transmitting messages incidental to hotel occupancy are specifically excluded. A telephone company does not include a person who operates a private shared communications system and who is otherwise not a telephone company. As described below, state law provides a different assessment procedure for telephone companies than for other ad valorem taxpayers.

In 2018, there were over 100 telephone companies with a Wisconsin public utility tax assessment. Some of these companies operate local exchanges. Others offer interstate service or intrastate service between local access and transport areas. A third group consists of firms that resell long distance services. These resellers purchase and resell bulk services from another telephone company. They own and operate switching facilities, but do not have separate transmission lines. Finally, commercial mobile telephone companies provide wireless (cellular and personal communications) services. While there are over 100 taxpayers, just 13 companies account of two-thirds of the tax. The largest telephone taxpayers are Wisconsin Bell, AT&T Mobility, and Verizon Wireless.

Determination of Tax Assessment. For all ad valorem utilities, a tax assessment is calculated by determining the full market value of the utility's taxable property and multiplying that value by a tax rate. State law excludes from taxation the value of certain property that is also exempt from general property taxes: (a) motor vehicles; (b) treatment plant and pollution abatement equipment; and (c) computers, cash registers, and fax machines.

Except for telephone companies, the tax assessment equals the statewide average net property tax rate multiplied by the utility's Wisconsin value. DOR determines that value by deriving a unit value, which is equivalent to the utility's full market value if sold as a unit, and allocating a portion of that value to Wisconsin according to statutorily established formulas.

Since actual sales price data do not generally exist, this process utilizes three distinct indicators of value -- cost, capitalized income, and stock and debt -- which attempt to take account of earning potential and are weighted differently according to the most appropriate indicator for a given type of utility.

Under the cost indicator, the Department may consider four types of costs -- historical, original, reproduction, and replacement. To these costs, allowances are made for loss of value due to depreciation, obsolescence, regulatory required write-offs, and utility plant acquisition adjustments. The capitalized income indicator is based on a company's operating income (before subtracting depreciation), capitalized at a rate based on market rates for equity, debt, and other factors. The premise behind this method is that the company is worth what it can earn. That is, the purchase price of the company can be determined by estimating expected future earnings and a required rate of return for investors. The stock and debt indicator uses the market value of these two items and other current liabilities, which together are assumed to equal the market value of property and assets. As companies diversify or form conglomerates, the stock and debt method of valuation becomes more difficult to employ. Other indicators are also considered, including company and independent appraisals, prior year assessments, shareholder reports, and comparable sales, if available. Based on these indicators, the Department uses its judgment to arrive at an estimate of fair market value.

Telephone companies have been subject to a somewhat different assessment process since 1998. First, telephone company values are determined within each local taxing jurisdiction where the company's property is located. Second, the value within each local taxing jurisdiction is multiplied by the net tax rate applied in that jurisdiction in the prior year under the general property tax. This procedure causes the value of intangible property to be excluded from the telephone company's value, which differs from the unit value

methods for valuing property, where the value of intangible property is generally included in the utility company's assessed value.

State law requires DOR to value telephone company property using the same methods the Department uses to assess manufacturing property, including a field review of all property once every five years on a rotating basis. Generally, DOR uses a sales-based approach to assess real property and the cost-based approach to assess personal property. For real property, DOR makes annual adjustments to reflect new construction and economic changes to value. The property's value is initially determined on a company-wide basis by multiplying the property's original cost by a conversion factor that reflects price changes and depreciation. The resulting value is allocated to individual local jurisdictions based on the original cost of the personal property in each jurisdiction relative to the original cost of personal property on a company-wide basis.

If telephone company property is used in part for utility operations and in part for nonoperating purposes, the property's predominant use determines how it is assessed. If real or tangible personal property is used more than 50% in the business's operation as a telephone company, then DOR assesses the property and the property is exempt from the general property tax. If real or tangible personal property is used less than 50% in the business's operation as a telephone company, then the property is assessed and taxed locally.

For other companies subject to ad valorem taxation, if a structure is used in part for utility operations and in part for nonoperating purposes, the structure is generally assessed for taxation by the state at the percentage of its full market value that represents its operating purposes. The balance is subject to local assessment and taxation.

Payment of Tax. Ad valorem taxpayers make semiannual payments on May 10 and November 10. Under this payment schedule, the utility

company must pay either 50% of its previous year's net utility tax liability or 40% of its estimated current year's liability on May 10. The utilities are notified of their tax liability for the current year on either August 10 for railroads and municipal electrics, October 1 for pipelines, airlines, and conservation and regulation companies, or November 1 for telecommunications companies. The remainder of the current year's assessment is due on November 10.

Gross Revenues Group

Utilities subject to the license fee on gross revenues include: (a) car line companies; (b) electric cooperatives; and (c) municipal and private light, heat, and power companies.

Car Line Companies. State law defines a car line company as any person, not operating a railroad, that is engaged in the business of furnishing or leasing car line equipment to a railroad. Car line equipment means railroad cars or other railroad equipment used in railroad transportation provided under a rental agreement. In 2018, six car line companies were subject to the state utility tax.

Electric Cooperatives. An electric cooperative is an entity organized under state law as a cooperative association that generates, transmits, or distributes electric energy to its members at wholesale or retail. The major electric cooperative association is Dairyland Power Cooperative. It is headquartered in La Crosse and supplies wholesale electricity to 30 rural electric distribution cooperatives, including 22 in Wisconsin, and 17 municipal utilities, including 10 in Wisconsin. In 2018, Dairyland accounted for 45% of total electric cooperative license fees.

Light, Heat, and Power Companies. There are two basic types of light, heat, and power companies. They may be either investor-owned or operated as a municipal utility. State law defines a light, heat, and power company as a person, association, company, or corporation engaged in

the following businesses: (a) generating and furnishing gas for lighting or fuel or both; (b) supplying water for domestic or public use or for power or manufacturing purposes; (c) generating, transforming, transmitting, or furnishing electric current for light, heat, or power; (d) generating and furnishing steam or supplying hot water for heat, power, or manufacturing purposes; or (e) transmitting electric current for light, heat, or power. Only municipal public utilities that meet the definition and also provide service outside the boundaries of the municipality owning the utility are subject to the state tax.

Since the tax on light, heat, and power companies was converted from an ad valorem to a gross revenues tax in 1985, the definition of light, heat, and power company has been expanded several times to reflect industry changes. Beginning in 1996, the definition was modified to include qualified wholesale electric companies, defined as any person that: (a) owns or operates facilities for the generation and sale of electricity to a public utility or to any other entity that sells electricity directly to the public; (b) sells at least 95% of its net production of electricity; and (c) owns, operates, or controls electric generating facilities that have a total power production capacity of at least 50 megawatts. These companies are also called independent power producers.

In 2001, the definition of qualified wholesale electric company was extended to wholesale merchant plants that have a total power production capacity of at least 50 megawatts. As part of a broader effort to enhance electric reliability, state law governing the regulation of public utilities had previously been amended to recognize these plants as electric generating equipment and associated facilities in this state that do not provide service to any retail customer and that are owned or operated either by an affiliated interest of a public utility or by a person that is not a public utility.

In 2018, the state's gross revenues tax on light, heat, and power companies extended to 103

utilities. While the state's 78 municipal light, heat, and power companies outnumber the private light, heat, and power companies, the municipal utilities comprised only 1.3% of 2018 tax assessments. The remaining 98.7% of the tax was attributable to 25 private light, heat, and power companies, which included 15 companies providing primarily retail service, 9 qualified wholesale electric companies, and one transmission company. Seven companies comprised just under 95% of total tax assessments: Wisconsin Electric Power Company (WEPCo); Wisconsin Power and Light Company; Wisconsin Public Service Corporation; Xcel Energy (the holding company for Northern States Power); Madison Gas and Electric Company; Wisconsin Gas Company; and NextEra Energy (the owner of the Point Beach nuclear plant, which was previously owned by WEPCo).

Determination of Assessment. Gross revenues utilities submit annual reports to the Department of Revenue on the amount of taxable gross revenues for the preceding year. The gross revenue amount is multiplied by the applicable tax rate to determine the amount of taxes due. For each type of taxpayer, state law specifies a rate and defines the tax base. Because the taxes are characterized as gross revenues or receipts, relatively few types of revenues are excluded from the tax base.

Car line companies' gross earnings are defined as all receipts by a car line company from the operation of equipment in the state. Earnings from interstate businesses are allocated to Wisconsin based on the ratio of Wisconsin car miles to total car miles. A tax rate equal to the average statewide net property tax rate is applied against the receipts. This is the same rate used for the state's ad valorem tax.

For electric cooperatives, gross revenues are defined as the previous year's total operating revenues, less interdepartmental sales and rents and the retailers' discount from the sales tax. Certain grants, public benefit fees, and low-income

assistance fees are excluded from gross revenues. In addition, a deduction is allowed for the cost of power bought for resale if the cooperative buys more than 50% of the power it sells, or if the electric cooperative purchased more than 50% of the power it sold in 1987 from an out-of-state seller. For multistate associations, a share of total cooperative revenues are apportioned to Wisconsin using a three-factor formula based on the proportion of property, payroll, and sales in-state to the respective total of each factor. Electric cooperatives are taxed at a flat 3.19% rate on gross revenues, except that the tax rate on wholesale sales of electricity equals 1.59%.

Annual assessments for light, heat, and power companies are based on their taxable gross revenues earned during the previous year. Except for qualified wholesale electric companies and transmission companies, gross revenues are defined as total operating revenues reported to the state Public Service Commission (PSC), less interdepartmental sales and rents and the retailers' discount from the sales tax. Also, gross revenues include receipts from total environmental control charges paid to companies under financing orders issued by the PSC. A private light, heat, and power company may deduct from its gross revenue either: (a) the actual cost of power purchased for resale if that company purchases more than 50% of its electric power from a nonaffiliated utility that reports to the PSC; or (b) 50% of the actual cost of power purchased for resale if that company purchases more than 90% of its power and has less than \$50 million in gross revenues. Certain grants, public benefit fees, and low-income assistance fees are also excluded from the gross revenues of light, heat, and power companies. Municipal light, heat and power companies are only taxed on that portion of their revenues from outside the boundaries of the municipality operating the utility.

For qualified wholesale electric companies, "gross revenues" means total business revenues from the same services that are provided by light, heat, and power companies. For transmission

companies, operating revenues are subject to the license fee, except for revenues from transmission services to a Wisconsin public utility or electric cooperative.

To determine Wisconsin taxable revenues for multi-state companies, an apportionment factor based on the shares of a company's total payroll, property, and sales that are in Wisconsin is applied to a company's gross revenues. The payroll factor includes management and services fees paid by a light, heat, and power company to an affiliated public utility holding company. As a result of this treatment, the portion of a public utility holding company's property that is used to provide services to a light, heat, and power company affiliated with the holding company is exempt from local property taxation.

Revenue from the sale of gas services is subject to tax at the rate of 0.97%, and wholesale sales of electricity are taxed at 1.59%. The tax rate on all other taxable revenue is 3.19%.

Payment of Tax. The Department makes a tax assessment based on taxable revenues earned in the previous calendar year. Installment payments are made toward the tax in the year that the revenue is earned. A final payment is made in the assessment year to reconcile installment payments with final assessments.

For car line companies, at least 50% of the current or 50% of the subsequent year's liability is due on September 10 and the remaining liability is due on April 15.

For electric cooperatives and light, heat, and power companies, semiannual installment payments of either 55% of the previous assessment or 50% of the estimated assessment are due on May 10 and November 10 of the year in which the revenue is earned. These utilities are notified of their actual license fee by the following May 1. On May 10 of the year following the year in which the revenue was earned, either a final adjustment

Table 2: General Fund Utility Tax Collections (In Millions)

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Ad Valorem Tax							
Conservation & Regulation	\$0.1	\$0.1	\$0.1	\$0.2	\$0.2	\$0.2	\$0.2
Municipal Electric	5.2	5.0	5.2	5.2	4.9	5.0	4.8
Pipeline	33.7	28.4	35.5	35.0	37.3	39.7	45.5
Telephone/Special Common Carrier	<u>81.0</u>	<u>67.3</u>	<u>72.2</u>	<u>81.9</u>	<u>76.5</u>	<u>70.8</u>	<u>63.6</u>
Total Ad Valorem Tax	\$120.0	\$100.8	\$113.0	\$122.3	\$118.9	\$115.7	\$114.1
Gross Revenues Tax							
Car Line Companies	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.1	\$0.2
Electric Cooperatives	11.1	11.3	12.1	12.2	11.7	12.1	12.4
Municipal Light, Heat & Power Cos.	3.0	3.2	3.4	3.3	3.5	2.9	3.1
Private Light, Heat & Power Cos.	<u>231.6</u>	<u>226.1</u>	<u>232.3</u>	<u>243.8</u>	<u>226.1</u>	<u>229.6</u>	<u>235.4</u>
Total Gross Revenues Tax	\$245.9	\$240.8	\$248.0	\$259.5	\$241.5	\$244.7	\$251.1
Refunds and Interest & Penalty Payments	0.0	-0.3	0.0	0.0	0.2	0.1	0.1
General Fund Total Collections	\$365.9	\$341.3	\$361.0	\$381.8	\$360.6	\$360.5	\$365.3

payment is made or a refund is issued to reconcile the two prior installment payments with the actual assessment.

Tax Collections

Ad valorem tax collections from airlines and railroads are classified as segregated revenues and deposited in the state's transportation fund, while the general fund receives the remaining utility tax revenues. In 2017-18, general fund utility tax collections totaled \$365.3 million and comprised 2.3% of total general fund tax revenues. Utility tax collections deposited in the transportation fund equaled \$47.0 million in 2017-18 and accounted for 2.4% of the transportation fund's total revenues.

Table 2 shows the change in general fund utility tax collections over the last seven fiscal years. Over the entire period, collections declined slightly, increasing in three years and decreasing in three years. The fluctuations are due largely to changes in telephone, pipeline, and private light, heat, and power company tax collections. The reductions in telephone company taxes reflect depreciation and obsolescence of property, as technologically improved equipment replaces older equipment. Construction of new pipeline property and enhancements to existing pipelines

have resulted in increases in taxable values and higher tax collections from pipeline companies. The reductions in private light, heat, and power company taxes were due in part to lower commercial and industrial energy consumption due to the slow pace of economic recovery after the 2009-10 economic downturn and the decrease in natural gas prices.

Table 3 shows historical collections for the two transportation fund utilities. Over the seven-year period, total collections have increased by 37.8%, with collections from railroad companies increasing at a faster rate (45.2%) than collections from airlines (3.3%). In the tax years corresponding to this period, statewide taxable values for railroad companies increased by 52.6%, compared to 17.9% for airlines. Over the seven-year period, the statewide average tax rate increased 1.5%.

Other State Taxes on Utilities

Corporate Income/Franchise Tax

In addition to the ad valorem and gross revenues taxes described above, Wisconsin public

Table 3: Transportation Fund Utility Tax Collections (In Millions)

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Ad Valorem Tax							
Airline	\$6.0	\$6.1	\$7.7	\$8.0	\$5.1	\$7.1	\$6.2
Railroad	<u>28.1</u>	<u>29.1</u>	<u>31.3</u>	<u>35.7</u>	<u>38.5</u>	<u>45.3</u>	<u>40.8</u>
Transportation Fund							
Total Ad Valorem Taxes	\$34.1	\$35.2	\$39.0	\$43.7	\$43.6	\$52.4	\$47.0

utilities are generally subject to the state corporate income/franchise tax on the same basis as other corporations. However, certain types of utility companies are exempt from this tax. Municipal light, heat, and power companies are exempt due to their status as agencies of local government. Electric cooperatives are exempt from the corporate income tax based on the general exemption for all cooperatives organized under Chapter 185 of the Wisconsin Statutes.

Taxable utility companies determine net corporate income tax liability in the same manner as most corporations. State corporate income tax provisions are generally referenced to federal law. Thus, the starting point for determining state income tax liability, net taxable income, is determined by subtracting allowable federal deductions from federal gross income. However, there are certain state adjustments that must be made in arriving at net taxable income for state purposes. The state utility tax is specified as an allowable deduction in these adjustments. The state corporate income tax is imposed at a flat 7.9% rate on taxable income. If applicable, state tax credits are used to offset gross tax liability to arrive at net tax liability. Utility companies that are members of a combined group report their income, deductions, and tax liability in the group's combined return. More detailed information about the state corporate income tax may be found in the Legislative Fiscal Bureau's informational paper entitled, "Corporate Income/Franchise Tax."

Sales Tax

Current law provides a number of energy-

related sales and use tax exemptions to utilities and other businesses, including exemptions for the following: (a) purchases by power companies of fuel used to produce electricity, steam, or other power; (b) transfers of transmission facilities to an electric transmission company; (c) the gross receipts of electric utilities and retail electric cooperatives from collections of low-income assistance fees; (d) fuel and electricity consumed in manufacturing tangible personal property; and (e) purchases of electricity and fuel, including natural gas, used in farming.

A sales tax exemption is provided to power companies, as well as others, for products, other than an interruptible power source for computers, whose power source is wind energy, direct radiant energy received from the sun, or gas generated from anaerobic digestion of animal manure and other agricultural waste, subject to minimum power production requirements. The sale, use, or consumption of electricity or energy produced from such a product is also exempt. Finally, state law provides a sales tax exemption for residential purchases of electricity and natural gas from November through April. Most other fuels purchased for residential use (such as coal, fuel oil, propane, steam, and peat) are totally exempt.

The state sales tax is generally imposed on telecommunications services, mobile telecommunications service, most ancillary services (such as voicemail service and directory assistance), and internet access services if the services are sourced to Wisconsin. However, under 2017 Wisconsin Act 59, internet access charges will become exempt from the tax beginning on July 1, 2020,

which reflects federal prohibition of the tax pursuant to the federal Trade Facilitation and Trade Enforcement Act of 2015. These services, other than telecommunication services sold on a call-by-call basis, are subject to the tax if the customer's place of primary use is in Wisconsin. Telecommunications services that are sold on a call-by-call basis are sourced to this state if the call originates or terminates in Wisconsin and is charged to a service address in this state.

The state's sales tax also applies to sales of prepaid calling services (calling cards) and prepaid wireless calling services (prepaid mobile phones), if the sales are sourced to Wisconsin. Generally, these sales are sourced to Wisconsin if the sale takes place at a retailer's location in this state, if the item that will implement the right to receive telecommunications services (such as a calling card) is shipped to a customer's address in this state, or if no item is shipped to a Wisconsin address but the customer's billing address is located in this state.

State law provides certain exemptions from the tax, such as for the sales price of the countywide "911" emergency phone systems, the police and fire protection fee, detailed telecommunications billing services, and interstate 800 services.

More information about the sales tax may be found in the Legislative Fiscal Bureau's informational paper entitled, "Sales and Use Tax."

Police and Fire Protection Fee

State law requires communications providers to impose a police and fire protection fee equal to seventy-five cents per month on each active retail voice communications service connection with an assigned telephone number. In instances where a provider extends multiple service connections to a subscriber, a separate fee is imposed on each of the first ten connections, and one additional fee is imposed for each additional ten connections per billed account. Communications service provided

via a voice over Internet protocol connection is also subject to the fee. Prepaid wireless telecommunications plans are subject to a fee that is equal to one-half of the fee imposed on other types of service connections. Such fees are imposed with each retail transaction, and retailers are required to collect the fee from the buyer with respect to each transaction. Providers and retailers are permitted to list the fee separately on subscribers' bills, or to list the fee in combination with charges for funding countywide 911 systems.

While state law directs the PSC to administer the fee, the Commission has contracted with DOR to collect the fee under a separate statutory provision. Subscribers pay the fee to their communications provider or retailer, who remits the fee to DOR by the end of the calendar month following the month the provider or retailer receives the fee from the subscriber. Fees are not included in calculating state or local sales taxes.

The police and fire protection fee was created in 2009 Wisconsin Act 28 and has been imposed since September 1, 2009. During the first nine months the fee was imposed, collections totaled \$45.4 million in 2009-10. Collections rose to \$51.9 million in 2010-11, the first full year of imposition and to \$56.3 million in 2011-12. Since then, collections have fluctuated within that band until 2017-18, when they fell to \$49.3 million after totaling \$56.6 million in 2016-17.

Proceeds from the fee are deposited in a segregated fund called the police and fire protection fund. Amounts deposited in the fund are used to make payments under the county and municipal aid program, thereby reducing the amount of general purpose revenue needed for the payments. Beginning in 2017-18, a portion of the proceeds are being used to fund the Wisconsin Interoperable System for Communications (WISCOM) program administered by the Department of Military Affairs. WISCOM is a shared system that first responders will use to communicate during a major disaster or large-scale incident.

Public Service Commission's Regulation of Public Utilities

History

Wisconsin's Public Service Commission (PSC) was preceded by a Railroad Commission, which regulated railroad rates. In 1907, the Railroad Commission's responsibilities were expanded when Wisconsin became the first state to regulate essential utility services provided to the public by entities that generally operated as noncompetitive, natural monopolies. The Public Service Commission was established as the successor to the Railroad Commission in 1931. Currently, the PSC regulates electric, natural gas, steam, water, and combined water and sewer utilities and certain aspects of local telephone service. Except for a small amount of federal dollars, the PSC is funded entirely by fees imposed on regulated entities.

Public Service Commission Overview

The PSC's regulatory authority is vested in three full-time commissioners, appointed by the Governor, with the advice and consent of the Senate, to staggered, six-year terms. The Governor designates the Commission chairperson, who serves a two-year term, and the chairperson may appoint division administrators, the chief legal counsel, and the communications and legislative director from outside the classified service. The agency's professional and support staff are generally in the classified civil service.

PSC regulation may vary based on such factors as type of utility, utility size, and number of customers served. However, except in the case of telecommunications utilities noted below, the Commission is generally responsible for:

- Setting the level and structure of rates for utility service based on authorized rates of return on investment;

- Regulating the construction, use, modification, and financing of utility operating property, including the use of depreciation accounts for new construction;

- Valuing operating property;

- Overseeing, examining, and auditing utility accounts and records;

- Approving utility mergers, other than for telecommunications utilities;

- Overseeing transactions between a public utility and an affiliated interest; and

- Determining levels of adequate and safe service and responding to consumer complaints about utility operations and prices.

The statutes grant the PSC broad jurisdiction to do all things necessary and convenient in the exercise of its regulatory authority over public utilities. The Commission has traditionally used a flexible approach in exercising its jurisdiction. Under this approach, the PSC has had discretionary authority to adjust, as needed, the degree of regulation of classes of public utilities. The following material provides greater detail on the PSC's major responsibilities.

Traditional Rate Regulation

Rate-setting has historically been the Commission's most visible regulatory function. In what has traditionally been a monopoly market, the rate-setting process attempts to establish prices at levels that would occur naturally under competitive market forces. While a utility's natural interest is to set prices at levels that maximize profits, the regulatory process provides a balance so that services are extended at prices that are reasonable both to rate-payers and to utility owners.

Rate-setting typically involves three basic determinations. First, the Commission sets a rate of

return that the utility is allowed to earn on its investment in plant and equipment. Second, the amount of revenue necessary for the utility to operate, pay debt, and meet its allowable rate of return is determined. Third, prices are set at levels that will generate the company's revenue requirement, allocated across categories of service according to relative costs and other factors for each category. All corporate income taxes, ad valorem or gross revenues utility taxes, and sales taxes are treated as expenses, and are generally fully recovered through the rates.

For utilities subject to such rate regulation, the rate-setting process has three basic procedural phases: pre-hearing, public hearing, and decision-making. First, the pre-hearing phase begins when a utility requests a rate increase. Prior to any formal hearing, PSC staff analyze the request and its impact and conduct a company audit. Also at this time, interested parties wishing to participate at the public hearing on the rate request prepare their materials. Second, the public hearing phase of the rate-setting process is an investigative and fact-finding process, rather than a decision-making forum. The utility makes a formal presentation of its proposal. The public, authorized intervenors, or the PSC staff may challenge the rate request or suggest alternatives at this stage of the rate-setting process. Third, the decision-making phase occurs after the public hearing and involves an open meeting held by the commissioners on the rate case. The commissioners make their decision based on the information presented in the initial formal filings and on the subsequent record developed at the public hearing.

While PSC decisions are generally final, they may be appealed by the utility or by other parties with an interest in the matter. Appeals may be made either directly to circuit court, or to the PSC for a rehearing and, then, to circuit court.

The PSC's authority extends to intrastate utilities and the intrastate operations of multi-state utilities. At the federal level, regulatory responsi-

bilities over interstate utility operations are divided between the Federal Communications Commission for interstate services of telecommunications companies and the Federal Energy Regulatory Commission for interstate operations and wholesale sales by energy service companies. Primary oversight of commercial nuclear power reactors that generate electricity is provided by the federal Nuclear Regulatory Commission, which regulates the operation and decommissioning of nuclear power plants and the transportation, storage, and disposal of nuclear waste from the plants.

The PSC authority over rates does not extend to all public utilities. In addition to the interstate utilities, some intrastate utilities are also excluded from PSC oversight. These include electric cooperatives, telephone cooperatives, certain specified providers of telecommunications services, and cable television companies. As of 2011, traditional utility regulation does not generally extend to the state's telecommunications utilities.

Deregulation of Telecommunications Services

In the telecommunications area, the period since 1984 may be characterized as one of increased competition both in terms of number of carriers and types of carriers. The role of the PSC has changed during this period, as traditional rate regulation has been replaced by deregulation and increased levels of competition. As a result of 2011 Wisconsin Act 22 (hereafter Act 22), telecommunications utilities in Wisconsin have become largely free of traditional utility regulation with respect to their offering of retail services to customers. Regulation was reduced from all forms of electronic communications to voice telecommunications only. In understanding this transition, several events are noteworthy.

Prior to 1984, American Telephone and Telegraph Company (AT&T) operated as a regulated monopoly. Recognizing that competition in the long-distance market had become feasible due to the introduction of electronic components and

AT&T's development of transmission technologies that replaced copper wires, the U.S. Department of Justice filed an antitrust lawsuit against AT&T in 1974. That lawsuit's settlement became effective in 1984, thereby allowing substantial deregulation of interexchange telecommunications markets. The terms of the settlement required AT&T to be split into two business components. AT&T would continue to own Western Electric, Bell Telephone Laboratories, and the long-distance services provided by AT&T's long lines division. The other business component was local exchange service, which AT&T divested from itself by creating seven regional Bell operating companies. The regional Bell operating companies, as well as the local exchange companies that existed before divestiture, are referred to as incumbent local exchange carriers, or ILECs.

In the ensuing years, competition among telecommunications utilities providing local exchange services also increased. A first step to reduce telecommunications regulations at the state level occurred when 1985 Wisconsin Act 297 introduced procedures for substituting competition for rate regulation and for certifying alternative providers. In a second step, an executive order issued by Governor Thompson created a task force on telecommunications infrastructure in 1993. The recommendations of the task force led to enactment of 1993 Wisconsin Act 496, which further deregulated the industry. Specifically, the Act directed the PSC to regulate all telecommunications utilities with the goal of developing forms of regulation other than the traditional rate-of-return regulation approach used at that time. Types of incentive regulation authorized under the Act included price regulation, under which the PSC regulates the prices of basic service rather than the utility's earnings, and alternative regulation, under which the PSC reduces its level of regulation in exchange for the utility's commitment to achieving certain goals related to increasing competition. Also, the Act created the state's universal service fund (USF) and authorized the Department of Agriculture, Trade and Consumer Protection to

enforce consumer protection measures related to deceptive advertising and sales representations, negative billing practices, and certain collection practices. The PSC was to enforce consumer complaints related to quality of service and service delivery.

Recognizing the increased level of competition in long-distance markets since the AT&T divestiture, the federal Telecommunications Act of 1996 sought to facilitate competition in local exchange markets and further enhance long-distance competition. The Act requires telecommunications utilities, such as ILECs, that acquired local exchange networks through divestiture to lease parts of their systems at cost, plus a reasonable profit, to new telecommunications providers entering that local market to compete against the ILEC. This policy change allowed a number of competitive local exchange carriers (CLECs) to provide services to customers, without the need to build entirely new and expensive networks.

Also, the 1996 federal Act requires interconnection of carriers' networks and imposes minimum standards respecting network facilities and capabilities available for competitive interconnections. The Act requires all companies to allow customers changing carriers to retain their telephone numbers. Finally, the Act overturns a provision in the 1984 divestiture agreement by allowing the local exchange carriers created through the agreement to provide long distance service, provided they meet certain benchmarks related to the level of competition in their local exchange markets and can show that their entry into the long-distance market is in the public interest.

In the aftermath of divestiture, several types of telecommunications utilities have emerged, including:

- Interexchange or long-distance carriers;
- Incumbent local exchange carriers;
- Alternative telecommunications utilities

(ATUs), such as competitive local exchange carriers and resellers;

- Commercial mobile radio service (cellular) providers; and
- Cable television companies and pay telephone companies.

While some might think of Voice over Internet Protocol (VoIP) providers as internet phone service, VoIP is actually a technology whereby information is arranged in a digital format for transmission. Therefore, VoIP includes any carrier that uses this technology and is broader than internet phone service. In the coming years, VoIP technology is expected to fully replace the "switched network" that historically has provided the framework for the telecommunications industry. Act 22 specifies that VoIP service is exempt from PSC regulation, with certain exceptions.

Act 22 eliminated price regulation, alternative regulation, PSC rate case activities, and some PSC investigational activities that pertained to ILECs. Alternative telecommunications utilities and cellular providers were already exempt from most Commission oversight. Also, the PSC's consumer protection responsibilities with regard to service quality and service delivery were eliminated under the Act. However, the Act did not affect consumer protection activities performed by the Department of Agriculture, Trade and Consumer Protection related to service agreements and advertising.

Even in a deregulated environment, it is important for a variety of reasons for telecommunications utilities to continue to be designated as such. Designation as a telecommunications utility is achieved through certification by the PSC. Act 22 authorized ILECs to either be recertified as ILECs or be certified as ATUs, and the Act authorized ILECs to be recertified as ATUs. This recertification procedure ensures that a utility certified under prior law is no longer subject to prior law provisions related to that certification. Thus,

telecommunication utility certification is an ongoing PSC responsibility.

2011 Act 22 also established specific authority over switched access charges. A switched access charge is imposed when a telecommunications utility operating a local exchange gives another carrier access to its exchange for purposes of originating or terminating a non-local call. The PSC has authority over intrastate calls, while the Federal Communications Commission (FCC) has jurisdiction over interstate calls. Recognizing that intrastate access charges have typically exceeded interstate access charges, Act 22 and a 2011 FCC order seek to bring parity between intrastate and interstate access charges. Act 22 addressed some of these access charges by setting a statutory reduction schedule. Shortly thereafter, the FCC addressed access charge reductions in a more comprehensive manner. In the aftermath of Act 22 and the FCC order, the PSC has established a process to implement and monitor industry compliance with the new law and regulations.

The PSC will continue to mediate disagreements between carriers regarding wholesale services, including access charges, as docketed PSC cases and orders. However, carriers may also seek to resolve disputes between themselves without significant PSC involvement. In any event, the PSC must maintain the structure necessary to perform this function. Carriers must file information regarding tariffs related to charges for intrastate switched access service with the PSC, and carriers have the option to also file other types of tariffs with the Commission, even though those tariffs are largely deregulated.

With deregulation under Act 22, the primary telecommunications responsibilities of the PSC have become intercarrier relations, as described above, administration of the universal service fund, including certification of carriers eligible for federal USF participation, and broadband promotion and mapping. These latter activities are described in greater detail later in this paper.

Restructuring of Electric Utilities

While the telecommunications industry was being deregulated, the Public Service Commission examined whether similar principles could be applied to the electric industry. The Commission's efforts were prompted, in part, by federal law changes allowing wholesale electric generators to compete with electric utilities in supplying power and requiring owners of electric transmission lines to let any generator transmit power over their lines.

In late 1994, the PSC opened a docket to consider approaches to restructuring electric utility transmission, generation, and distribution operations, and, one year later, an advisory committee issued a report detailing the various restructuring options that appeared to be feasible and describing the types of legislative and policy changes required to implement each option. A PSC report to the Legislature in February, 1996, advised that any conversion from regulated to competitive markets must be contingent on a series of electric industry and regulatory reforms. The PSC indicated that it intended to proceed incrementally through the restructuring process. The Commission's view at that time was that full retail competition would occur only if reforms in the industry's generation, transmission, and retail sectors were first implemented. In 1997, disruptions to the state's electric power supply shifted the state's restructuring efforts to focus on reliability, as opposed to deregulation. Electric industry restructuring has caused the PSC to expand its activities beyond traditional rate regulation to include new responsibilities related to electric transmission, affiliated interests, independent power producers, renewable energy portfolios, and strategic energy assessment.

Transmission Divestiture

Individual electric utilities owned and operated electric transmission lines and facilities in their service territory prior to state law changes in 1997 and 1999. Those changes required the transfer of

ownership and control of the high-voltage transmission lines held by Wisconsin-based public utility companies operating principally in the eastern part of the state to a newly created transmission company, the American Transmission Company (ATC), by September 30, 2001. The public utility companies, electric cooperatives, and municipal electric utilities received stock in ATC to compensate them for their divested assets. In turn, ATC provides these entities with equitable access to the transmission grid at fair rates. In addition, ATC is responsible for constantly monitoring the flow of electricity across the transmission grid, as well as for the planning, construction, operation, maintenance, and expansion of the grid. Although the PSC oversaw the transfer of utility infrastructure to ATC, ATC's creation diminished the Commission's authority, as the Federal Energy Regulatory Commission regulates the transmission and wholesale sales of electricity. However, the PSC has retained oversight of the construction of transmission facilities. In western Wisconsin, Xcel Energy and Dairyland Power Company continue to maintain their own transmission infrastructure.

Affiliated Interests and Leased Generation

State law authorizes public utilities and the affiliated interests of those utilities to enter into long-term, leased generation contracts with one another. Generally, an affiliated interest is a person or company with an ownership interest in a public utility. Also, it can be a company in which a public utility has an ownership interest.

Under a leased generation contract, a utility's affiliated interest agrees to construct or improve electric generating equipment and associated facilities. The public utility then leases the land, equipment, and facilities and operates the facilities. The lease must be at least 20 years in length for gas-fired facilities and 25 years for coal-burning facilities. After this initial lease, the public utility has the right to renew the lease or purchase the facilities at fair market value. The project must be at least a \$10 million improvement in order to

qualify as a leased generation contract.

State law requires PSC approval of leases and lease renewals between public utilities and affiliated interests. The Commission must find that the lease will not have a substantial, anticompetitive effect on electricity markets for any class of customers. Also, state law prohibits the PSC from increasing or decreasing the retail revenue requirements of a utility on the basis of any income, expense, gain, or loss incurred or received by the utility's affiliated interest due to its ownership of equipment and facilities under a leased generation contract. The PSC must allow a utility to recover in rates all costs related to a leased generation contract.

The initial effect of these provisions was to allow Wisconsin Energy Corporation, the parent company of Wisconsin Electric Power Company, to form a nonutility affiliate to be an electric power generating company. The nonutility affiliate builds and owns electric power generating facilities, which are then leased back to Wisconsin Electric. Wisconsin Electric operates the new facilities to produce electric power for its customers, much as it operates the generating facilities that it directly owns. This ownership and lease arrangement allows the Wisconsin Energy Corporation to build generating facilities outside of its public utility affiliate (Wisconsin Electric), thereby taking advantage of less regulated financing and contracting options than would exist if the public utility constructed the facility.

Siting of Power Plants and Transmission Facilities

State law prohibits the construction of large electric generating facilities and high-voltage transmission lines unless the PSC has issued a certificate of public convenience and necessity (CPCN). Unlike other PSC regulatory activities, the siting portion of the CPCN requirement also applies to electric cooperatives and merchant companies.

A CPCN is required for any generating facility in Wisconsin with a capacity of 100 megawatts or more and transmission facilities of at least one mile in length that are designed for operation at 100 kilovolts or more. Certificates of public convenience and necessity are generally not required for transmission lines rebuilt for operation at the same voltage in largely the same right of way.

The PSC determines the information to be contained in applications and, within 30 days of an application's submittal, the Commission must determine if the application is complete. A public hearing must be held on each application, and state law requires the Commission to take final action on an application within 180 days of determining the application is complete, although the Chairperson of the PSC may extend the deadline up to an additional 180 days. The PSC certification process is coordinated with Department of Natural Resources permitting requirements.

Before issuing a CPCN, the PSC must determine that the proposed facility meets a number of statutory standards. These standards relate to electric energy reliability, service efficiency, future electricity needs, wholesale market competition, the environment, and existing land use and development plans. Some facilities, such as merchant plants, are specifically excluded from certain standards, and other standards are specifically limited to high-voltage transmission lines and PSC-regulated public utilities. Based on its findings, the PSC may approve, deny, or modify proposed facility applications.

For electric generating facilities, construction must begin within one year of the latest of: (a) the date the Commission issues the certificate; (b) the date on which the electric utility has been issued every required federal and state permit, approval, or license; (c) the date on which every deadline has expired for requesting administrative review of such permits and licenses; or (d) the date on which the electric utility has received the final decision, after exhausting every proceeding for judicial

review. The PSC may grant an extension of this deadline upon a showing of good cause by the electric utility. If construction is not begun within this one-year period, the original certificate becomes void.

For smaller facilities not meeting the CPCN threshold of 100 megawatts or 100 kilovolts, the PSC may require an electric utility to obtain a certificate of authority. The certificate of authority requirement also extends to distribution and transmission lines of natural gas utilities.

Wind energy systems with an operating capacity of less than 100 megawatts are subject to special provisions in state law and administrative rule. State law directs the PSC to establish a 15-member Wind Siting Council and promulgate administrative rules with the Council's assistance addressing setback requirements and decommissioning and providing reasonable protection from health effects. The rules must also enumerate the procedural requirements for approving systems at the local level and may include other requirements relating to visual appearance, lighting, connections to the power grid, setback distances, maximum audible sound levels, shadow flicker, proper means of measuring noise, interference with communication signals, or other matters. While wind energy systems that require a CPCN are not directly subject to the rule, the Commission is required to take the rule into account as part of its CPCN process.

Municipalities and counties are prohibited from imposing more restrictive requirements on the installation of wind energy systems than those set forth in the PSC rules. Appeals of municipal or county decisions affecting wind energy systems may be made to the local government or to the PSC. Any judicial review must be preceded by a PSC decision or order, and any judicial review is limited to the PSC decision or order, rather than the local government decision or enforcement action.

Renewable Energy Portfolios

The PSC has administered a renewable energy policy since 1994, when state law directed the Commission to encourage public utilities to develop and demonstrate technologies using renewable sources of energy. Under the policy, the total amount of electricity that a utility or cooperative sells in a year is compared to the amount of renewable resource credits it claims or electricity it generates from renewable resources.

Renewable resources are certain energy sources used to generate electric power and include fuel cells that use a renewable fuel, tidal or wave action, solar thermal electric or photovoltaic energy, wind power, geothermal technology, biomass, synthetic gas created by the plasma gasification of waste, densified fuel pellets made from certain waste material, fuel produced by pyrolysis of organic waste material, and certain hydroelectric facilities. Also, credits are created based on electric consumers' use of certain renewable energy technology that displaces electricity use. Examples include solar applications, such as water heaters or light pipes, as well as other displacement technologies utilizing geothermal energy, biomass, biogas, synthetic gas, densified fuel pellets, or fuel produced by pyrolysis.

State law establishes goals for the state as a whole and for individual retail electric providers. On a statewide basis, the goal is for 10% of all electric energy consumed in the state to be derived from renewable resources by 2015. This goal was first achieved in 2013, and has been achieved each year since. To achieve the goal, individual electric utilities and cooperatives were required to sell specified amounts of renewable energy to their customers by certain dates, incrementally increasing over time, based on a historical baseline of electricity sales. The program remains in effect, although there is no scheduled incremental increase. Instead, utilities and cooperatives must continue to meet standards established for 2015 sales. If a utility or cooperative provides more

renewable energy than required, it generates a renewable resource credit that it may retain for future use or sell to another utility or cooperative in an interstate credit trading market. PSC reports it is likely that the 10% goal will be met each year for the foreseeable future.

Utilities must report to PSC annually on progress towards meeting renewable standards. Reporting data indicates that Wisconsin electric providers produced 11.64% of their energy from renewable sources in 2017. Providers may also procure renewable energy for their green pricing programs, by which customers voluntarily pay a premium to purchase renewable energy. Adding in voluntary programs, 12.15% of electricity produced in 2017 was from renewable sources.

PSC analysis indicates that in 2015 and 2016, the program resulted in rates that were between 2.48% and 3.52% higher, on average, than rates would have been without the these renewable standards.

Strategic Energy Assessment

State law directs the PSC to prepare a biennial report that evaluates the adequacy and reliability of the state's current and future electrical supply. Each Strategic Energy Assessment (SEA) covers a seven-year period and must identify the projected demand for electric energy and assess whether sufficient electric capacity and energy will be available to the public at a reasonable price. Also, the SEA must identify and describe electric generation and transmission facilities planned for construction, existing and planned renewable resource generating facilities, plans for ensuring that there is adequate ability to transfer electric power into the state, and activities to discourage inefficient and excessive power use. In addition, the SEA must assess factors related to competition, purchased generation capacity and energy, and regional bulk power, as well as consider other factors. The Commission's latest report was issued in July, 2018, covering the period

between 2018 and 2024.

Other PSC Programs

Energy Efficiency and Renewable Resource Programs. Energy efficiency and renewable resource programs include multiple programs organized under four broad categories enumerated in the statutes. These include: (a) statewide programs; (b) large energy customer programs; (c) utility-administered programs; and (d) voluntary utility-administered programs. Energy efficiency programs are intended to decrease energy usage or increase the efficiency of energy usage of utility customers. Renewable resource programs are intended to encourage the development or use by utility customers of renewable resource applications.

The statewide programs are known as the Focus on Energy program. Focus on Energy is funded through a statutory provision requiring investor-owned utilities to spend 1.2% of annual operating revenues derived from retail sales on energy efficiency and renewable resource activities. The statutes permit large energy customers to administer and fund their own energy efficiency programs, with PSC approval, and to deduct the expense from their utility bills. The utility may then deduct that amount from its amount required under the 1.2% revenue requirement. The statutes also permit investor-owned utilities to retain a portion of their required statewide program funding to administer their own program for large energy customers. Currently, there are no large energy customer programs or utility-administered programs that have been approved by the Commission. Utilities are permitted to administer programs on a voluntary basis, but such programs are not funded through the 1.2% revenue requirement.

Through the rate-making process, the PSC adjusts utility rates to ensure that the required contributions are produced. However, the revenue raised from each large energy customer is based on the amount raised in 2005. State law "froze" those

customers' payments at their 2005 amounts until 2009, when the payments were indexed to the lesser of the increase in the Consumer Price Index or the increase in utility operating revenues.

State law requires the statewide energy efficiency and renewable resource programs to be administered collectively by the state's energy utilities through competitively bid contracts with one or more individuals or organizations. The state's investor-owned energy utilities formed a nonprofit organization called the Statewide Energy Efficiency and Renewable Administration (SEERA) to create and fund the statewide programs, and SEERA has contracted with APTIM Government Solutions to manage the programs. SEERA's contract with APTIM has been extended through 2022.

Under the contract, APTIM is not permitted to implement programs. Instead, APTIM has contracted with a variety of companies to implement and deliver the programs. For the energy efficiency and renewable resource programs, approximately 40% of the resources are targeted to programs for residential customers, and the remaining 60% of resources are targeted to programs for the various business classes of customers. According to the PSC, this funding allocation reflects the historic funding contributions from each type of customer. In addition, an environmental and economic research and development program solicits proposals and funds research regarding the impact of energy use on the Wisconsin environment and economy as it relates to the portfolio of Focus on Energy programs.

The statewide energy efficiency and renewable resource programs are funded entirely outside the state budget process. However, the PSC provides program oversight, which include: (a) setting annual targets and four-year goals for electricity and natural gas savings; (b) developing, approving, and monitoring program budgets; and (c) reviewing and approving program designs developed by the program administrator. In addition, the statutes

require the Commission to contract for financial and performance audits.

At least once every four years, the Commission must conduct a formal evaluation of the energy efficiency and renewable resource programs and set or revise goals, priorities, and measurable targets for the programs. In spring 2016, the Commission opened a docket on its third quadrennial planning process, as required by statute. Based on that process, the Commission promulgated its decision as an order, adopted unanimously on June 6, 2018, setting the structure and goals for the program during the 2019 through 2022 period.

Office of Energy Innovation. The 2015-17 state budget act transferred the State Energy Office from the Department of Administration to the PSC, where it has been combined with the Commission's Focus on Energy oversight function to create the Office of Energy Innovation (OEI). The mission of OEI is to promote innovative and effective energy policies and programs that benefit the state's citizens. In addition to partnering with Focus, OEI responsibilities include monitoring the consumption of fuels, such as gasoline, diesel, and propane, and participating in the U.S. Department of Energy's state heating oil and propane pricing survey. This involves tracking heating fuel prices throughout the heating season. This information is also made available to the public, along with use and price data pertaining to other energy sources. Also, OEI secures federal funding and administers a variety of energy-related programs, such as the clean manufacturing revolving loan fund, which is administered in cooperation with the Wisconsin Economic Development Corporation. Finally, OEI coordinates and updates the state energy assurance plan, along with corresponding training and exercises with other state agencies for energy emergency responses.

Pipeline Safety Program. Both the federal and state governments impose regulations regarding pipeline safety. These regulations cover the design, construction, operation, inspection, repair,

and maintenance of pipelines, the training and testing of pipeline employees and contractors, and the maintenance of pipeline company records. The Office of Pipeline Safety (OPS) in the U.S. Department of Transportation has certified the Public Service Commission to regulate, inspect, and enforce intrastate gas pipeline safety requirements in Wisconsin. OPS has retained authority over safety requirements for interstate gas pipelines and for intrastate and interstate liquid pipelines in Wisconsin. PSC activities include completely inspecting every natural gas company at least once every three years, reviewing every natural gas company's maintenance records at least once every year, inspecting in-state gas pipeline construction plans, making unscheduled inspections of pipeline construction projects, and advising natural gas companies about safety matters. The federal government reimburses the state for up to 80% of its costs for administering the pipeline safety program.

Universal Service Fund. The PSC administers a variety of programs relating to the accessibility and affordability of telecommunications service. These programs are funded through PSC assessments on companies providing retail intrastate voice telecommunications services. Providers pay assessments monthly based on an assessment rate that the PSC adjusts annually. The assessments are deposited in the universal service fund (USF), which is administered by a private firm under contract with the PSC.

The USF is established to ensure that all state residents receive essential telecommunications services. The PSC is required to appoint a USF Council consisting of representatives of telecommunications providers and consumers of telecommunications services to advise the Commission regarding the administration of the fund. With the Council, the PSC is required to establish programs funded from the USF that ensure the delivery of essential services anywhere in the state. The Federal Communications Commission defines essential services to include both voice and broadband. Essential voice services include: (a) single-party

voice-grade access to the public switched network or its functional equivalent; (b) local usage; (c) access to emergency services; and (d) toll limitation for low-income customers. Essential broadband services include "the capability to transmit data to and receive data by wire or radio from all or substantially all internet endpoints." To implement this general statutory directive, the PSC has promulgated administrative rules establishing the various USF-funded programs.

The fund supports programs across a number of agencies, with 2018-19 appropriations totaling \$44.1 million. The PSC administers six of the programs:

- **Telecommunications Equipment Purchase Program** provides vouchers to disabled persons to be used to purchase special telecommunications equipment;
- **Lifeline Program** pays a portion of the monthly basic telephone service charges for low-income households;
- **High-Rate Assistance Credit Program** reimburses telecommunications providers for credits they extend to residential customers when the total rate for residential service exceeds a specified percentage of the median household income for a county in their service area;
- **Telemedicine Equipment Grant Program** provides grants to nonprofit medical clinics and public health agencies to purchase telecommunications equipment that promotes technologically advanced medical services, enhances access to medical care in rural or underserved areas, or enhances access to medical care to underserved populations or persons with disabilities;
- **Nonprofit Access Grant Program** provides grants to nonprofit groups to partially fund programs or projects that facilitate affordable access to telecommunications services; and

- **Two-Line Voice Carryover Program** provides a second telephone line to certain hearing-impaired customers.

The PSC programs, as well as the costs for the program's fund administrator, are funded by a single appropriation of \$5.9 million annually. Actual expenditures fell below this level in 2015-16 (\$3.6 million), 2016-17 (\$4.3 million), and 2017-18 (\$4 million), and the Commission has adopted a \$4.2 million budget for 2018-19.

The remaining programs funded with USF assessments are administered by other state agencies and account for 87% of the 2018-19 USF appropriations. These include: (a) \$16.0 million for the educational telecommunications access program (Technology for Educational Achievement, or TEACH) administered by the Department of Administration (DOA) for educational entities' access to new data lines for direct internet access and video links; (b) \$2.9 million to the BadgerLink program administered by the Department of Public Instruction (DPI) to pay for contracts with vendors who provide statewide access to reference databases of magazines and newspapers and to fund a contract between DPI and the National Federation of the Blind to provide Newsline electronic information service, which gives telephone access to audio versions of newspapers for sight-impaired individuals; (c) \$16.0 million for aids to public library systems, administered by DPI; (d) \$1.2 million for library service contracts between DPI and providers of specialized statewide library services and resources; (e) \$1.0 million for a digital learning collaborative established by DPI for the statewide web academy and for delivery of digital content and collaborative instruction; and (f) \$1.1 million to the University of Wisconsin (UW) System to reimburse DOA for BadgerNet telecommunications services provided to UW campuses.

The USF also funds broadband expansion grants, described below. 2017 Act 59 provided ongoing grant funding, rather than limited-term transfers from the USF balance as had been

previously appropriated. Beginning in 2017-18, unexpended amounts in the USF appropriations described above are to be transferred to the USF appropriation for broadband expansion grants at the end of each fiscal year, or the fiscal biennium in the case of the DOA appropriation, which is biennial. These funds would be available for expenditure on an ongoing basis under the broadband grant appropriation, which is continuing. The Act requires that the available funding for broadband expansion grants be at least \$2 million annually. In the event that prior-year transfers from other USF appropriations fall under this amount, PSC may include any shortfall amount in its calculation of contributions from telecommunications providers. For 2017-18, PSC reports a total of \$2.2 million in lapses were received into the appropriation, meaning no additional assessments were necessary.

Broadband Activities. In coordination with the U.S. Department of Commerce (USDOC), the PSC is the state's lead agency in conducting broadband mapping and planning activities. Federal law requires USDOC to develop and maintain a comprehensive, interactive, and searchable nationwide inventory map of available broadband service capability. Rather than undertaking the mapping project on its own, the National Telecommunications and Information Administration (NTIA) within USDOC has administered a grant program under which Wisconsin and other states have developed their own broadband maps, within NTIA specifications, with links to the federal map. As required by federal law, the map indicates: (a) geographic areas in which broadband service is available; (b) the technologies used to provide broadband service in those areas; (c) the spectrum used for the provision of wireless broadband access; (d) the operational speeds of the broadband; and (e) broadband availability at schools, hospitals, libraries, colleges and universities, and all state and municipal public buildings. To assist in meeting the federal requirements, the PSC used much of the grant proceeds to contract with a vendor.

With the grant's expiration in 2014, maintenance of the state map has transitioned to the PSC. Maintenance activities include adding new providers, updating the database for existing providers, and twice-yearly data updates with NTIA. The PSC's broadband planning efforts include working with a variety of stakeholders to develop policies that encourage investment into new broadband facilities as well as the adoption and use of broadband resources for increased economic benefit. The PSC performs several other functions related to the expansion of broadband access in underserved areas of the state, including the certification of "Broadband Forward!" communities. To receive this certification, municipalities and counties must enact an ordinance, based on a PSC model ordinance, for reviewing applications and issuing permits related to broadband network projects. These functions have been performed by the PSC's State Broadband Office.

Broadband Expansion Grants. The PSC administers the broadband expansion grant program, created by 2013 Wisconsin Act 20. Profit and not-for-profit organizations, telecommunications utilities, and those organizations and utilities in partnership with municipalities and counties are eligible to apply for grants. Grants are to be used for projects that increase broadband access and capacity in underserved areas of the state. Priority is

given to projects that include matching funds, that involve public-private partnerships, that affect areas with no broadband service providers, that are scalable, that promote economic development, that will not delay broadband deployment to neighboring areas, or that affect a large geographic area or a large number of underserved individuals or communities. Table 4 outlines grant appropriations and awards by year under the program. Based on returned grants, remaining unawarded amounts, and USF appropriation lapses, it is anticipated \$7.1 million will be available for award in the 2019 grant round, including \$4.9 million in previously appropriated funds not yet awarded and \$2.2 million in unencumbered 2017-18 transfers from other USF appropriations.

Table 4: Broadband Expansion Grant Awards

Year	Appropriation	Awards	Amount Awarded
2014	\$500,000	7	\$500,000
2015	500,000	7	452,600
2016	1,500,000	11	1,500,000
2017	1,500,000	16	1,500,000
2018	<u>14,000,000</u>	<u>59</u>	<u>9,189,000</u>
Total	\$18,000,000	100	\$13,141,600