

# THE VALUATION OF ELECTRICAL GENERATION PROPERTY IN SELECTED STATES

Prepared for the Revenue and Transportation Committee

by

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## INTRODUCTION

According to the Energy Information Administration, 16 states (Delaware, Illinois, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, and Virginia) and Washington, D.C., are engaged in the restructuring of the electric utility industry, while six states (Arizona, Arkansas, California, Montana, Nevada, and Oklahoma) have delayed or suspended restructuring legislation.

This paper summarizes how ten states value electrical generation property for property tax purposes. Three of the states included in the summary have enacted legislation to allow restructuring (Ohio, Pennsylvania, and Texas); the New York Public Service Commission established restructuring in New York; three states have enacted restructuring legislation but have delayed implementation (Arizona, New Mexico, and Oklahoma); California has suspended restructuring; Oregon enacted customer choice for large industrial customers but not for residential customers; and Washington has not enacted restructuring legislation.

For each state, a brief synopsis of restructuring<sup>1</sup> and a description of how electrical generation property is valued in the state is presented. Electrical generation property may be valued exclusively by the state, by local assessors, or by a combination of both. A substantial portion of the information on valuation procedures was obtained from telephone conversations with representatives of a particular state. The contact person is noted for each state. Other sources of information are noted separately.

## ARIZONA<sup>2</sup>

In 1998, the Arizona Legislature enacted legislation to affirm the authority of the Arizona Corporation Commission to require investor-owned utilities to open their service territories to retail competition and to sell generation facilities to affiliated companies. Large customers were allowed access to retail competition beginning January 1, 1999. Rules adopted by the Commission required a 5% rate reduction for residential customers. Because of the lack of competition in the state, the Arizona

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<sup>1</sup>Compiled from the Energy Information Agency, U.S. Department of Energy, "Electric Power Industry Restructuring and Deregulation", <http://www.eia.doe.gov/cneaf/electricity/page/restructure.html>. Restructuring information is as of February 2003. According to the EIA website, additional updates are not planned.

<sup>2</sup>Bob Williams, Arizona Department of Revenue, telephone conversation, January 13, 2004.

Corporation Commission ordered the Tucson Electric Power Company and the Arizona Public Service Company "to cancel any plans to divest interests in any generating assets."

According to Bob Williams, 18 new generation facilities have been constructed over the past few years; 20 new projects have been put on hold. Regional transmission constraints have hindered the ability to export electricity. Prior to recent legislative enactments, Arizona valued electric utility property primarily on the basis of book value with additional deductions (transmission and distribution property is still valued this way). In 2000, the Arizona Legislature revised the method for valuing electrical generation facilities (House Bill 2324). The legislation provided:

- for a valuation method for electrical generation facilities that do not engage in retail electric sales;
- for the local assessment of land associated with electrical generation property;
- that the valuation of improvements to real property is the replacement cost new less depreciation schedules adopted by the Arizona Department of Revenue;
- that the valuation of personal property is the acquisition cost less depreciation schedules adopted by the Department. The Department must also take into account all forms of obsolescence. The assessed value of personal property is adjusted as follows:
  - in the first year of assessment, 35% of the depreciated value;
  - in the second year of assessment, 51% of the depreciated value;
  - in the third year of assessment, 67% of the depreciated value;
  - in the fourth year of assessment, 83% of the depreciated value;
  - in the fifth year and subsequent assessment, the scheduled depreciated value (but not below a minimum value);
- that personal property associated with construction work in progress is not valued until the property is placed in commercial service;
- that a phase in of the valuation method for existing generation facilities that included a 15% reduction in the value of generation facilities to account for stranded costs in tax years 2001 and 2002.<sup>3</sup>

In 2003, the Arizona Legislature revised House Bill 2324 to ensure that all electric generation facilities are valued on the same basis (House Bill 2348) and to ensure that the valuation of existing facilities did not increase dramatically. Under the revised method, the value of all improvements to electrical generation is the cost (the cost of constructing the property or the acquisition cost) multiplied by valuation factors (based on the useful life of the asset) adopted by the Department of Revenue. The valuation of existing plants was adjusted to stabilize changes in valuation that may have occurred using the new valuation "formulas". The value of personal property is the cost (invoice, plus transportation costs, labor costs, and sales taxes paid) multiplied by valuation factors (as opposed to "any appropriate

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<sup>3</sup>Arizona State Senate, "Final Revised Fact Sheet for H.B. 2324." [http://www.azleg.state.az.us/legtext/44leg/2r/summary/s.2324fin\\_final.doc.htm](http://www.azleg.state.az.us/legtext/44leg/2r/summary/s.2324fin_final.doc.htm)

depreciation") adopted by the Department. The assessed value of personal property is adjusted as provided in House Bill 2324. The value of improvements and personal property may not be below 10% of the cost of the property. Pollution control equipment had previously been assessed at 50% of value but is now assessed at 100% of value.

If generation property is sold to another taxpayer, the valuation of the property is the seller's cost (if the buyer has access to the cost information); otherwise, acquisition cost is used. The legislation also clarified the meaning of "commercial service" related to construction work in progress.

There are 11 classes of property in Arizona. Commercial property, which includes public utilities and electrical generation facilities, is taxed at 25% of full cash value. Residential property is taxed at 10% of full cash value.

#### **CALIFORNIA<sup>4</sup>**

California provided for the restructuring of electrical utilities in 1996 (Assembly Bill 1890). The restructuring legislation required regulated public utilities to sell certain types of their generation facilities (fossil fuel generators, but not hydroelectric facilities or nuclear power plants) to unregulated power producers. Between 1998 and 1999, 22 electrical generation plants were sold.<sup>5</sup>

The legislation also required the creation of an independent system operator to manage the transmission system and a power exchange to operate a wholesale energy market. Small and residential customer electricity rates were frozen at 1996 levels through March 2002.

The California Board of Equalization is constitutionally responsible for the state assessment of certain types of property including "companies transmitting or selling gas or electricity."<sup>6</sup> After the enactment of Assembly Bill 1890, the Board considered whether the generation plants that had been sold should continue to be assessed by the state or to be locally assessed. Following a series of public meetings, the Board determined that its constitutional jurisdiction to assess electric generation facilities was limited to facilities that are owned by a company that holds a certificate of public need and necessity, issued by the California Public Utilities Commission for the construction of the facility, or that are owned by a company that is otherwise state-assessed.<sup>7</sup> In 1999, the Board adopted Rule 905, the effect of which

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<sup>4</sup>Harold Hale, California Board of Equalization, Property Tax Department, telephone conversation, January 16, 2004.

<sup>5</sup>California State Board of Equalization, Staff Legislative Bill Analysis, AB 81, June 5, 2001.

<sup>6</sup>Article XIII, section 19, Constitution of California.

<sup>7</sup>Terri A. Sexton and Steven M. Sheffrin, "Electric Utility Deregulation and the Property Tax in California and Other Western States", in Impacts of Electric Utility Deregulation on Property Taxation, edited by Philip Burling (Lincoln Land Institute of Land Policy: 2000), p. 73.

was to delegate to county assessors the responsibility of assessing electrical generation facilities of nonregulated power producers.<sup>8</sup>

Locally assessed property is valued under the limitations of Proposition 13 at the lesser of acquisition value or market value and is taxed at 1% of value. The valuation of the property may not increase by more than 2% a year unless the property is sold. Given the limitation of the Proposition 13 inflation adjustment, it is likely that the locally assessed value of the property would, after a period of time, be below that of the state-assessed value.<sup>9</sup>

In the midst of the energy crisis in California, the Board reviewed the application of Rule 905 and determined that the state assessment of generation facilities would better reflect its constitutional responsibilities and "more accurately reflect the value of generation facilities on a statewide basis in the competitive power market."<sup>10</sup> In November 2001, the Board amended Rule 905, which resulted in the transfer of the assessment of electrical generation facilities from local assessors to the Board. Since January 1, 2003, the Board has been responsible for the assessment of the generation facilities that had been sold and any newly constructed generation facilities. The revised rule provides that an electrical generation facility is state-assessed property if the facility has a generating capacity of 50 megawatts or more.<sup>11</sup> Independent power producers have challenged the authority of the Board to value their generation facilities.

Investor-owned regulated electrical utilities are valued on the unitary method. The valuation is based on the historical cost, less depreciation, indicator; the income indicator (by estimating one year of income); and the sales indicator, if information is available. The cost indicator is heavily weighted in the determination of market value of regulated utilities.

The valuation method for nonregulated electrical generation facilities is based on replacement cost new, less depreciation, and on income. The Board of Equalization conducted a replacement cost study of combined cycle gas generation plants. The Board estimated the cost of constructing a new facility at about \$600,000 per megawatt.

The cost indicator is determined by multiplying the cost per megawatt by the plant's capacity, less depreciation and functional and economic obsolescence. The income indicator is determined by capitalizing income and operating expenses over the life of the contract(s). The income approach is

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<sup>8</sup>Timothy W. Boyer and Richard Johnson, Memorandum to the State Board of Equalization, June 4, 2001.

<sup>9</sup>Sexton, *op cit*.

<sup>10</sup>Legislative Bulletin 2002, Legislative Division, California State Board of Equalization, p. 3. <http://www.boe.ca.gov/legdiv/enact/ptleg/02ptbulletin-web.pdf>

<sup>11</sup>Assembly Bill 81 statutorily codified Rule 905 for the state assessment of certain electrical generation property.

weighted more heavily for older facilities, while the cost approach is weighted more heavily for newer facilities.

Intangible property is not subject to taxation in California. State-assessed property is valued at 100% of market value but is subject to the same tax rate as other property.

### **NEW MEXICO<sup>12</sup>**

New Mexico flirted briefly with restructuring. In 1999, the state enacted Senate Bill 428 to open the state's electric power market to retail access for residential and small consumers beginning in 2001 and for all other consumers by 2002. However, the California experience prompted the Legislature during the 2001 legislative session to delay retail access for 5 years (Senate Bill 266).

Statutory provisions govern the method of valuation for an "electric plant" (electrical generation, transmission, and distribution property). Section 7-36-29, NMSA, requires that this type of property be valued at cost, less depreciation (net book value).<sup>13</sup> The value of the electric plant may not be less than 20% of the cost of tangible property of the plant. Construction work in progress is valued at 50% of the amount expended for tangible property. The assessment of the electric plant is limited to property within the state. If, however, a regulated utility protests the valuation of the property, the Department of Taxation and Revenue will conduct a unit value assessment. The taxable value of all property in New Mexico is 33.33% of assessed or market value.

### **NEW YORK<sup>14</sup>**

In May 1996, the New York Public Service Commission issued an opinion and order that restructured New York's electric power industry.<sup>15</sup> The goal was to establish competitive wholesale markets by 1997 and competitive retail markets by early 1998. The order recommended the divestiture of generation property from transmission and distribution. Investor-owned utilities, except for smaller utilities, have divested most of their generation facilities, including hydroelectric facilities, thermal facilities, and nuclear plants.

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<sup>12</sup>Mitch Bonnery, New Mexico Department of Taxation and Revenue, telephone conversation, January 21, 2004.

<sup>13</sup>Functional and economic obsolescence and other relevant factors must be considered.

<sup>14</sup>James Dunne, Research Information and Policy Development, New York Office of Real Property Services, telephone conversation, January 20, 2004, and Henry Szyplski, ORPS, telephone conversation, January 21, 2004.

<sup>15</sup>New York State Public Service Commission, "In the Matter of Competitive Opportunities Regarding Electric Service," Opinion No. 96-12, May 20, 1996.

The state Office of Real Property Services (ORPS) annually values larger generation facilities; smaller generation facilities are locally assessed.<sup>16</sup> Before restructuring, utility property, including generation facilities, was valued as "specialty" property on the basis of reproduction cost.<sup>17</sup>

Since restructuring of the electric utility industry, generation facilities are valued primarily on the income approach, using a discounted cash flow method over an assumed 10-year holding period of the facility. Gross revenue is determined by multiplying kilowatt hours (after adjusting for a kilowatt capacity factor) by projected energy prices estimated by the U.S. Department of Energy. Prices are adjusted to remove the effects of regulation and line losses. Annual net cash flow (gross revenue less operation and maintenance costs) is discounted to the present.

Because there have not been many recent sales, the sales indicator is not used much. If the sales indicator is used, the sales price is reduced by 5% to account for the value of tangible personal property and intangible property--New York does not tax personal property.

Peaking plants are valued on the basis of replacement costs (combined cycle gas generators at \$500,000 to \$600,000 per megawatt), less depreciation and obsolescence.

According to ORPS, the valuation of about 50% of the generation facilities declined under the new valuation method, while 20% increased and 30% stayed about the same.

## **OHIO**<sup>18</sup>

In 1999, Ohio enacted Senate Bill 3 to allow retail customers to choose an electrical energy supplier by January 1, 2001. The law required a 5% residential rate reduction and a rate freeze for 5 years. Electric utilities were allowed to divest or functionally separate generation facilities. Although some generation facilities have been sold, most electric utilities have not "spun off" their generation property into separate entities. The legislation also reduced the assessment rate applied to generation facilities. A kilowatt-hour tax was imposed on distribution companies for sales to final consumers to replace lost property tax revenue attributable to the lower assessment rate applied to generation facilities.

Generation facilities in Ohio are valued by the Ohio Department of Taxation in accordance with to statutory provisions. An existing facility reports the cost of all property at the generation facility. The Ohio Department of Taxation subtracts from the total cost of the facility the cost of real property and improvements, pollution control facilities (exempt from taxation), construction work in progress,

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<sup>16</sup>Local assessors may request that the Office of Real Property Services conduct an "advisory" appraisal of a generation facility. The local assessor is not required to accept the results of the appraisal.

<sup>17</sup>For the purpose of property tax assessment, reproduction cost is the present cost to replicate the property, less depreciation.

<sup>18</sup>Bill Peters, Public Utility Tax Division, Ohio Department of Taxation, telephone conversation, January 27, 2004.

capitalized interest, and intangible property to arrive at the cost of tangible personal property. A standard depreciation and obsolescence factor of 50% is applied to the capitalized cost (value) of tangible personal property to arrive at a "true" value (additions and deletions). Before restructuring took effect, generation facilities were assessed at 100% of market value and part of the value was allocated to other taxing jurisdictions in which the electric utility had property. Effective January 1, 2001, all personal property associated with electrical generation facilities are assessed at 25% of value and the value of the property is allocated to the taxing jurisdiction in which it is located.

New generation facilities or facilities that were sold after December 31, 2000, are valued on the basis of the cost of the facility listed on the owner's books in the year acquired. If a facility is sold, the sales price is allocated among the assets. The true value of the property is depreciated according to composite tables developed by the Department of Taxation. The economic life of coal, nuclear, and hydroelectric facilities is 30 years and natural gas facilities is 25 years, but the residual value may not be less than 15%. An older plant may be depreciated faster if the useful life is determined to be shorter than prescribed.

All real property (e.g., residential, commercial, and utility property) is valued locally and assessed at 35% of true value, based on historical costs and comparable sales.

The assessed value of utility personal property ranges from 25% to 88%. For example, "nonlocal" telecommunications is assessed at 25% of true value, while local exchanges are assessed at 25% to 88% of true value depending on the age of the property. Transmission and distribution property and pipelines are assessed at 88% of value. According to Bill Peters, there is interest in establishing a uniform assessment rate for personal property.

## **OKLAHOMA<sup>19</sup>**

In 1997, Oklahoma enacted the Electric Restructuring Act of 1997 to allow retail competition by July 2002 (Senate Bill 500). The legislation created a joint electric utility task force to study the technical issues of restructuring and directed the Oklahoma Corporation Commission to develop a framework for implementing retail competition. In 2001, Oklahoma delayed restructuring and created an electric restructuring advisory committee (Senate Bill 440). The legislation provided that retail competition may not occur until the advisory committee issues its final report and the legislature enacts enabling legislation.

Oklahoma assesses electrical utilities on a unitary basis similar to Montana using book cost, income, and stock and debt indicators. Other generation facilities are assessed locally using depreciated construction costs. The assessment ratio for investor-owned electric utilities is 22.5% of market value,

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<sup>19</sup>William Mack and Larry Rollins, Oklahoma Tax Commission, telephone conversation, January 20, 2004.

while the assessment ratio for locally assessed industrial property ranges from 11% to 13%. Intangible property is exempt in Oklahoma.

## **OREGON**<sup>20</sup>

In 1999, Oregon enacted a form restructuring legislation (Senate Bill 1149). Businesses and industrial customers would have access to retail competition by October 1, 2001, but residential customers would not. Instead, residential customers would be able to choose from a regulated utility a portfolio of options that includes regulated rates, market-based rates, or "green" power. The legislation provided that the Oregon Public Utility Commission develop incentives for divestiture of generation facilities by a regulated utility. In 2001, the Oregon Legislature enacted House Bill 3633 to delay most restructuring provisions until March 1, 2002. Many large industrial customers were "discouraged" from choosing an alternative supplier because of variable transition charges. In late 2002, the Oregon Public Utility Commission adopted a 5-year plan to allow a large industrial customer of Portland General Electric to pay a fixed transition charge if it chose another electricity supplier or agreed to a daily pricing option from Portland General Electric.<sup>21</sup>

The Oregon Department of Revenue annually assesses the property of public utilities and certain other companies, including both regulated investor-owned electric utilities and nonregulated electrical generation facilities.<sup>22</sup> The authority of the Department to assess designated utilities and companies is based on statutory provisions related to the type of service or commodity provided (section 308.515, ORS). Regulated utilities are subject to unitary assessment using the cost (historical cost, less depreciation), income (discounted cash flow model), and market (sales or stock and debt) indicators. Construction work in progress, pollution control equipment, and intangible property are included in the valuation of property.

A merchant generation facility is valued as situs property in the county in which it is located. Several new merchant plants have been built in the state. The Department of Revenue uses cost, income, and market indicators in determining value of merchant plants. The original cost of constructing a new generation facility would be more heavily weighted in the early years of operation. Replacement cost may be considered in the future. All property in Oregon is assessed at 100% of market value.

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<sup>20</sup>Merri Seaton, Property Assessment Division, Oregon Department of Revenue, Salem, Oregon, telephone conversation, January 22, 2004.

<sup>21</sup>"Commission Adopts Electric Industry Restructuring Change", Oregon Public Utility Commission press release, November 1, 2002. [http://www.puc.state.or.us/press/2002/2002\\_031.htm](http://www.puc.state.or.us/press/2002/2002_031.htm)

<sup>22</sup>Cogeneration facilities producing less than 20 megawatts of capacity and selling to a single regulated utility are assessed locally as industrial property.

## **PENNSYLVANIA**<sup>23</sup>

In 1996, Pennsylvania enacted the Electricity Generation Customer Choice and Competition Act (House Bill 1509). The law provided that consumers may choose a competitive generation supplier of electricity. One-third of state's consumers were allowed choice in 1999, two-thirds in 2000, and all consumers in 2001. Under restructuring, the Public Utility Commission may permit, but is not required to allow, an electric utility to divest itself of facilities or to revise its corporate structure.

Real property in Pennsylvania is locally assessed (personal property is exempt from taxation). In 1968, Pennsylvania amended its constitution to exempt public utility realty from local property taxation. The purpose of the amendment was to require the state to impose a tax on public utilities in lieu of local property taxes in order to distribute the revenue derived from that tax to local governments across the state regardless of the location of the utility property. In 1971, Pennsylvania enacted a public utility realty tax on regulated utility services.<sup>24</sup> The statewide tax is distributed to each local taxing jurisdiction in proportion of its tax receipts to the tax receipts of all local taxing jurisdictions. The rate of tax is equal to the amount of real estate taxes that could have been imposed by local taxing authorities on the property. Prior to 1999, the tax was imposed on the book value of the land and improvements reported by the public utility. In 1999, Pennsylvania changed the tax base of the public utility realty tax from book value to the assessed value of the property determined by local tax assessors (Act 1999-4). The legislation also allowed public utilities to appeal the assessed value for tax years 1998 and 1999. The legislation also removed electrical generation property from the public utility tax base; generation property is now subject to local realty taxes.

Pennsylvania law (72 P.S. section 5020-402(a)) specifies that in determining the value of property, "cost (reproduction or replacement, as applicable, less depreciation and all forms of obsolescence), comparable sales and income approaches, must be considered in conjunction with one another."

A taxpayer disputed the valuation of a nuclear facility determined by the Luzerne County Board of Assessment Appeals.<sup>25</sup> A trial court had reduced the valuation of the facility from \$3.9 billion in 1998 and \$3.8 billion in 1999 to \$57 million in 1998 and \$71 million in 1999.<sup>26</sup> The Commonwealth Court of Pennsylvania affirmed the value determined by the trial court. The Commonwealth Court held that the trial court:

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<sup>23</sup>Greg Scotnicki, Bureau of Corporation Taxes, Pennsylvania Department of Revenue, telephone conversation, January 22, 2004.

<sup>24</sup>The constitutional amendment gave the state an option on the type of tax Pennsylvania could have imposed. The state could have levied a gross receipts tax on the utilities (see Article VIII, section 4, Pennsylvania Constitution).

<sup>25</sup>PP & L Inc., v. Luzerne County Board of Assessment Appeals, 838 A.2d 1.

<sup>26</sup>*Ibid*, p. 7.

- properly excluded the income approach from valuation because there is no reasonable way to separate the income stream attributable to taxable real property from that attributable to the electric generation business conducted on the property;
- correctly permitted a deduction for functional obsolescence<sup>27</sup> because the cost of a gas-fired plant is substantially less than the cost of constructing a nuclear plant;
- properly allowed a deduction for economic obsolescence<sup>28</sup> based on the sales of comparable nuclear plants;
- correctly excluded an award for stranded costs (\$1.5 billion) because the costs were not part of the real estate (and would not affect the price a buyer would pay for the facility).<sup>29</sup>

In another case, two taxpayers disputed the valuation of hydroelectric facilities by the Lancaster County Assessment Board for tax years 2000 through 2002.<sup>30</sup> The taxpayers' appraiser valued the property using the reproduction cost method (cost to replicate the property). The appraiser then deducted an amount that represented the difference between the cost of a new hydroelectric facility and the cost of a combined cycle gas generator to account for obsolescence. A trial court had accepted this method for determining the value of the facilities. On appeal, the Commonwealth Court, in a divided opinion, disallowed the deduction on the basis that it "constituted the improper inclusion of value-in-use in the value of the property." A dissenting opinion concluded that the deduction reflected a proper deduction for obsolescence (as required by statute) because a buyer would not pay more for a hydroelectric facility than the buyer would pay for a gas generator that "produced the same results."<sup>31</sup>

## **TEXAS**<sup>32</sup>

In 1999, Texas enacted legislation (Senate Bill 7), to allow retail competition beginning January 1, 2002. Electric utilities were required to create separate companies for generation, distribution and

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<sup>27</sup>Functional obsolescence is obsolescence attributable to the inefficiency, overcapacity, or inadequacy of the facility (see footnote No. 25, p. 9).

<sup>28</sup>Economic obsolescence is depreciation caused by unfavorable external conditions, such as the local economy, economics of the industry, loss of materials or labor sources, and passage of new legislation (see footnote No. 25, p. 9).

<sup>29</sup>Joseph C. Bright, "Commonwealth Court: Nuclear Energy Property Correctly Valued", State Tax Notes, Vol. 30, No. 8, November 17, 2003, pp. 614-615.

<sup>30</sup>*PP & L Inc. v. Lancaster County Assessment Board*, No. 1700 C.D. 2002 (Pa. Cmwlth. April 30, 2003) unreported.

<sup>31</sup>Joseph C. Bright, "Commonwealth Court: Assessed Value Can Include Obsolete Value", State Tax Notes, Vol. 28, No. 8, May 26, 2003, p. 706.

<sup>32</sup>Dennis Degeer, Capitol Appraisal Group, Austin, Texas, telephone conversation, January 23, 2004.

transmission, and a retail electric provider. The legislation also provided for a 3-year rate freeze and a 6% rate reduction for residential and small customers for 5 years or until utilities lose 40% or more of their customers to competition. Utilities were not allowed to own more than 15% of the installed generation capacity in the regional grid (Electric Reliability Council of Texas). Electric utilities either sold generation facilities or auctioned a portion of their generation capacity to electricity suppliers. Municipal and rural electric cooperatives were allowed, but not required, to open their territories to competition.

All property in Texas is locally assessed. Electrical generation facilities are now valued separately from transmission and distribution. The value of a generation facility is determined on the basis of replacement cost new (combined cycle gas turbines), less depreciation, income, and market sales. The replacement cost of gas turbines is used in Texas because a lot of new generation has been installed using this technology. In addition to physical depreciation, economic and functional obsolescence are taken into account in determining the cost indicator for existing plants.

The income indicator is based on megawatt capacity, daily wholesale sales, contracts, and capacity auctions. After taking into account operating costs, income is projected into the future and future net income is discounted to the present using a specified capitalization rate. Under existing economic conditions, the income indicator is typically the most heavily weighted indicator of value for generation facilities in Texas.

The market indicator is based on sales of existing generation facilities; the stock and debt approach is not used because the facilities are locally assessed. Because there have not been many recent sales of generation facilities, the market indicator is not currently much relied on. If more sales of electrical generation facilities occur, the market indicator may replace income as the better indicator of value.

An interesting digression relates to the valuation of a nuclear plant in Texas. A 2,300 megawatt nuclear plant was built at a cost of \$11 billion, or for about \$4.8 million per megawatt. A similar sized combined cycle gas turbine could be built for \$1 billion. However, the nuclear plant is valued at \$1.5 billion because of the competitive cost advantage of nuclear fuel.

## **WASHINGTON**

Restructuring of the electrical utility industry has not occurred in Washington. The state Department of Revenue centrally assesses regulated utilities and any wholesale generation facility that is located in more than one county. The Department uses the historical cost, less depreciation; yield income (an income forecasting method); and stock and debt indicators to value regulated utilities. A deduction is allowed for intangible property. Pollution control facilities are subject to taxation unless owned by a specific type of thermal electrical generator.

Except as noted above, wholesale generators are valued locally. The valuation of locally assessed generation facilities is based on cost, income, and market indicators. The cost indicator of a newly constructed facility (typically wind or natural gas generators) would be based on construction cost, less

adjustments for economic obsolescence (e.g., a surplus of energy supply). Replacement or reproduction costs may be used. The Department of Revenue may provide an advisory valuation on behalf of a local assessor.

A generation facility and related coal mine in Centralia was sold a few years ago. Because this facility crosses county lines, it is assessed by the Department of Revenue. The Department took into account sales information in valuing the facility.

All taxable property is assessed at 100% of market value. Public utility districts are exempt from property taxes but pay a fee in lieu of tax based on kilowatt-hour revenue.

### **CONCLUDING COMMENTS**

The states included in this summary indicate that a wide variety of techniques are used to determine market value (or full cash value or true value) of regulated public utilities and nonregulated electrical generators for property tax purposes. Several states have revised the valuation methods for electrical generation property, regardless of the status of restructuring in the particular state, to account for the evolving structural changes in the electric supply industry. Although California has suspended restructuring, it uses replacement cost new, less depreciation, and a discounted cash flow income method for valuing wholesale generators. Texas uses these methods to value all generation property under a restructured environment, while New York relies primarily on a discounted cash flow income method.

Several states value all generation property. Arizona, New Mexico, and Ohio each provide a statutory method for the valuation of electrical generation property owned by a regulated utility or by a wholesale generator. New Mexico values all generation property on the basis of cost. Ohio provides a separate method for valuing electrical generation facilities of regulated utilities and for valuing new generation or generation that has been sold. Arizona provides for a generally uniform assessment method for all generation property. Oregon assesses regulated utilities on the unitary method and wholesale generation facilities as "stand-alone" units using cost, income, and market indicators.

Washington and Oklahoma value regulated utilities on a unitary basis, while wholesale generators are valued locally.

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