



WYOMING LEGISLATIVE SERVICE OFFICE

Issue Brief

STATE TAXATION OF ELECTRICITY GENERATION

November 2024

by

Don Richards, Budget/Fiscal Administrator

Dean Temte, Senior Fiscal Analyst

Taylor DuPont, Fiscal Analyst

Catherine Camarotte, Fiscal Analyst

Kelly Lower, Research Analyst

PURPOSE

This Issue Brief is intended to provide background information and comparative assessment of (i) state tax policies potentially impacting electric generation in the Western United States; (ii) electricity generation, consumption, and pricing metrics; (iii) Wyoming state revenue generated by various forms of electric generation; (iv) wind energy taxation in the Western United States; and (v) an initial estimate of state revenue generated through the imposition of an excise tax on electricity generation.

INTRODUCTION

The national electrical generation, distribution, and consumption markets are significantly different than that of other energy commodities, e.g., coal, oil, or natural gas. In the simplest terms the markets for flow of electrons (electricity) are decidedly different than the markets for gaseous, liquid, or solid combinations of carbon and hydrogen. Multiple state tax structures, the existence of wholesale and retail markets, regional disparities, physical distribution channels, widely different business plans of market participants, and differences in public utility regulated and unregulated aspects of the market introduce considerable complexity individually and collectively.

In an attempt to minimize some of this complexity rather than add to it, where possible this *Issue Brief* focuses on facts and known data rather than forecasts or econometric estimates. Nevertheless, consideration of known data rather than estimates forestalls attempts to add valuable insights on occasion and, at worst, raises other questions and limitations. As such, the incorporation of estimates rather than known data is a requirement for portions of this *Issue Brief*. Where applicable, the primary assumptions underlying the estimates are summarized with the recognition that the selection and application of assumptions are subject to perspective and interpretation.

Throughout the materials, these analyses exclude consideration of federal income taxes, federal tax credits, the federal (retained) portion of federal mineral revenues, abandoned mine reclamation fees and black lung fees. This approach is selected for two reasons.

- First, Wyoming policymakers have little to no impact on the establishment of these revenue policies and federal tax (and credit) structures apply to all states, though admittedly not all feedstocks, universally. There is one exception to this approach. In Section IV of this *Issue Brief*, federal income taxes and tax credits are included in the taxation of wind-generated electricity in the update of the 2010 Wind Costing Model presented to the Joint Revenue Interim Committee.¹ LSO was charged with updating the model, not modifying it. Since federal income taxes and tax credits were included in the original model, LSO staff did not remove them or otherwise modify the model computations. The impact of including federal taxes on the comparisons between states amounts to a maximum difference of \$0.59 in the cost estimates, with Oregon being the most favorably impacted and Washington being the least favorably impacted. In total, this differential amounts to less than one percent of the average computed cost of generating one megawatt hour (MWh) of electricity. Furthermore, this inclusion is common across other identified cost comparisons.²
- Second, while the State of Wyoming certainly benefits from federal appropriations and, indirectly, contributions to abandoned mine reclamation fees, the connection to these payments and services funded through state legislative appropriations is tenuous.

Finally, for purposes of this *Issue Brief*, multi-state tax comparisons include the 11 continental western states ("Western United States") including Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. When used in this *Issue Brief* "Western States Plus" includes the aforementioned 11 states plus North Dakota, South Dakota and Nebraska.

EXECUTIVE SUMMARY

Several major conclusions are evident:

- Each state's tax policies have developed independent of one another. As a result, substantial differences are reflected in both the various basis of the taxes imposed and types of taxes and manner in which taxes are imposed on electrical generation companies.
- Broadly, Wyoming's overall tax rates are lower than Western States Plus. Wyoming does not impose taxes that other Western States Plus do, but Wyoming imposes a wind generation tax, which is unusual among the comparator states. Finally, after accounting for incentives and exemptions of other states, Wyoming's tax structure compares less favorably both for the construction of electrical generation facilities, especially wind generation, and residential consumption of electricity.

¹ Olsen, Arne; Chait, Michele; and Pacheco, Andres, "Wind Costing Model," Energy+Environmental Economics (E3), July 1, 2010. (Handout included in submission to the Joint Revenue Interim Committee, September 22, 2010.)

² For example, see Godby, Robert; Cook, Benjamin; Holland, Morgan; and Kjorstad, Tyler, "Estimating the Impact of State Tax and Incentive Policies on the Cost of Wind Development in the West," March 8, 2024.

- Wyoming is a net exporter of electricity, with electric generation in excess of 46,000 GWh and total electrical sales of less than 17,000 GWh, resulting in the largest exporter of generated electricity of the Western States Plus.³
- Wyoming's retail cost of electricity is below the national average for residential, commercial, industrial, and transportation consumers. As a result, Wyoming electrical generators have a valuable commodity to export and sell to other users. Additionally, that export must compete in the marketplace on price, at the time and location demanded, and with other attributes as demanded by the market buyers.
- Proposed and permitted new electrical generation in Wyoming and nationwide is predominantly for renewable energy and of that class, nationally solar and wind account for the greatest amount of both. Across three primary methods of electrical generation in Wyoming (coal, natural gas, and wind), total revenue paid, which benefits the state and its localities attributable to the generation of electricity, are ranked, highest to lowest:
 - \$5.02/MWh for \$3.50/MCF natural gas,
 - \$3.08/MWh for \$14.00/ton (8,600 BTU) coal, and
 - \$2.29/MWh for wind.
- ✓ If only sales and use, ad valorem and production taxes are considered the rankings, from highest to lowest are:
 - \$2.29/MWh for wind;
 - \$1.70/MWh for \$3.50/MCF natural gas, and
 - \$1.50/MWh for \$14.00/ton (8,600 BTU) coal.
- A bill establishing a generation tax was drafted but not considered in 2024. While Wyoming has a wind generation tax on electricity, other methods of electrical generation do not have a generation tax.

I. WESTERN STATE TAX POLICIES

LSO staff reviewed a portfolio of taxes and tax rates that are imposed on electric generators for all "Western States Plus." The taxes considered include corporate income taxes, sales and use taxes, ad valorem (property) taxes, gross receipts taxes, franchise taxes, and various excise taxes such as those imposing a tax on generation or production of electricity. Additionally, staff summarized state tax credits and incentives. A summary of all identified taxes and credits can be found in Attachment A.

When considering tax policies across the "Western States Plus" region, Wyoming

- ✓ Is the only state that impose a wind generation tax;⁴
- ✓ Imposes the lowest combined total state and local sales and use taxes of states imposing a sales and use tax⁵; however, after taking into account expected qualifications for

³ See Attachment B, Tables 4 and 5, LSO compilation of data from U.S. Energy Information Administration, "Annual Electric Power Industry Report," October 2023.

⁴ Montana imposes a tax on all electricity produced, including wind generation. North Dakota imposes a wind generation and grid-connected tax in lieu of all real or personal property taxes, except for property taxes on land. In Wyoming, electricity produced from a wind turbine is exempt from this tax for three-years. South Dakota imposes a wind generation tax in lieu of all real or personal property taxes of the facility.

⁵ Note Montana, New Mexico and Oregon do not apply any sales and use tax goods or materials used for the electrical generation.

exemptions, Wyoming's combined sales and use tax rate is just above the median of all Western States Plus;

- ✓ Is one of nine states that does not impose a gross receipts tax on electrical generation;
- ✓ Has the second lowest effective statewide property tax rate on utilities and the third lowest after considering certain electrical generation property tax exemptions; and
- ✓ Is one of four states that does not impose any corporate income tax on companies generating electricity.

II. ELECTRICITY GENERATION, CONSUMPTION, AND PRICING: NATIONAL DATA

Table 1 illustrates the fuel type of electrical generation plants under construction, permitted, and pending application in Wyoming and nationwide, as reported by the American Public Power Association. In sum, the majority of additional, planned electrical generation in Wyoming is derived from wind, while approximately 85 percent of power generation under construction, permitted, or pending applications nationwide is derived from either wind or solar, with solar accounting for roughly two-thirds of the future planned generation.

Table 1. Future Electrical Generation Plants in Wyoming and Nationwide.

Plants Under Construction	Wyoming		United States	
	Capacity (MW)	Share	Capacity (MW)	Share
<i>Wind</i>	3,832	96.2%	14,137	21.5%
<i>Solar</i>	150	3.8%	43,061	65.4%
<i>Natural Gas</i>			6,119	9.3%
<i>Nuclear</i>			1,100	1.7%
<i>All Other*</i>	2	0.1%	1,482	2.2%
Permitted Plants				
<i>Wind</i>	661	100.0%	11,564	17.4%
<i>Solar</i>			45,124	67.7%
<i>Natural Gas</i>			6,440	9.7%
<i>Hydro</i>			2,862	4.3%
<i>All Other*</i>			630	1.0%
Plants Pending Application				
<i>Solar</i>			40,107	65.3%
<i>Wind</i>	510	42.2%	12,259	20.0%
<i>Hydro</i>	700	57.9%	4,554	7.4%
<i>Natural Gas</i>			4455	7.3%
<i>All Other*</i>			40	0.1%

Source: "America's Electricity Generation Capacity," American Public Power Association, 2024 Update, Tables 2.1, 2.2 and 2.3, supplemented by e-mail correspondence with Buttel, Lindsay, Manager, Research and Statistics, American Public Power Association, Hitachi Energy Velocity Suite database, accessed January and February 2024.
Note: * "All Other" unless specified, may include nuclear, other gas, geothermal, distillate fuel oil, biomass solids, hydro, waste heat, biomass gases, landfill gas, other biomass, agricultural byproduct, wood, wood waste solids, and other.

The tables and figures included in Attachment B, *LSO Fact Sheet 24FS029*, show national statistics regarding electrical power generation, sales (consumption), and prices for residential, commercial, industrial, and transportation consumers from 2010 to 2022.

Statistics collected by the U.S. Energy Information Administration (EIA) demonstrate the total U.S. electric power industry increased generation by 2.6 percent from 2010 to 2022, as measured in megawatt hours (MWh), with the largest change in generation output from 2017 to 2018 marked by a 3.6 percent increase in overall generation.⁶ Total generation includes many sources, including coal, hydroelectric conventional, natural gas, nuclear, petroleum, pumped storage, solar, and geothermal energy sources.

Electricity consumption in the U.S. across the residential, commercial, industrial, and transportation sectors has increased from 2010 to 2022 in all sectors except transportation, which has decreased by 14.4 percent.⁷ The total sales price of electricity as measured in cents per kilowatt hour (KWh) has increased across all sectors from 2010 to 2022, with the largest increase in the residential sector with a 3.5 cent increase per KWh (30.4 percent) from 2010 to 2022.⁸

Electricity generation increased from 2010 to 2022 in nine of the Western States Plus: Colorado, Idaho, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, and Washington. Generation decreased in the remaining five Western States Plus, Arizona, California, Montana, Utah, and Wyoming.⁹

Electricity consumption across the total residential, commercial, industrial, and transportation sectors increased in all Western States Plus except California (-2.6 percent) and Wyoming (-3.6 percent). The largest total increase across all sectors was in North Dakota, which increased total consumption by 96 percent.¹⁰ Electricity prices across all Western States Plus are the highest for the residential sector. The state with the largest total increase in electricity price across all sectors is California with a 9.3 cent increase per KWh (71.5 percent). The state with the lowest total sector price of electricity is Wyoming.¹¹

Wyoming has the lowest ratio of consumption over generation across all Western States Plus, with a ratio of 35.6 percent in 2022, making Wyoming the leading energy exporter in the Western States Plus. Several Western States Plus have had an annual consumption to generation ratio which exceeded the total generation of energy in the state for a given year, such as Colorado, Idaho, Nevada, and South Dakota.

Attachment B-1 illustrates the growth of electric generation from renewable sources. Data from the EIA indicate that Wyoming had the six largest growth of renewable electric energy generation in the last four years among Western States Plus.

⁶ Attachment B, Table 1.

⁷ Attachment B, Table 2.

⁸ Attachment B, Table 3.

⁹ Attachment B, Table 5.

¹⁰ Attachment B, Table 4.

¹¹ Attachment B, Table 10.

III. STATE REVENUE FROM ELECTRICITY GENERATION: COMPARISON OF FEEDSTOCKS (INPUTS)

This section compares the estimated revenue provided to Wyoming state and local governments from electricity generated by coal, natural gas, and wind. Put differently, this section examines the total amount of revenue various electrical generation methods contribute to state and local revenues, not what generation in other states contribute to state and local government revenue. Broadly, this analysis is an update of work compiled by LSO and presented to the Joint Revenue Interim Committee in 2016.¹² In the update of this analysis, LSO staff consulted the Department of Revenue and Wyoming Public Service Commission staff, staff of other state Public Service Commissions, several major public utility firms operating in the western U.S., and wholesale providers of electricity. Through those discussions, the analysis has not only been updated, but the methodology is also substantively revised. Furthermore, the scope of the analysis is expanded.

Primary Source Methodology: Specifically, in terms of methodology, rather than applying the direct cost ratio of coal and natural gas to determine the contribution per MWh of various taxes to state revenue as in the 2016 research, LSO staff used primary source information from the Department of Revenue combined with average royalty, ad valorem, severance tax, and production of federal minerals within Wyoming used by the Consensus Revenue Estimating Group (CREG). The analysis has been expanded to both state and local taxes, recognizing the collection and distribution of these taxes may be unrelated separate public policy questions. Furthermore, the analysis now considers the sales and use taxes paid during construction of electrical generation facilities, amortized over twenty years, estimated sales and use taxes paid annually after construction, and estimated ad valorem taxes paid on property plant and equipment. Recognizing the potential for differences of interpretation, the analysis provides a subtotal of these taxes, by MWh, across feedstocks (inputs). Then, additional taxes and revenues paid on the feedstocks are shown separately and summed in total. This analysis does not consider any federal taxes, including but not limited to abandoned mine land fees, black lung fees, the portion of federal mineral royalties retained by the federal government, federal incentives, such as tax credits, or any taxes associated with transmission and distribution or either the produced electricity (transmission lines) or transportation of the feedstocks (railroads and pipelines). Finally, revenue from state leases or royalties are not directly included for either electricity generated by wind or electricity generated by natural gas or coal.

Estimate Methodology: The sales and use construction and operations tax estimates are as of fiscal year 2021, estimated by the LSO and the Department of Revenue. In particular, sales and use taxes for operations are not disaggregated by utility type and no reliable information was available from the contacted utilities to provide a disaggregated estimate. A similar issue is evident with respect to an estimate of property, plant and equipment for coal-fired and natural gas-fired electrical generation plants. Finally, sales and use taxes for construction are based upon the last decade of submissions to the Wyoming Department of Environmental Quality, Industrial Siting Division, by type of generation facility.

¹² Wyoming Legislative Service Office, "Taxation of Wind, Coal, and Natural Gas," September 22, 2016. [<https://wyoleg.gov/InterimCommittee/2016/03-0922APPENDIX10.pdf> accessed August 3, 2024.]

Attachment C offers a presentation of the findings of this updated and expanded analysis for the estimated state and local revenue generated by electricity generated by coal, natural gas, and wind. Furthermore, Table 2, summarizes the estimated total revenue receipts per MWh for the primary feedstocks. The purpose of this analysis is to provide a set of revenue streams that could be included (or excluded) for purposes of comparison depending on the intended analysis. Currently, with all revenue streams included, the total tax receipts paid per MWh by feedstock are as follows: natural gas, coal, and wind. Natural gas has several taxes included (ad valorem, severance taxes etc.) that are greater than either coal or wind.

Table 2. Estimated Total Revenue Receipts per MWh, by Feedstock.

	Wind	Coal (8,600 BTU)	Natural Gas
Price per Ton or MMBtu (MCF)	N/A	\$14.00	\$3.50
Sales and Use Taxes, Construction	\$0.34	\$0.45	\$0.65
Sales and Use Taxes, Operations	\$0.12	\$0.12	\$0.12
Ad Valorem, Property/Plant/Equip.	\$0.83	\$0.93	\$0.93
Subtotal 1	\$1.29	\$1.50	\$1.70
Ad Valorem GP 6%	N/A	\$0.41	\$1.09
Severance Taxes 6.5 or 6%*	N/A	\$0.42	\$1.04
Subtotal 2	N/A	\$0.83	\$2.13
FMRs**	N/A	\$0.44	\$1.19
CLBs	N/A	\$0.31	N/A
Subtotal 3	N/A	\$0.75	\$1.19
Production of electricity from wind***	\$1.00	N/A	N/A
Subtotal 4	\$1.00	N/A	N/A
Grand Total	\$2.29	\$3.08	\$5.02

Source: LSO analysis of Department of Environmental Quality impact assistance payments reporting, U.S. Energy Information Administration conversions, tax information as provided by the Department of Revenue, and analysis of wind, coal, and natural gas tax structures.

Notes: * Natural gas is assessed at 6%; coal is assessed at 6.5%.** FMR calculations incorporate CREG assumptions of the production of coal (88%) and natural gas (8%) occurring on federal lands. ***Electricity produced from a wind turbine is exempt from this tax for three-years.

IV. COMPARISON ACROSS WESTERN STATES OF WIND TAXATION, WIND CAPACITY, DISTRIBUTION, AND OTHER FACTORS

This section considers the differences in state tax structures, differences in wind capacity, and regional construction estimates to summarize and compare the cost of developing wind resources across the 11 western states. This analysis is limited to updating the inputs, where possible, of the 2010 Energy+Environmental Economics model (E3 model).¹³ This model features assumptions of

¹³ Olsen, Arne; Chait, Michele; and Pacheco, Andres, "Wind Costing Model," Energy+Environmental Economics (E3), July 1, 2010. (Handout included in submission to the Joint Revenue Interim Committee, September 22, 2010.) [Publicly available model available at: http://www.ethree.com/wp-content/uploads/2017/02/E3_WY_Wind_Energy_Costing_Model.xls, accessed August 4, 2024.]

capital costs, operations and maintenance costs, wind capacity factors, state and federal taxes and tax incentives, as well as transmission costs. A separate, more detailed model was recently released by a group of University of Wyoming researchers (UW model).¹⁴ Although the two studies have similar assumptions but different attributes and modeling approaches, the conclusions, at least in terms of rankings, are comparable.

The updated E3 model uses the same input assumptions as the UW model where available and unless LSO identified more reliable, updated inputs. For example, LSO included different debt interest rate in the E3 model, which reflects the rate as of August 2024, and some assumptions of state tax structures. Specifically, LSO staff applied the same state tax assumptions in the E3 model match as those described in Section I of this *Issue Brief* wherever the model structure allows. While the UW model ranks states based on a calculated average cost per megawatt-hour over the lifetime of the wind project, the E3 model ranks states based on a calculated present value cost per megawatt-hour over the lifetime of the wind project. Therefore, the calculated costs will be different between the two models. Attachment D contains the updated input values used in the E3 model. Specifically, Attachment D-1 summarizes the system financing cost assumptions and Attachment D-2 summarizes the tax assumptions.

In general, differences in the levelized busbar costs¹⁵ among states in the E3 model are driven by state-specific regional cost adjustments and capacity factors, a measure of wind generation potential. Attachment D contains two output figures: D-3 and D-4. The first figure, D-3, shows E3 model outputs assuming no regional cost factors and a capacity factor of 35 percent for each state. This focuses the model on differences in local tax policy. The second figure, D-4, shows E3 model outputs including regional cost and capacity factors.

In general, when regional cost and capacity factors are excluded, the differences in the levelized costs among states are small. Wyoming tends to fall in the middle-to-upper range of levelized costs per megawatt-hour. When regional cost and capacity factors are included, the levelized costs of Wyoming, New Mexico, Montana, and Colorado fall below those of the other states included in the analysis. This is primarily due to the much higher wind generation capacity of those four states. Importantly, compared to the original E3 model in 2010, levelized costs have decreased by 25 to 50 percent for all states.¹⁶ Table 3 and reproduced as Attachment D-5 compares the output of the 2010 E3 model, the UW model, and both versions of the updated E3 model. The table provides a pro forma cost rank for each state, meaning the hypothetical ranking of costs given all assumptions of the models. When regional factors are included, Montana and Wyoming rank first and second, respectively for lowest cost.

¹⁴ Godby, Robert; Cook, Benjamin; Holland, Morgan; and Kjorstad, Tyler, "Estimating the Impact of State Tax and Incentive Policies on the Cost of Wind Development in the West," March 8, 2024.

[https://www.uwyo.edu/cbea/_files/documents/wind-study.pdf, accessed August 4, 2024.]

¹⁵ The "levelized busbar cost" is the average cost per unit of electricity generated at the generation facilities (wind turbines, in this case), allowing for the recovery of identified costs over the estimated life of the generation facilities.

¹⁶ The UW model includes two versions of the levelized costs for New Mexico: one assuming that the wind project takes advantage of property tax exemptions stemming from the use of industrial revenue bonds with local governments, and one assuming the wind project does not. The E3 model only assumes that the wind project does not take advantage of the industrial revenue bonds.

Table 3. Wind Generation Modeling: \$/MWh and State Ranking Comparison.

	2010 E3		2024 UW Report, 35% Capacity		2024 LSO Update of E3, 35% Capacity		2024 LSO Update of E3, Regional Capacity	
		Rank		Rank		Rank		Rank
AZ	\$93.36	5	\$56.42	5	\$57.61	5	\$51.93	7
CA	\$95.89	6	\$60.08	10	\$58.00	6	\$59.14	10
CO	\$91.50	4	\$55.63	4	\$62.57	10	\$41.54	4
ID	\$102.11	9	\$57.17	6	\$56.00	2	\$46.84	5
MT	\$76.62	1	\$55.51	3	\$56.14	3	\$37.01	1
NV	\$103.27	10	\$57.64	7	\$56.66	4	\$62.17	11
NM	\$88.53	3	\$61.04	11	\$60.75	9	\$38.48	3
OR	\$96.26	7	\$55.33	2	\$58.30	7	\$53.56	8
UT	\$98.17	8	\$54.69	1	\$55.14	1	\$48.62	6
WA	\$109.60	11	\$59.30	9	\$62.81	11	\$57.63	9
WY	\$81.91	2	\$58.08	8	\$58.85	8	\$38.16	2

Sources: LSO staff summary of Godby, Robert; Cook, Benjamin; Holland, Morgan; and Kjorstad, Tyler, "Estimating the Impact of State Tax and Incentive Policies on the Cost of Wind Development in the West," March 8, 2024, and 2024 updated results from Olsen, Arne; Chait, Michele; and Pacheco, Andres, "Wind Costing Model," Energy+Environmental Economics (E3), July 1, 2010.

V. ESTIMATED STATE FISCAL IMPACTS – ELECTRICAL GENERATION TAX

In 2024, HB 147 was not introduced or considered by the Legislature. As proposed, the draft would have imposed an excise tax on the production of electricity with credits for other taxes (excise, sales, use, severance and ad valorem taxes) paid in the tax year by the same taxpayer, or in the case of severance taxes, documented taxes paid by another person. The estimated fiscal impact included a total, new tax liability of \$133 million per year before any reduction for tax credits. Total tax credits were estimated at \$115 million per year. The difference, \$18 million, would have been distributed roughly equally between the state General Fund and local government sources.

There are several technical considerations to such a policy proposal. For example, the ability and practicality of determining the offsetting taxes to establish the appropriate tax credit could require significant accounting, or even operational business challenges. The tax design could reasonably be expected to treat different electrical generators differently based upon the feedstock of the electrical generation, or even the business plan of the producers. Finally, the basis of the proposed tax in this legislation is the annual gross energy earnings, as opposed to the quantity of electricity produced. See Attachment E for a copy of the legislation, fiscal note, and discussion of the underlying assumptions.

ATTACHMENT A

ARIZONA

Corporate income taxes

Arizona has a corporate income tax rate of 4.9 percent on amounts greater than \$0, as of March 15, 2024.^{i, ii}

Sales and use taxes

Electricity is subject to Arizona's transaction privilege tax (commonly referred to as a sales tax) under the utilities classification.ⁱⁱⁱ The state sales tax rate is 5.6 percent, and the average combined rate is 8.379 percent.^{iv}

Ad valorem (property) taxes

The valuation of electric generation facilities is determined as follows:

- The value of land used in operating the facility shall be the cost to the current owner as of December 31 of the preceding calendar year.
- The valuation of real property improvements used in operating the facility is the cost multiplied by the valuation factor.
- The valuation of personal property used in operating the facility is the cost multiplied by the valuation factor, adjusted as follows:
 - ✓ 35 percent of the scheduled depreciated value for the first year of assessment.
 - ✓ 51 percent of the scheduled depreciated value for the second year of assessment.
 - ✓ 67 percent of the scheduled depreciated value for the third year of assessment.
 - ✓ 83 percent of the scheduled depreciated value for the fourth year of assessment.
 - ✓ the scheduled depreciated value for the fifth and subsequent years of assessment.^v
- Electric generation facilities are considered class one property^{vi} and are assessed at the following percentages:
 - ✓ 17.0 percent beginning from and after December 31, 2022 through December 31, 2023.
 - ✓ 16.5 percent beginning from and after December 31, 2023 through December 31, 2024.
 - ✓ 16.0 percent beginning from and after December 31, 2024 through December 31, 2025.
 - ✓ 15.5 percent beginning from and after December 31, 2025 through December 31, 2026.
 - ✓ 15.0 percent beginning from and after December 31, 2026.^{vii}

The Arizona statewide average property tax rate in 2023 was 10.97 percent,^{viii} resulting in a calculated effective property tax rate of 1.86 percent.

The effective tax rate on industrial property in Pheonix, Arizona (land and building value of \$25 million) ranges from 1.788 percent to 1.855 percent.^{ix}

Gross receipts taxes

Arizona does not have a gross receipts tax.^x

Franchise, other excise taxes and generation taxes

Arizona imposes two separate assessments on public service corporations including electric, gas, sewer, water, and telephone utilities not operated by municipalities. The assessments are levied on the gross operating revenue from each corporation's intrastate operations during the preceding calendar year. These regulatory assessment fees are currently charged at a rate of 0.2122 percent for businesses and 0.2503 percent for residents.^{xi, xii}

Arizona imposes an assessment for each of the two years in the biennium on each consortium of public service corporations and municipal corporations engaged in constructing or operating a commercial nuclear

generating station for the purpose of developing, maintaining and supporting the state plan to provide for off-site response to an emergency caused by an accident at a commercial nuclear generating station. The assessment shall be in an amount equal to the appropriations provided, plus interest at a rate of ten percent per year.^{xiii}

State tax credits and incentives

Through December 31, 2040, property tax assessment on renewable energy (solar, wind or other nonpetroleum renewable sources) and storage equipment owned by utilities and other entities operating in Arizona is assessed at 20 percent of the "taxable original cost" after deducting depreciation.^{xiv}

Arizona has a sales tax exemption on machinery, equipment or transmission lines used directly in producing or transmitting electrical power, but not including distribution.^{xv}

CALIFORNIA

Corporate income taxes

California has a corporate income tax rate of 8.84 percent on amounts greater than \$0, as of March 15, 2024.ⁱ

Sales and use taxes

Electricity delivered to consumers through lines is exempt from California's sales and use tax.^{iii, xvi} Electricity for commercial and industrial purposes is subject to California sales tax. The California state sales tax rate is 7.25 percent, and the average combined rate is 8.85 percent.^{iv}

Ad valorem (property) taxes

Taxable property in California is subject to a tax of 1 percent of the “taxable value” of the property.^{xvii} The California Bd. of Equalization shall annually assess every electric generation facility with a generating capacity of 50 megawatts or more that is owned or operated by an electrical corporation.^{xiii, xviii} State-assessed property is assessed at fair market value or full value as of the first day of January.^{xix}

The effective tax rate on industrial property in Los Angeles, California (land and building value of \$25 million) ranges from 0.912 percent to 0.96 percent.^{ix}

Gross receipts taxes

California does not have a gross receipts tax.^x

Franchise, other excise taxes and generation taxes

California imposes an Electrical Energy Surcharge on the consumption of electrical energy purchased from an electric utility. The Electrical Energy Surcharge is imposed upon the consumption in California of electrical energy purchased from an electric utility. The 2023 rate is three-tenths mill (\$0.0003)/kilowatt-hour (\$0.30/megawatt-hour).^{xx}

State tax credits and incentives

California has a property tax incentive for the installation of active solar energy systems in the form of a new construction exclusion (no assessment). An active solar energy system may be used for any of the following:

- Domestic, recreational, therapeutic, or service water heating
- Space conditioning
- Production of electricity
- Process heat
- Solar mechanical energy

This exclusion statute sunsets on January 1, 2027.^{xxi}

Electricity delivered to consumers through lines is exempt from California's sales and use tax under.^{iii, xxii}

Qualified tangible personal property to be used primarily in the generation or production, storage, or distribution of electric power is partially exempt from sales and use tax. The partial exemption rate of 3.9375 percent applies to the period January 1, 2017 through June 30, 2030.^{xxiii}

COLORADO

Corporate income taxes

Colorado has a corporate income tax rate of 4.4 percent on amounts greater than \$0, as of March 15, 2024.ⁱ

Sales and use taxes

Electricity furnished and sold for commercial consumption is subject to sales tax. Electricity sold to occupants of residences for residential use is exempt from state and certain local sales taxes.^{iii, xxiv} The state sales tax rate is 2.9 percent, and the average combined rate is 7.81 percent.^{iv} Electricity sold to occupants of residences for residential use is exempt from state and certain local sales taxes.^{iii, xxv}

Ad valorem (property) taxes

Property of public utilities are assessed at the state level and apportioned to the counties for collection of the property tax.^{xxvi} The assessment rate for state assessed renewable energy property is 26.4 percent for 2023 and 2024. All other state assessed real and personal property is assessed at 27.9 percent for 2023 and 2024.^{xxvii} The Colorado statewide average mill levy in tax year 2023 was 81.498 mills (8.1498 percent),^{xxviii} resulting in a calculated effective property tax rate of 2.15 percent on renewable energy property and 2.27 percent on all other state assessed property.

The effective tax rate on industrial property in Denver, Colorado (land and building value of \$25 million) ranges from 1.649 percent to 1.728 percent.^{ix}

Gross receipts taxes

Colorado does not have a gross receipts tax.^x

Franchise, other excise taxes and generation taxes

Colorado imposes a tax on public utilities based on annual gross intrastate utility operating revenues of not more than 0.45 percent. The current rate is 0.380511924 percent.^{xi, xxix, xxx}

State tax credits and incentives

Electricity sold to occupants of residences for residential use is exempt from state and certain local sales taxes.^{iii, xxxi}

Colorado allows a sales and use tax exemption for components used in the production of alternating current electricity from a renewable energy source.^{xxxii}

IDAHO

Corporate income taxes

Idaho has a corporate income tax rate of 5.8 percent on amounts greater than \$0, as of March 15, 2024.ⁱ

Sales and use taxes

The state sales tax rate is 6.0 percent, and the average combined rate is 6.026 percent.^{iv} The sale or purchase of electricity is exempt from taxation when delivered to consumers at the place of consumption by means of wires or similar systems.^{iii, xxxiii}

Ad valorem (property) taxes

Taxable property in Idaho is assessed at 100 percent of market value, less exemptions.^{xxxiv, xxxv} Property tax rates are set based on approved budgets established by taxing districts to fund services and the assessed value of the taxing district.^{xxxvi} Real and personal property of electric utilities are classified as operating property and is centrally assessed by the Idaho State Tax Commission.^{xxxvii, xxxviii} The 2022 estimated average tax rate applied to operating property was 0.649 percent.^{xxxix}

The effective tax rate on industrial property in Boise, Idaho (land and building value of \$25 million) ranges from 0.717 percent to 0.751 percent.^{ix}

Gross receipts taxes

Idaho does not have a gross receipts tax.^x

Franchise, other excise taxes and generation taxes

Idaho imposes a special regulatory fee on electrical utilities not to exceed 0.3 percent of the gross operating revenues derived from intrastate utility business.^{xi, xl} The regulatory fee for FY 2025 is 0.2127 percent of gross operating revenues.^{xli}

Idaho imposes a tax on cooperative electrical associations of 3.5 percent of its annual gross earnings from the distribution, delivery and sale of electricity within the state of Idaho, after reducing gross earnings by its related in-state costs of power. This tax is in lieu of all other taxes on the property.^{xi, xlii}

Idaho imposes a license tax of 0.5 mills/kWh (\$0.50/MWh) on the generation, manufacture or production of electricity by means of water power, except for electricity generated or sold for use in manufacturing, mining, milling, smelting, refining and processing. Electricity used for pumping water for irrigation or drainage purposes in the state of Idaho is also exempt from tax.^{xliii}

Idaho imposes a tax on wind energy or geothermal energy producers of 3.0 percent of the producer's gross wind or geothermal energy earnings. Idaho imposes a tax on solar energy producers of 3.5 percent of the producer's gross solar energy earnings. The wind energy tax, the geothermal energy tax or the solar energy tax are in lieu of all other taxes on the property of the producer and shall reduce the property tax to be levied to finance an annual budget.^{xliii, xliv}

State tax credits and incentives

For calendar years beginning on January 1, 2006, and ending on December 31, 2030, subject to the limitations, a taxpayer who has certified that the tax incentive criteria will be met within the project site shall be entitled to receive a rebate of 25 percent of all sales and use taxes imposed, and that the taxpayer or its contractors actually paid in regard to any property constructed, located or installed within the project site during the project period for that site.^{xlv}

The wind energy tax, the geothermal energy tax or the solar energy tax are in lieu of all other taxes on the property of the producer and shall reduce the property tax to be levied to finance an annual budget.^{xiii, xlv}

The sale or purchase of electricity is exempt from taxation when delivered to consumers at the place of consumption by means of wires or similar systems.^{iii, xlvii}

MONTANA

Corporate income taxes

Montana has a corporate income tax rate of 6.75 percent on amounts greater than \$0, as of March 15, 2024.ⁱ

Sales and use taxes

Montana has no state sales tax or local sales taxes.^{iv}

Ad valorem (property) taxes

Taxable property in Montana is valued at 100 percent of market value.^{xlvi} Market value is multiplied by the tax class (assessment) rate to arrive at taxable value.^{xlix} Montana electric generation property, including solar electric generation, is typically classified as Class 13 property. Montana wind generation facilities are generally classified as Class 14 property.^{xiii, 1} The tax class rates for electric generation (Class 13) property and wind generation (Class 14) property are 6.0 percent and 3.0 percent, respectively with calculated average mill levies of in tax year 2022 of 538 mills and 544 mills, respectively. The calculated effective tax rate in tax year 2022 for electric generation (Class 13) property is 3.23 percent. The calculated effective tax rate in tax year 2022 for wind generation (Class 14) property without the presumed impact of the property tax incentive for renewable resources (described below) is 1.63 percent. The calculated effective tax rate in tax year 2022 for wind generation (Class 14) property with the presumed impact of the property tax incentive for renewable resources is 0.96 percent.

The effective tax rate on industrial property in Billings, Montana (land and building value of \$25 million) ranges from 1.061 percent to 1.100 percent.^{ix}

Gross receipts taxes

Montana does not have a gross receipts tax.^x

Franchise, other excise taxes and generation taxes

Montana imposes a Public Service Regulation Fee on all regulated companies based on a percentage of gross operating revenue.^{xi, li} Effective October 1, 2023 through September 30, 2024, the public service regulation fee is 0.37 percent of gross operating revenue.^{lii}

Montana imposes an Electrical Energy Producer's License Tax of \$0.0002/kilowatt hour (\$0.20/megawatt hour) on all electricity and electrical energy generated, manufactured, or produced in Montana.^{xi, liii}

Montana imposes a wholesale energy transaction tax of \$0.00015/kilowatt hour (\$0.15/megawatt hour) on electricity transmission, based upon the kilowatt hours of electricity transmitted by a transmission services provider in Montana.^{xiii, liv}

An owner or operator of a wind generation facility used for a commercial purpose is subject to an initial local governmental and local school impact fee for each year of the first 3 years after construction of the wind generation facility begins. The annual impact fee may not exceed 0.5 percent of the total cost of constructing the wind generation facility.^{xiii, lv}

State tax credits and incentives

"Montana generating plants producing with renewable energy sources (including solar and wind) are eligible for the new or expanded industry property tax reduction. This incentive reduces the local mill levy during the first nine years of operation, subject to approval by the local government. If approved, the facility is taxed at 25 percent or 50 percent of its taxable value in the first five years. After the fifth year, the tax reduction decreases in equal increments until reaching full taxable value in the tenth year. The tax reduction

applies only to taxes levied for the local high schools and elementary schools and for the local government offering the reduction." ^{lvi, lvii}

Montana has no state sales tax or local sales taxes.^{iv}

NEBRASKA

Corporate income taxes

Nebraska has a corporate income tax rate of 5.58 percent on amounts greater than \$0 and 5.84 percent on amounts greater than \$100,000 as of March 15, 2024.ⁱ Nebraska is moving to one tax rate of 5.2 percent in 2025, 4.55 percent in 2026 and 3.99 percent in 2027.^{lviii}

Sales and use taxes

Nebraska imposes sales and use tax on the gross receipts from the furnishing of electricity services, other than electricity supplied to customer-generators (end-use electricity customer that generates electricity on the customer's side of the meter).^{iii, xi, lix} The state sales tax rate is 5.5 percent, and the average combined rate is 6.968 percent.^{iv}

Ad valorem (property) taxes

All real property in Nebraska, except for agricultural and horticultural land, and historically significant real property, is subject to property taxation and shall be valued at 100 percent of its actual value. Tangible personal property is subject to taxation, unless expressly exempt, and is valued at net book value.^{lx} The average 2023 tax rate on all taxable property was 1.6691 percent.^{lxi}

The effective tax rate on industrial property in Omaha, Nebraska (land and building value of \$25 million) ranges from 1.584 percent to 1.647 percent.^{ix}

Gross receipts taxes

Nebraska does not have a gross receipts tax.^x

Franchise, other excise taxes and generation taxes

Public power districts and corporations must make payments in lieu of taxes to local political subdivisions pursuant to Article VIII, Section 11, of the Nebraska Constitution. Public power districts make two types of payments in lieu of taxes: 1) payments in the same amount and to the same political subdivisions as were paid in 1957; and 2) 5 percent of the gross retail sales collected within a political subdivision where electricity is sold at retail (minus the amount of the 1957 payment allocated to the political subdivision).^{xi, lxii, lxiii} All payments under the gross revenue tax provisions are in lieu of all other taxes, franchise payments, occupation taxes, and other excise taxes, but are not in lieu of motor vehicle licenses and wheel taxes, permit fees, fuel taxes, and other such excise taxes or general sales taxes levied against the public generally.^{xi, lxiv}

Nebraska imposes an annual Nameplate Capacity Tax on renewable energy generation facilities (wind, solar, biomass, or landfill gas) equal to the total nameplate capacity multiplied by \$3,518 per megawatt. The tax is not imposed on renewable energy generation facilities owned or operated by the federal government, the State of Nebraska, a public power district, a public power and irrigation district, an individual municipality, a registered group of municipalities, an electric membership association, a cooperative or a customer-generator (end-use electricity customer that generates electricity on the customer's side of the meter). The nameplate capacity tax replaces tangible personal property taxes imposed on renewable energy infrastructure. Real property of renewable energy generation facilities is subject to property tax assessment, including concrete pads, foundations, operations and maintenance buildings, road construction, leasehold value and lease payments.^{lxv}

State tax credits and incentives

Sales and purchases of electricity are exempt when more than 50 percent of the amount purchased is for use directly in irrigation or farming. Sales and purchases of electricity are also exempt when more than 50 percent of the amount purchased is for use directly in processing, manufacturing, or refining, in the

generation of electricity, in the compression of natural gas for retail sale as a vehicle fuel, or by any hospital.^{lxvi}

All payments by public power districts under the gross revenue tax provisions are in lieu of all other taxes, franchise payments, occupation taxes, and other excise taxes, but are not in lieu of motor vehicle licenses and wheel taxes, permit fees, fuel taxes, and other such excise taxes or general sales taxes levied against the public generally.^{xi, lxvii}

The nameplate capacity tax replaces tangible personal property taxes imposed on renewable energy infrastructure. Real property of renewable energy generation facilities is subject to property tax assessment, including concrete pads, foundations, operations and maintenance buildings, road construction, leasehold value and lease payments.^{lxviii}

NEVADA

Corporate income taxes

Nevada does not have a corporate income tax.ⁱ

Sales and use taxes

The state sales tax rate is 6.85 percent, and the average combined rate is 8.236 percent.ⁱⁱⁱ Nevada exempts from sales and use tax the sale, furnishing, storage, consumption, or other use within Nevada of electricity when delivered to consumers via lines.^{iv, lxxix}

Ad valorem (property) taxes

All property subject to taxation in Nevada is assessed at 35 percent of the value of the property.^{lxx} The FY 2022-23 average tax rate was 3.1736 percent,^{lxxi} resulting in a computed average effective tax rate of 1.11 percent.

The effective tax rate on industrial property in Las Vegas, Nevada (land and building value of \$25 million) ranges from 0.864 percent to 0.908 percent.^{ix}

Gross receipts taxes

Nevada has a gross receipts tax called the Commerce Tax with rates ranging from 0.051 percent to 0.331 percent on Nevada gross revenues in excess of \$4.0 million^{x, lxxii} Tax rate on utilities and telecommunications is 0.136 percent.^{lxxiii}

Franchise, other excise taxes and generation taxes

Nevada imposes a Public Utility Assessment of 3.5 mills, or 0.35 percent, of gross operating revenue derived from intrastate operations for the use of the Nevada Public Utilities Commission. Nevada also imposes a Public Utility Assessment of 0.75 mills, or 0.075 percent, of gross operating revenue derived from intrastate operations for the use of the Nevada Consumer Advocate.^{xi, lxxiv}

State tax credits and incentives

"The Nevada Renewable Energy Tax Abatement program awards partial sales and use tax and partial property-tax abatements to eligible renewable energy facilities with a minimum capacity of 10 megawatts. The program reduces the sales and use tax rate to 2.6 percent for three years and grants up to a 55 percent property tax abatement for 20 years."^{lxxv, lxxvi}

Nevada exempts from sales and use tax the sale, furnishing, storage, consumption, or other use within Nevada of electricity when delivered to consumers via lines.^{iii, lxxvii}

NEW MEXICO

Corporate income taxes

New Mexico has a corporate income tax rate of 4.8 percent on amounts greater than \$0 and 5.9 percent on amounts greater than \$500,000 as of March 15, 2024.ⁱ

Sales and use taxes

New Mexico does not have a sales tax. It has a gross receipts tax instead.^{lxxviii}

Ad valorem (property) taxes

Property subject to valuation for property taxation is classified as either residential property or nonresidential property.^{lxxix} Taxable property in New Mexico is assessed at a tax ratio of 33 and one-third percent.^{lxxx} The weighted average property tax rate for the 2022 tax year for nonresidential property is 31.184 mills (3.1184 percent)^{lxxxi}, resulting in a calculated effective tax rate of 1.0395 percent.

The effective tax rate on industrial property in Albuquerque, New Mexico (land and building value of \$25 million) ranges from 1.315 percent to 1.368 percent.^{ix}

Gross receipts taxes

New Mexico has a gross receipts tax on businesses in New Mexico. Persons engaged in business passes tax to the consumer in most cases either separately stated or as part of the selling price, resembling a sales tax.^{lxxxii} Gross receipts derived from sales of utilities, including electricity, are subject to New Mexico's gross receipts tax.^{iv, lxxxiii} There is no gross receipts tax on consumables used in manufacturing, including electricity and natural gas.^{lxxxiv} The state rate is 4.875 percent and the average combined rate is 7.617 percent.ⁱⁱⁱ

Franchise, other excise taxes and generation taxes

The New Mexico Public Regulation Commission imposes a tax on cooperative and foreign corporations transacting business in New Mexico of \$10 for each 100 persons to whom electricity is supplied within the state.^{xi, lxxxv}

State tax credits and incentives

New Mexico counties and municipalities may issue industrial revenue bonds (IRBs) to fund projects, including the construction of electric generation projects. Projects funded through IRBs are up to 100 percent exempt from property taxes for up to a statutory limit of 30 years, with the percentage of the property tax exemption and the duration of the exemption determined by the local government issuing the bonds and the duration of the bond term. IRB projects are also exempt from the New Mexico gross receipts taxes on purchases of equipment made with bond proceeds.^{lxxxvi}

New Mexico counties and municipalities may grant a property tax exemption up to 100 percent on commercial personal property of a new business facility located in their jurisdiction from the property tax imposed by the granting local government. The exemption may not exceed twenty years.^{lxxxvii}

NORTH DAKOTA

Corporate income taxes

North Dakota has a corporate income tax rate of 1.41 percent on amounts greater than \$0, 3.55 percent on amounts greater than \$25,000 and 4.31 percent on amounts greater than \$50,000 as of March 15, 2024.ⁱ

Sales and use taxes

The state sales tax rate is 5.00 percent, and the average combined rate is 8.236 percent.^{iv} The gross receipts derived from the sale of electricity are exempt from sales tax.^{iii, lxxxviii}

Ad valorem (property) taxes

North Dakota defines “assessed value” as 50 percent of the true and full value of property.^{lxxxix} Property of electrical companies is classified as centrally assessed property and has a taxable value of 10 percent of assessed value.^{xiii, xc} The statewide average mill levy in 2023 was 216.86 mills (21.686 percent),^{xc} resulting in a calculated effective tax rate of 1.08 percent.

The effective tax rate on industrial property in Fargo, North Dakota (land and building value of \$25 million) ranges from 0.513 percent to 0.641 percent.^{ix}

Gross receipts taxes

North Dakota does not have a gross receipts tax.^x

Franchise, other excise taxes and generation taxes

North Dakota wind generators, wind farms, and associated collector systems are subject to taxes consisting of two components: \$2.50/kilowatt (\$2,500/megawatt) times the rated capacity plus one-half mill/kilowatt-hour (\$0.50/megawatt-hour) of electricity generated. North Dakota grid-connected generators of 100 kilowatts or more not produced from coal or wind, or produced from coal and not subject to coal conversion taxes are subject to taxes consisting of two components: \$0.50/kilowatt (\$500/megawatt) times the rated capacity plus one mill/kilowatt-hour (\$1.00/megawatt-hour) of electricity generated.^{xiii, xcii} Wind generation and grid-connected taxes are imposed in lieu of all real or personal property taxes, except for property taxes on land.^{xciii}

Coal conversion facilities with electrical generation are subject to two taxes:

1) 0.65 mills times 60 percent of installed kW capacity times the number of hours in taxable period ($0.65 \times 60 \text{ percent} \times \text{MW capacity} \times \text{hours}$). All electrical generating units that begin construction or complete repowering are exempt from 85 percent of the tax imposed for 5 years. Exemption for the remaining 15 percent may also be granted for up to 5 years.

2) 0.25 mills/kWh (\$0.25/MWh) of electricity produced for sale. All electric generating units that begin construction or complete repowering are exempt from tax imposed for 5 years.^{xiii, xciv}

North Dakota imposes a distribution tax of \$0.80/megawatt hour for the retail sale of electricity delivered to consumers in North Dakota. Distribution taxes do not apply to the sale of electricity to any coal conversion facility that became operational before January 1, 2009, and which is subject to taxation under North Dakota Century Code § 57-60.^{xcv}

North Dakota transmission lines are subject to a tax per mile based on their nominal operating voltages:

- Transmission lines with less than 50 kilovolts are subject to a tax of \$50 per mile.
- Transmission lines with more than 50 kilovolts, but less than 100 kilovolts are subject to a tax of \$100 per mile.
- Transmission lines with more than 100 kilovolts, but less than 200 kilovolts are subject to a tax of \$200 per mile.

- Transmission lines with more than 200 kilovolts, but less than 300 kilovolts are subject to a tax of \$400 per mile.
- Transmission lines with 300 kilovolts or more are subject to a tax of \$600 per mile.
- Transmission lines of 230 kilovolts or larger initially placed in service after Jan. 1, 2009 are subject to tax at the rate of \$300 per mile or fraction of a mile.^{xi, xcvi}

State tax credits and incentives

Wind generation and grid-connected taxes are imposed in lieu of all real or personal property taxes, except for property taxes on land.^{xcvii}

"Electrical generating facilities are exempt from sales and use taxes. For wind facilities, the equipment must be purchased between July 2011 and January 2017. For non-wind and non-coal facilities, the facility must sell the electricity it produces or use it on site for a business-related activity."^{xcviii, xcix}

The gross receipts derived from the sale of electricity are exempt from sales tax.^{iii, c}

OREGON

Corporate income taxes

Oregon has a corporate income tax rate of 6.6 percent on amounts greater than \$0 and 7.6 percent on amounts greater than \$1,000,000 as of March 15, 2024.ⁱ

Sales and use taxes

Oregon has no state sales tax or local sales taxes.^{iv}

Ad valorem (property) taxes

Taxable property in Oregon shall be valued at 100 percent of its real market value.^{ci} Oregon property used to generate, conduct, and distribute electricity is classified as utility property, and is assessed by the Oregon Department of Revenue.^{xiii, cii} Centrally assessed property is allowed an exemption of the amount that real market value exceeds historical or original cost multiplied by 130 percent.^{ciii} The average tax rate in FY 2023-24 is \$17.35 per \$1,000 of assessed value, or 1.735 percent.^{civ}

The effective tax rate on industrial property in Portland, Oregon (land and building value of \$25 million) ranges from 1.952 percent to 2.054 percent.^{ix}

Gross receipts taxes

Oregon has a gross receipts tax called the Corporate Activity Tax (CAT) with a rate of 0.57 percent.^x The tax is computed as \$250 plus 0.57 percent of taxable Oregon commercial activity of more than \$1 million.^{cv} Thirty-five percent of the greater of cost inputs or labor costs is subtracted to arrive at taxable commercial activity.^{cvi}

Franchise, other excise taxes and generation taxes

Oregon imposes a tax on public utilities determined on or after March 1 of each year at a minimum of \$10 and a maximum of 0.45 percent of gross operating revenues derived within Oregon in the preceding calendar year.^{xi, cvii}

Oregon imposes a tax on the gross revenues derived from transmission and distribution lines or, alternatively, based on the real market value of the lines. The tax is the lesser of four percent of the gross revenue derived from the use or operation of transmission and distribution lines (exclusive of revenues from the leasing of lines to governmental agencies) minus the cost of power to the association, or the sum of:

- an amount obtained by multiplying the real market value of the transmission and distribution lines for the current fiscal year by the maximum school tax rate, plus;
- an amount obtained by multiplying the real market value of the transmission and distribution lines for the current fiscal year by \$10 per \$1,000 of real market value, plus;
- an amount obtained by multiplying the real market value of the transmission and distribution lines by the tax rate of the county for exempt bonded indebtedness.^{xi, cviii}

A local privilege tax may also be imposed by a city on public utilities operating without a franchise in an amount not to exceed five percent of the gross revenues of the cooperative, utility, district or company currently earned within the boundary of the city.^{xi, cix}

A local privilege tax may also be imposed by a city on distribution utilities based on a volumetric rate times the volume of electric energy in kilowatt hours delivered, transmitted or distributed to retail electricity consumers within the city by the distribution utility. The volumetric rate may vary by customer class.^{xi, cx}

State tax credits and incentives

Oregon "cities, counties, or contiguous counties can set up Rural Renewable Energy Development (RRED) Zones located outside of the urban growth boundary of any large city or metropolitan area. Businesses must meet certain employment and/or investment requirements to be eligible. Commercial renewable energy properties in these zones are eligible for a 3-to-5-year local property tax exemption. Eligible investments include wind, geothermal, solar, biomass, or other unconventional forms of electricity generation, or systems that produce, distribute or store biofuels. Each zone sets a local cap for the total value of property that can qualify for the abatement, up to \$250 million in initial market value of each project. Interested businesses must apply for authorization before construction or installation begins." ^{cx}ⁱ

Oregon allows a property tax exemption for any change in real market value to property due to the installation of a qualifying renewable energy system. "Qualifying renewables include solar, geothermal, wind, water, fuel cell or methane gas systems used to heat, cool or generate electricity. This exemption is intended for end users and only applies to systems that are net metered or primarily intended to offset on-site electricity use. This exemption may is not allowed for tax years beginning after July 1, 2029." ^{cx}ⁱⁱ, ^{cx}ⁱⁱⁱ([Database for State Incentives for Renewables & Efficiency website](#), [Or. Rev. Stat.307.175](#))

Oregon has no state sales tax or local sales taxes.^{iv}

SOUTH DAKOTA

Corporate income taxes

South Dakota does not have a corporate income tax.ⁱ

Sales and use taxes

The state sales tax rate is 4.2 percent, and the average combined rate is 6.111 percent.^{iv} South Dakota imposes sales tax on the gross receipts from selling, furnishing, or servicing electricity, including the gross receipts from those sales by a municipal corporation.^{iii, cxiv}

Ad valorem (property) taxes

All taxable property in South Dakota is to be assessed at full and true value. Property is then equalized to 85 percent for property tax purposes.^{cxv} Real and personal property of utility and energy systems companies is classified as nonagricultural property.^{xiii, cxvi} The calculated effective tax rate of utility property in FY 2022 was 1.624 percent.^{cxvii}

The effective tax rate on industrial property in Sioux Falls, South Dakota (land and building value of \$25 million) ranges from 0.582 percent to 0.727 percent.^{ix}

Gross receipts taxes

South Dakota does not have a gross receipts tax.^x

Franchise, other excise taxes and generation taxes

South Dakota imposes a tax of not more than 0.0015 (0.15 percent) on the annual intrastate gross receipts derived by the public utility from its customers within South Dakota during the preceding calendar year.^{xi, cxviii}

South Dakota imposes a tax on rural electric companies engaged in the distribution or transmission of electric energy for consumption principally in rural areas. The tax is \$0.0016 per kilowatt hour (\$1.60/MWh) of retail electric energy and a tax of \$0.0008 per kilowatt hour (\$0.80/MWh) of wholesale electric energy delivered within South Dakota during the preceding calendar year.^{xi, cxix}

South Dakota wind farms first producing power after June 30, 2007 or solar facilities, with capacities of 5 megawatts (MW) or more, pay an annual tax of \$3.00/kW (\$3,000/MW) times the nameplate capacity of the renewable facility. The tax is imposed beginning the first calendar year the renewable facility generates gross receipts.^{cxx} Wind farms producing power for the first time after March 31, 2015 pay an annual tax of \$0.00045/kWh (\$0.45/MWh) of electricity produced. South Dakota solar facilities pay an annual tax of \$0.00090/kWh (\$0.90/MWh) of electricity produced by the solar facility.^{cxxi} The taxes described above are in lieu of all taxes levied by the state, counties, municipalities, school districts, or other political subdivisions on the personal and real property of the company which is used or intended for use as a renewable facility. These taxes are not in lieu of the retail sales and service taxes imposed.^{cxxii}

State tax credits and incentives

South Dakota does not have a corporate income tax.ⁱ

The taxes on wind farms and solar facilities described above are in lieu of all taxes levied by the state, counties, municipalities, school districts, or other political subdivisions on the personal and real property of the company which is used or intended for use as a renewable facility.^{cxxiii}

UTAH

Corporate income taxes

Utah has a corporate income tax rate of 4.55 percent on amounts greater than \$0, as of March 15, 2024.ⁱ

Sales and use taxes

The state sales tax rate is 6.10 percent, and the average combined rate is 7.249 percent.^{iv} Electricity purchased for commercial or residential use is subject to Utah's sales and use tax.^{iii, cxxiv} The sales tax on electricity for residential use is 2 percent plus applicable local taxes.^{cxxv}

Municipalities may levy a municipal energy sales and use tax of up to 6 percent of the delivered value of taxable energy (gas and electricity) sold or used within its borders. This is in addition to any local-option sales and use taxes the municipality imposes.^{cxxvi}

Ad valorem (property) taxes

Taxable property in Utah is assessed and taxed at a uniform and equal rate applied to its fair market value. Public utility property, like all other nonresidential and nonfarm land property, is valued 100 percent of its fair market value.^{xiii, cxxvii, cxxviii} The effective tax rate of utility property in tax year 2023 was 1.01 percent.^{cxxix}

The effective tax rate on industrial property in Salt Lake City, Utah (land and building value of \$25 million) ranges from 0.726 percent to 0.759 percent.^{ix}

Gross receipts taxes

Utah does not have a gross receipts tax.^x

Franchise, other excise taxes and generation taxes

Utah imposes a fee on all public utilities of 0.3 percent of gross operating revenues. Utah imposes a fee on electrical cooperatives of 0.15 percent of gross operating revenues.^{xi, cxxx}

State tax credits and incentives

"Utah exempts the purchase or lease of equipment used to generate electricity from renewable resources from the state sales tax. Eligible resources include wind, solar, biomass, geothermal, hydroelectricity, nuclear fuel and others."^{cxxxi, cxxxii}

Sales of natural gas, electricity, heat, coal, fuel oil, or other fuels for industrial use are exempt from sales tax.^{cxxxi}

Utah offers a production tax credit (PTC) against Utah taxes for solar, wind, biomass and geothermal electricity projects with nameplate capacity over 660 kilowatts (0.66 megawatts). The PTC is \$.0035 per kilowatt hour (\$3.50/MWh) produced during the first 48 months of operation.^{cxxxiv, cxxxv, cxxxvi}

Utah offers "the Alternative Energy Development Incentive (AEDI). The AEDI is a nonrefundable tax credit for 75 percent of new state tax revenues (including, state, corporate, sales, and withholding taxes) over the life of the project or 20 years, whichever is less. The actual amount and duration of an incentive is determined by the Utah Office of Energy Development on a case-by-case basis. Eligible projects include the construction of electricity generation facilities of 2 megawatts or greater that utilize hydroelectric, solar, biomass, geothermal, wind, or waste heat from an industrial facility or a power station."^{cxxvii cxxviii, cxxix,}

WASHINGTON

Corporate income taxes

Washington does not have a corporate income tax.ⁱ

Sales and use taxes

The state sales tax rate is 6.50 percent and the average combined rate is 9.378 percent.^{iv} Sales or use of steam, electricity or electrical energy are exempt from sales and use tax.^{iii, cxi, cxli} Sales and use of tangible personal property by consumers are not subject to sales and use tax if the utility business is subject to the public utility tax, described below.^{iii, cxlii, cxliii}

Ad valorem (property) taxes

Taxable property in Washington is valued at 100 percent of its true and fair value and assessed on the same basis unless specifically provided otherwise by law.^{cxliv} Real property of a utility company is assessed as commercial property.^{xiii, cxlv, cxlvi} Washington's statewide effective property tax rate in 2023 was 0.8 percent.^{cxlvii}

The effective tax rate on industrial property in Seattle, Washington (land and building value of \$25 million) ranges from 0.579 percent to 0.608 percent.^{ix}

Gross receipts taxes

Washington has a gross receipts tax called the Business and Occupation (B&O) Tax.^x The Public utility tax is in lieu of the B&O tax.^{cxlviii}

Franchise, other excise taxes and generation taxes

Washington imposes a Public Utility Tax on public service businesses, including businesses engaged in the supply of energy, natural gas, and water. The generation/distribution of electrical power is taxed at a rate of .038734 (3.8734 percent).^{cxlix}

Washington levies a tax on districts operating a thermal electric generating facility with design capacity of 250,000 kilowatts or more, located on a federal reservation, placed in operation after September 21, 1977. Subsection 1 of the tax is 1.5 percent of the wholesale value of energy produced for use or sale, except energy used in the operation of the power plant and associated transmission facilities.^{cl} Subsection 2 of the tax is imposed equal to 7.00 percent multiplied by the tax payable under subsection 1.^{cli}

Washington levies a tax on plants or facilities operated for generation, distribution and sale of electric energy. Subsection 1 of the tax is the sum of the following amounts: (a) 2.00 percent of gross revenues from the sale of electric energy distributed; plus (b) 5.0 percent of the first 4 mills/kWh (\$4.00/MWh) of wholesale value of self-generated energy distributed to its own customers; plus (c) 5.0 percent of the first 4 mills/kWh (\$4.00/MWh) of revenue from the sale of self-generated energy for resale.^{clii} Subsection 2 of the tax is equal to 7.00 percent multiplied by the tax payable under subsection 1.^{cliii}

Washington imposes a monthly excise tax on the use of a renewable energy (solar or wind) facility constructed after July 1, 2023 with minimum 10 MW nameplate capacity. The excise tax is imposed on taxpayers granted a 10 or 15-year personal property tax exemption.^{cliv} The solar excise tax is \$80 per month per MW of nameplate capacity for 10-year property tax exemption or \$75 per month per MW of nameplate capacity for 15-year property tax exemption. The wind excise tax is \$150 per month per MW of nameplate capacity for 10-year property tax exemption or \$130 per month per MW of nameplate capacity for 15-year property tax exemption. There is also a monthly excise tax on capacity of renewable energy storage systems imposed on taxpayers granted a 10- or 15-year personal property tax exemption. The tax is \$19 per month

per MW hour of energy storage capacity for 10-year exemption and \$14 per month per MW hour of storage capacity for 15-year exemption.^{clv}

Washington imposes a fee on public service companies subject to regulation by the Washington Utilities and Transportation Commission of one-tenth of one percent of the first \$50,000 of gross operating revenue, plus four-tenths of one percent of any gross operating revenue in excess of \$50,000. Large combination utilities (both an electrical company and a gas company) pay a fee of 0.001 percent of the first \$50,000 of gross operating revenue, plus 0.005 percent of any gross operating revenue in excess of \$50,000.^{clvi}

State tax credits and incentives

Washington has a sales tax exemption on equipment (including labor and services related to installation) used to generate electricity from renewable resources. Qualifying systems must have minimum generating capacity of 1 kilowatt. Beginning January 1, 2020, through December 31, 2029, purchasers may be eligible for a remittance equal to 50 – 100 percent of the state and local tax paid.^{clvii, clviii}

Sales or use of steam, electricity or electrical energy are exempt from sales and use tax.^{iii, clix, clx} Sales and use of tangible personal property by consumers are not subject to sales and use tax if the utility business is subject to the public utility tax, described below.^{iii, clxi, clxii}

The Public utility tax (described above) is in lieu of the B&O tax.

If a Washington taxpayer fulfills the requirements of the monthly excise tax on the use of renewable energy and renewable energy storage systems.^{clxiii} Then, renewable energy personal property of the taxpayer is exempt from the property taxes levied for any state purpose.^{clxiv}

WYOMING

Corporate income taxes

Wyoming does not have a corporate income tax.^{i, clxv}

Sales and use taxes

The state sales tax rate is 4.0 percent and the average combined rate is 5.441 percent.^{iv} The sales price paid to public utilities and to persons furnishing gas, electricity or heat for domestic, industrial or commercial consumption is subject to sales tax.^{clxvi} Sales of fuel used as boiler fuel in the production of electricity are exempt from sales and use tax.^{clxvii, clxviii} Sales of power and fuel for direct use in manufacturing, processing or agriculture are exempt from sales tax.^{clxix}

Ad valorem (property) taxes

Wyoming electricity generation facilities are classified as industrial property.^{clxx} Industrial property is assessed at 11.5 percent of fair market value.^{clxxi} The average mill levy for industrial property in tax year 2023 was 64.5 mills, resulting in a calculated effective tax rate of 0.74 percent.

The effective tax rate on industrial property in Cheyenne, Wyoming (land and building value of \$25 million) ranges from 0.657 percent to 0.699 percent.^{ix}

Gross receipts taxes

Wyoming does not have a gross receipts tax.

Franchise, other excise taxes and generation taxes

Wyoming imposes a \$1.00 per megawatt hour (MWh) tax on electricity produced from wind resources. Electricity produced from a wind turbine is not subject to tax until 3 years after the turbine first produced electricity for sale.^{clxxii}

Wyoming imposes a \$5.00 per MWh tax on the sale of electricity produced from nuclear reactors. Except as provided below, no tax is imposed on any advanced nuclear reactor operated in accordance with W.S. 35-11-2101. Beginning July 1, 2035, a taxpayer would only qualify for this exemption for any month that not less than 80 percent of the advanced nuclear reactor's uranium used for producing electricity was sourced from uranium mines located in the U.S.^{clxxiii}

Wyoming Public Service Commission annual fees are based on one-half of the biennium budget established by the Wyoming Legislature. The assessment rate for any year shall not exceed three-thousandths (.003) of the gross Wyoming intrastate retail revenues, unless the assessment of three-thousandths (.003) is insufficient to produce the amount to be collected. An additional assessment sufficient to produce the amount to be collected shall not exceed two-thousandths (.002).^{clxxiv}

State tax credits and incentives

Wyoming does not have a corporate income tax.ⁱ

Electricity produced from a wind turbine is not subject to the electric generation tax in the first three years the turbine first produces electricity for sale.^{clxxv}

Except as provided below, no tax is imposed on any advanced nuclear reactor operated in accordance with W.S. 35-11-2101. Beginning July 1, 2035, a taxpayer would only qualify for this exemption for any month that not less than 80 percent of the advanced nuclear reactor's uranium used for producing electricity was sourced from uranium mines located in the U.S.^{clxxvi}

Sales of fuel used as boiler fuel in the production of electricity are exempt from sales and use tax.^{clxxvii, clxxviii}
Sales of power and fuel for direct use in manufacturing, processing or agriculture are exempt from sales tax.^{clxxix}

Wyoming counties, municipalities and joint powers boards may issue industrial revenue bonds (IRBs) to fund projects, including the construction of electric generation projects. Projects funded through IRBs are exempt from property taxes for the duration of the lease entered into between the local government and the developer, but the developer must make payments in lieu of all property taxes exempted.^{clxxx, clxxxi}

REFERENCES CONSULTED, ENDNOTES
[All websites accessed September 22, 2024.]

-
- ⁱ Tax Foundation Facts & Figures: *How does your state compare?*, 2024, Table 14.
- ⁱⁱ [Arizona Dept. of Revenue, Pub. 618.](#)
- ⁱⁱⁱ National Conference of State Legislatures, *2024 Summary of Sales and Use Tax of Electricity*, June 5, 2024, summarized from Bloomberg Tax Research.
- ^{iv} Tax Foundation Facts & Figures: *How does your state compare?*, 2024, Table 18.
- ^v [Arizona Revised Statutes § 42-14156.](#)
- ^{vi} [Arizona Revised Statutes § 42-12001.](#)
- ^{vii} [Arizona Revised Statutes § 42-15001.](#)
- ^{viii} [Arizona Department of Revenue Annual Report FY 2023, Table 39, p. 55.](#)
- ^{ix} [Lincoln Institute of Land Policy, Minnesota Center for Fiscal Excellence, 50-State Property Tax Comparison Study: for taxes paid in 2023, July 2024, pp. 84 and 86.](#)
- ^x Tax Foundation Facts & Figures: *How does your state compare?*, 2024, Table 17.
- ^{xi} National Conference of State Legislatures, *Excise Tax-Electricity and Renewables*, June 6, 2024, summarized from Bloomberg Tax Research.
- ^{xii} [Arizona Public Service website.](#)
- ^{xiii} National Conference of State Legislatures, *State Excise Taxes on Electricity Production*, December 2022, summarized from Bloomberg Tax Research.
- ^{xiv} [Arizona Revised Statutes § 42-14155.](#)
- ^{xv} [Arizona Revised Statutes § 42-5159\(B\)\(4\).](#)
- ^{xvi} [California Revenue & Tax Code § 6353\(a\).](#)
- ^{xvii} [California Board of Equalization, California Property Tax: An Overview, Publication 29, December 2018.](#)
- ^{xviii} [California Revenue & Tax Code § 721.5.](#)
- ^{xix} [California Revenue & Tax Code § 722.](#)
- ^{xx} [California Department of Tax and Fee Administration, Energy Resources \(Electrical Energy\) Surcharge.](#)
- ^{xxi} [California Board of Equalization, Active Solar Energy System Exclusion.](#)
- ^{xxii} [California Revenue Tax Code § 6353\(a\).](#)
- ^{xxiii} [California Code of Regulations, Title 18, Section 1525.4.](#)
- ^{xxiv} [Colorado Revised Statutes § 39-26-104\(1\)\(d.1\).](#)
- ^{xxv} [Colorado Revised Statutes § 39-26-715\(1\)\(a\)\(II\).](#)
- ^{xxvi} [Colorado Department of Local Affairs, Division of Property Taxation, State Assessed Property.](#)
- ^{xxvii} [Colorado Department of Local Affairs, Division of Property Taxation, Assessment Rates.](#)
- ^{xxviii} Colorado Dept. of Local Affairs, Division of Property Taxation 2023 Annual Report, p. 981.
- ^{xxix} [Colorado Revised Statutes § 40-2-113.](#)
- ^{xxx} [Colorado Department of Revenue, Sales and Use Tax Topics: Renewable Energy Components.](#)
- ^{xxxi} [Colorado Revised Statutes § 39-26-715\(1\)\(a\)\(II\).](#)
- ^{xxxii} [Ibid.](#)
- ^{xxxiii} [Idaho Code § 63-3622F.](#)
- ^{xxxiv} [Idaho State Tax Commission, Understanding Property Taxes.](#)
- ^{xxxv} [Idaho Code § 63-314.](#)
- ^{xxxvi} [Idaho State Tax Commission, Understanding Property Taxes.](#)
- ^{xxxvii} [Idaho Code § 63-201\(16\).](#)
- ^{xxxviii} [Idaho Code § 63-401.](#)
- ^{xxxix} [Idaho State Tax Commission, Idaho 2022 Market Values and Property Taxes, page 13.](#)
- ^{xl} [Idaho Code § 61-1004\(2\).](#)
- ^{xli} [Idaho Public Utilities Commission, Order No. 36141, April 15, 2024.](#)
- ^{xlii} [Idaho Code § 63-3502.](#)
- ^{xliii} [Idaho Code § 63-2701 and 63-2705.](#)
- ^{xliv} [Idaho Code § 63-3502B.](#)
- ^{xlvi} [Idaho Code § 63-4408.](#)
- ^{xlvi} [Idaho Code § 63-3502B\(3\).](#)
- ^{xlvii} [Idaho Code § 63-3622F.](#)
- ^{xlviii} [Montana Department of Revenue, 7/1/20-6/30/22 Biennial Report, Property Tax Section, p. 221.](#)

xlix *Ibid*, p. 222.

¹ Montana Code Annotated § [15-6-156](#) and [157](#).

li [Montana Code Annotated § 69-1-402\(2\)](#).

lii [Montana Department of Revenue, Public Service Regulation Fee](#), updated March 29, 2024.

liii [Montana Code Annotated § 15-51-101](#).

liv [Montana Code Annotated § 15-72-104\(1\)\(a\)](#).

lv [Montana Code Annotated § 15-24-3004](#).

lvi [Database of State Incentives for Renewables and Efficiency – Montana, Corporate Property Tax Reduction for New/Expanded Generating Facilities](#).

lvii [Montana Code Annotated § 15-24-1401 et seq.](#)

lviii [Tax Foundation, State Corporate Income Tax Rates and Brackets](#), January 23, 2024.

lix [Nebraska Revised Statutes § 77-2701.16\(2\)\(c\)](#).

lx [Nebraska Revised Statutes § 77-201](#).

lxi [Nebraska Department of Revenue, Property Assessment Division, 2023 Annual Report](#), p. 31.

lxii [Nebraska Legislative Research Office, LRO Snapshot](#), April 2022.

lxiii [Nebraska Revised Statutes § 70-651.03](#).

lxiv [Nebraska Revised Statutes § 70-651.05](#).

lxv [Nebraska Revised Statutes § 77-6201-6203](#).

lxvi [Nebraska Revised Statutes § 77-2704.13](#).

lxvii [Nebraska Revised Statutes § 70-651.05](#).

lxviii [Nebraska Revised Statutes § 77-6201-6203](#).

lxix [Nevada Revised Statutes § 372.295](#).

lxx [Nevada Revised Statutes § 361-225](#) and [361-043](#).

lxxi [Nevada Department of Taxation, Division of Local Government Services, Local Government Finance Property Tax Rates for Nevada Local Governments Report Fiscal Year 2022-2023](#), p. III.

lxxii [Nevada Department of Taxation, Commerce Tax FAQs](#).

lxxiii [Nevada Revised Statutes § 363C-330](#).

lxxiv [Nevada Revised Statutes § 704.033](#).

lxxv [Database of State Incentives for Renewables and Efficiency – Nevada: Sales tax abatement](#) and [Property tax abatement](#).

lxxvi [Nevada Revised Statutes § 701A.300 et seq.](#)

lxxvii [Nevada Revised Statutes § 372.295](#).

lxxviii [New Mexico Taxation and Revenue Department, Frequently asked questions](#).

lxxix [New Mexico Statutes Annotated § 7-36-2.1](#).

lxxx [New Mexico Statutes Annotated § 7-37-3](#).

lxxxi [New Mexico Department of Finance and Administration, Property Tax Facts for Tax Year 2022](#), p. 11.

lxxxii [New Mexico Taxation and Revenue Department, Frequently asked questions](#).

lxxxiii [New Mexico Statutes Annotated § 7-9-3\(P\)\(2\)](#).

lxxxiv [New Mexico Economic Development Department Competitive Business Climate website](#).

lxxxv [New Mexico Statutes Annotated § 62-15-28](#).

lxxxvi [Deirdre M. Firth, City of Albuquerque, An Overview of Industrial Revenue Bonds in New Mexico, Presentation to the Revenue Stabilization and Tax Policy Committee](#), September 15, 2016.

lxxxvii [New Mexico Statutes Annotated 3-64-3](#).

lxxxviii [North Dakota Century Code 57-39.2-04\(27\)](#).

lxxxix [North Dakota Century Code §57-02-01\(3\)](#).

xc [North Dakota Century Code §57-06-02, 57-02-01\(4\), §57-02-27\(4\)](#).

xc i [North Dakota Tax Commissioner, 2023 Property Tax Statistical Report](#), Table 8, p. 21.

xc ii [North Dakota Century Code 57-33.2-04](#).

xc iii [North Dakota Century Code § 57-33.2-05](#).

xc iv [North Dakota Century Code § 57-60-02](#).

xc v [North Dakota Century Code § 57-33.2-03](#).

xc vi [North Dakota Century Code § 57-33.2-02\(1\)-\(5\) and \(7\)](#).

xc vii [North Dakota Century Code § 57-33.2-05](#).

xc viii [Database of State Incentives for Renewables and Efficiency – North Dakota, Sales and Use Tax Exemption for Electrical Generating Facilities](#).

xc ix [North Dakota Century Code § 57-39.2-04\(2\)](#).

-
- ^c [North Dakota Century Code § 57-39.2-04\(27\).](#)
- ^{ci} [Oregon Revised Statutes § 308.232.](#)
- ^{cii} [Oregon Revised Statutes § 308.515.](#)
- ^{ciii} [Oregon Revised Statutes § 308.674.](#)
- ^{civ} [Oregon Department of Revenue, *Property Tax Statistics Fiscal Year 2023-24 report*, Exhibit 6, p. 8.](#)
- ^{cv} [Oregon Department of Revenue, *Corporate Activity Tax*.](#)
- ^{cvi} [Oregon Revised Statutes § 317A.119.](#)
- ^{cvi} [Oregon Revised Statutes § 756.310\(3\).](#)
- ^{cvi} [Oregon Revised Statutes § 308.807.](#)
- ^{cix} [Oregon Revised Statutes § 221.450.](#)
- ^{cx} [Oregon Revised Statutes § 221.655.](#)
- ^{cxi} [Database of State Incentives for Renewables and Efficiency – Oregon, Local Option – Rural Renewable Energy Development Zones.](#)
- ^{cxi} [Database of State Incentives for Renewables and Efficiency – Oregon, Renewable Energy System Exemption.](#)
- ^{cxi} [Oregon Revised Statutes § 307.175.](#)
- ^{cxiv} [South Dakota Codified Laws Annotated § 10-45-6.](#)
- ^{cxv} [South Dakota Department of Revenue, *How property taxes are calculated*, Item 3.](#)
- ^{cxvi} [South Dakota Codified Laws Annotated § 10-6-110.](#)
- ^{cxvii} [South Dakota Department of Revenue, *Property Tax Statistical Report Fiscal Year 2022*, p.46.](#)
- ^{cxviii} [South Dakota Codified Laws Annotated § 49-1A-3.](#)
- ^{cxix} [South Dakota Codified Laws Annotated § 10-36-6.](#)
- ^{cxx} [South Dakota Codified Laws Annotated § 10-35-18.](#)
- ^{cxix} [South Dakota Codified Laws Annotated § 10-35-19.1.](#)
- ^{cxix} [South Dakota Codified Laws Annotated § 10-35-17.](#)
- ^{cxix} [South Dakota Codified Laws Annotated § 10-35-17.](#)
- ^{cxix} [Utah Code Annotated § 59-12-103\(1\)\(c\)\(ii\) and \(d\)\(ii\).](#)
- ^{cxix} [Utah State Tax Commission Publication 25, p. 13.](#)
- ^{cxix} [Utah State Tax Commission Publication 54, p. 1.](#)
- ^{cxix} [Utah Code Annotated § 59-2-103\(2\).](#)
- ^{cxix} [Utah Code Annotated § 59-2-201\(1\).](#)
- ^{cxix} [Utah State Tax Commission, Utah Property Tax Division, *2023 Annual Statistical Report*, p. 3.](#)
- ^{cxix} [Utah Code Annotated § 54-5-1.5\(5\)\(b\).](#)
- ^{cxix} [Database of State Incentives for Renewables and Efficiency – Utah, Alternative Energy Sales Tax Exemption.](#)
- ^{cxix} [Utah Code Annotated § 59-12-104\(55\).](#)
- ^{cxix} [Utah Code Annotated § 59-12-104\(39\).](#)
- ^{cxix} [Utah Office of Energy Development, *Production Tax Credit \(PTC\): What outcomes can be fostered with this incentive?*.](#)
- ^{cxix} [Utah Code Annotated § 59-7-614\(6\).](#)
- ^{cxix} [Utah Code Annotated § 59-10-1106\(5\).](#)
- ^{cxix} [Database of State Incentives for Renewables and Efficiency – Utah, Alternative Energy Development Incentive \(Corporate\).](#)
- ^{cxix} [Utah Code Annotated § 59-7-614.7.](#)
- ^{cxix} [Utah Code Annotated § 79-6-503.](#)
- ^{cxix} [Washington Revised Code § 82.08.950.](#)
- ^{cxix} [Washington Revised Code § 82.12.950.](#)
- ^{cxix} [Washington Revised Code § 82.08.0252.](#)
- ^{cxix} [Washington Revised Code § 82.12.0253.](#)
- ^{cxix} [Washington Revised Code § 84.40.030.](#)
- ^{cxix} [Washington Administrative Code § 458-53-030\(5\).](#)
- ^{cxix} [Washington Administrative Code § 458-53-050.](#)
- ^{cxix} [Washington State Department of Revenue, *Property Tax Statistics 2023*, p. 87.](#)
- ^{cxix} [Washington State Department of Revenue, *Public utility tax*.](#)
- ^{cxix} [*Ibid.*](#)
- ^{cl} [Washington Revised Code § 54.28.025.](#)
- ^{cli} [Washington Revised Code § 82.02.030.](#)
- ^{cli} [Washington Revised Code § 54.28.020.](#)

-
- cliii [Washington Revised Code § 82.02.030.](#)
 - cliv [Washington Revised Code § 84.36.680.](#)
 - clv [Washington Revised Code § 82.96.010.](#)
 - clvi [Washington Revised Code § 80.24.010.](#)
 - clvii [Database of State Incentives for Renewables and Efficiency – Washington, Renewable Energy Sales and Use Tax Exemption.](#)
 - clviii [Washington Revised Code § 82.08.962.](#)
 - clix [Washington Revised Code § 82.08.950.](#)
 - clx [Washington Revised Code § 82.12.950.](#)
 - clxi [Washington Revised Code § 82.08.0252.](#)
 - clxii [Washington Revised Code § 82.12.0253.](#)
 - clxiii [Washington Revised Code § 82.96.010.](#)
 - clxiv [Washington Revised Code 84.36.680.](#)
 - clxv [Wyoming Statutes § 39-7-101.](#)
 - clxvi [Wyoming Statutes § 39-15-103\(a\)\(i\)\(E\).](#)
 - clxvii [Wyoming Statutes § 39-15-105\(a\)\(iii\)\(G\).](#)
 - clxviii [Wyoming Statutes § 39-16-105\(a\)\(iii\)\(C\).](#)
 - clxix [Wyoming Statutes § 39-15-105\(a\)\(iii\)\(D\).](#)
 - clxx [Wyoming Statutes § 39-13-102\(m\)\(iii\) and \(vii\).](#)
 - clxxi [Wyoming Statutes § 39-13-103 \(b\)\(iii\)\(B\).](#)
 - clxxii [Wyoming Statutes § 39-22-103 through 105.](#)
 - clxxiii [Wyoming Statutes § 39-23-103 through 105.](#)
 - clxxiv [Wyoming Statutes § 37-2-107.](#)
 - clxxv [Wyoming Statutes § 39-22-105.](#)
 - clxxvi [Wyoming Statutes § 39-23-103 through 105.](#)
 - clxxvii [Wyoming Statutes § 39-15-105\(a\)\(iii\)\(G\).](#)
 - clxxviii [Wyoming Statutes § 39-16-105\(a\)\(iii\)\(C\).](#)
 - clxxix [Wyoming Statutes § 39-15-105\(a\)\(iii\)\(D\).](#)
 - clxxx [Wyoming Legislative Service Office, *Industrial Revenue Bonds*, Presentation to the Joint Revenue Committee, September 30, 2021.](#)
 - clxxxi [Wyoming Statutes § 15-1-708\(b\).](#)



FACT SHEET

WYOMING LEGISLATIVE SERVICE OFFICE

NATIONAL STATISTICS - ELECTRICITY GENERATION, CONSUMPTION, AND PRICE

August 2024

Kelly Lower, Research Analyst

United States Electricity Generation, Consumption, and Prices 2010-2022

Statistics collected by the U.S. Energy Information Administration demonstrate the total U.S. electric power industry increased generation by 2.6 percent from 2010 to 2022, as measured in megawatt hours (MWh), with the largest change in generation output from 2017 to 2018 marked by a 3.6 percent increase in overall generation. Total generation includes many sources, including coal, hydroelectric conventional, natural gas, nuclear, petroleum, pumped storage, solar, and geothermal energy sources.

Electricity consumption across the residential, commercial, industrial, and transportation sectors has increased from 2010 to 2022 in all sectors except transportation, which has decreased by 14.4 percent. The total sales price of electricity as measured in cents per kilowatt hour (KWh) has increased across all sectors from 2010 to 2022, with the largest increase in the residential sector with a 3.5 cent increase per KWh from 2010 to 2022.

Western States Plus Electricity Generation, Consumption, and Prices 2010-2022

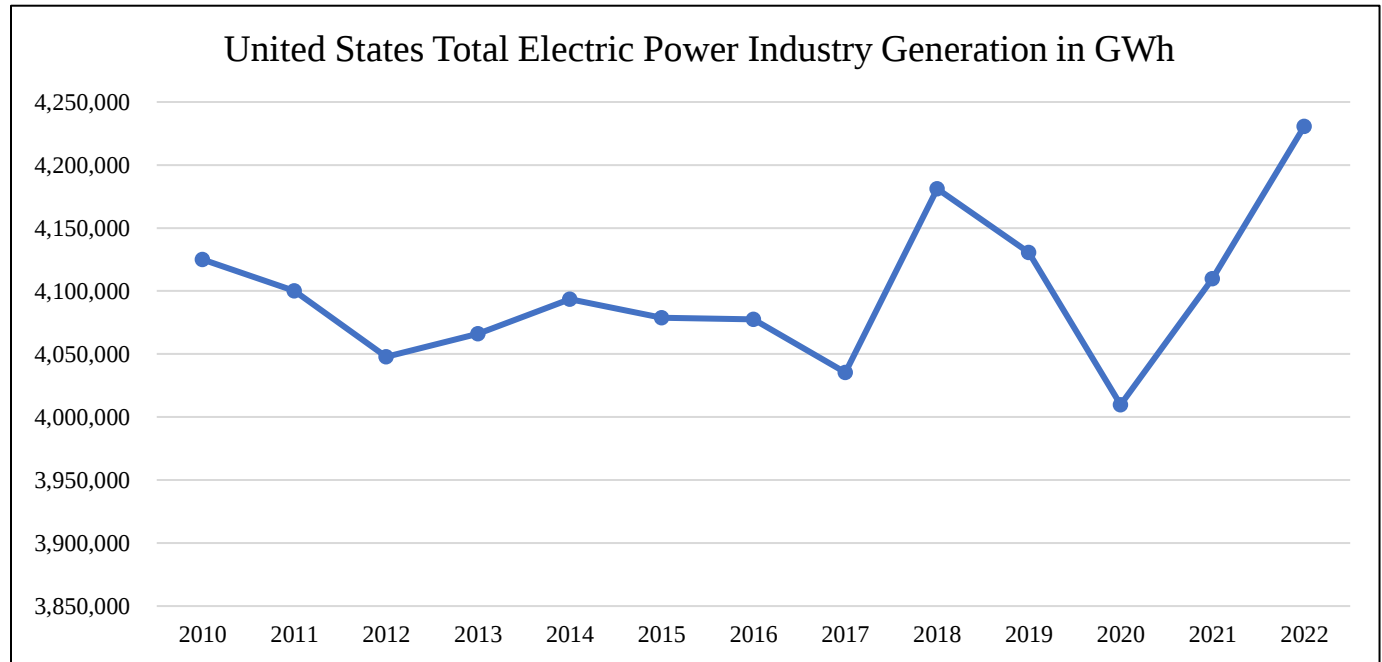
Electricity generation increased from 2010 to 2022 in nine of the Western States Plus: Colorado, Idaho, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, and Washington. Generation decreased in the remaining five Western States Plus, Arizona, California, Montana, Utah, and Wyoming.

Electricity consumption across the total residential, commercial, industrial, and transportation sectors increased in all Western States Plus except California (-2.6 percent) and Wyoming (-3.6 percent). The largest total increase across all sectors was in North Dakota, which increased total consumption by 96 percent. Electricity prices across all Western States Plus are the highest for the residential sector. The state with the largest total increase in electricity price across all sectors is California with a 9.3 cent increase per KWh. The state with the lowest total sector price of electricity is Wyoming.

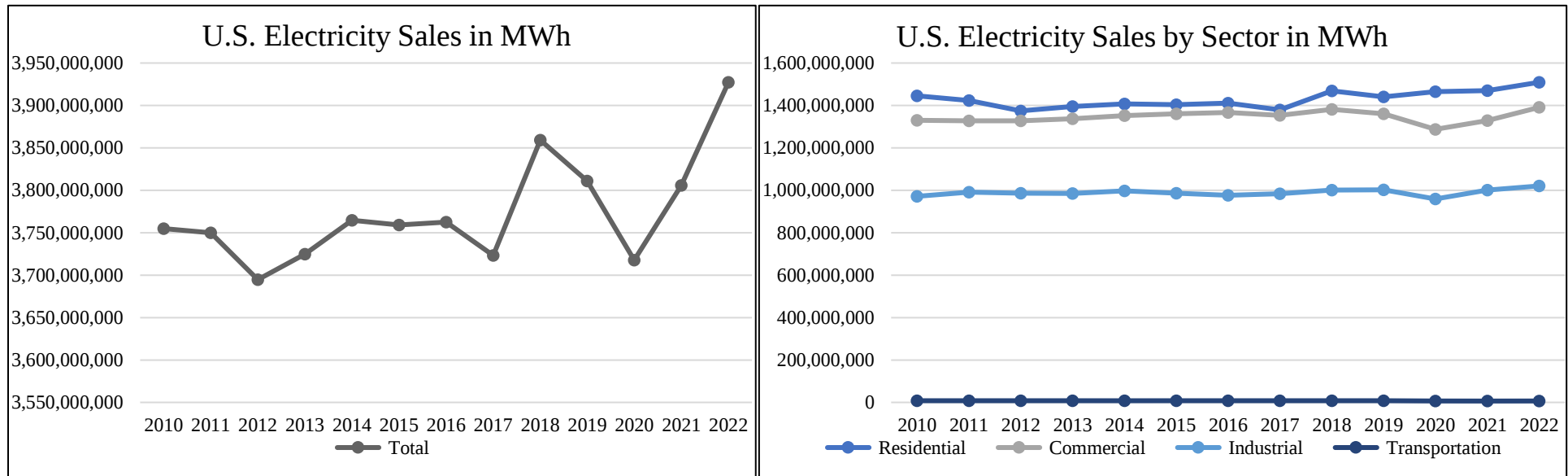
Wyoming has the lowest ratio of consumption over generation across all Western States Plus, with a ratio of 35.6 percent in 2022, making Wyoming the leading energy exporter in the Western States Plus. Several Western States Plus have had an annual consumption to generation ratio which exceeded the total generation of energy in the state for a given year, such as Colorado, Idaho, Nevada, and South Dakota.

Table and Chart 1: United States Electricity Generation and Percent Change 2010-2022

Year	Total Electric Power Industry Generation in GWh	
2010	4,125,060	
2011	4,100,141	-0.6
2012	4,047,765	-1.3
2013	4,065,964	0.4
2014	4,093,564	0.7
2015	4,078,714	-0.4
2016	4,077,574	0.0
2017	4,035,443	-1.0
2018	4,180,988	3.6
2019	4,130,574	-1.2
2020	4,009,767	-2.9
2021	4,109,699	2.5
2022	4,230,672	2.9
Total Percent Change		2.6



Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

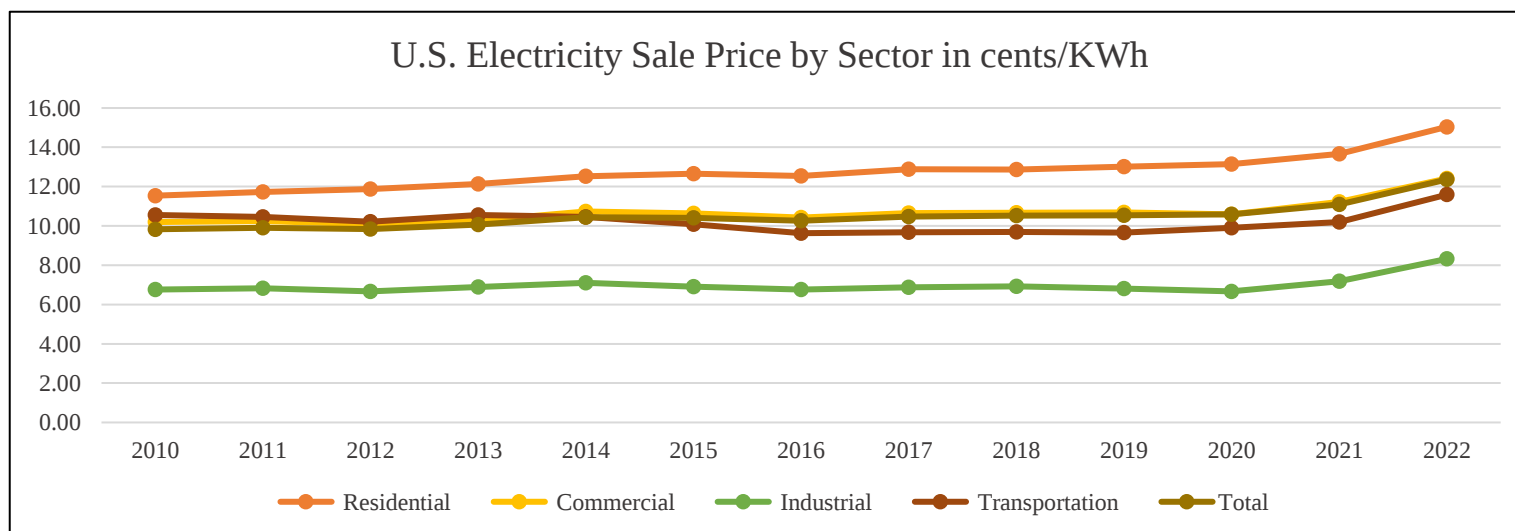
Chart 2: United States Electricity Sales (Consumption) by Sector 2010-2022**Table 2: United States Electricity Consumption by Sector in MWh and Percent Change 2010-2022**

Year	Residential		Commercial		Industrial		Transportation		Total	
2010	1,445,708,403		1,330,199,364		971,221,189		7,712,412		3,754,841,368	
2011	1,422,801,093	-1.6	1,328,057,439	-0.2	991,315,564	2.1	7,672,084	-0.5	3,749,846,180	-0.1
2012	1,374,514,708	-3.4	1,327,101,196	-0.1	985,713,854	-0.6	7,320,028	-4.6	3,694,649,786	-1.5
2013	1,394,812,129	1.5	1,337,078,777	0.8	985,351,874	0.0	7,625,041	4.2	3,724,867,821	0.8
2014	1,407,208,311	0.9	1,352,158,263	1.1	997,576,138	1.2	7,757,555	1.7	3,764,700,267	1.1
2015	1,404,096,499	-0.2	1,360,751,527	0.6	986,507,732	-1.1	7,636,632	-1.6	3,758,992,390	-0.2
2016	1,411,058,153	0.5	1,367,191,386	0.5	976,715,181	-1.0	7,496,910	-1.8	3,762,461,630	0.1
2017	1,378,647,742	-2.3	1,352,887,694	-1.0	984,297,945	0.8	7,522,593	0.3	3,723,355,974	-1.0
2018	1,469,093,059	6.6	1,381,754,845	2.1	1,000,672,553	1.7	7,664,804	1.9	3,859,185,261	3.6
2019	1,440,288,909	-2.0	1,360,876,555	-1.5	1,002,352,849	0.2	7,632,150	-0.4	3,811,150,463	-1.2
2020	1,464,605,046	1.7	1,287,439,583	-5.4	959,082,028	-4.3	6,547,824	-14.2	3,717,674,481	-2.5
2021	1,470,486,882	0.4	1,328,439,498	3.2	1,000,613,490	4.3	6,334,383	-3.3	3,805,874,253	2.4
2022	1,509,233,162	2.6	1,390,872,813	4.7	1,020,463,986	2.0	6,599,108	4.2	3,927,169,069	3.2
Total Percent Change		4.4		4.6		5.1		-14.4		4.6

Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Table 3 and Chart 3: United States Electricity Price by Sector (cents/KWh) and Price Change 2010-2022

Year	Residential		Commercial		Industrial		Transportation		Total	
	Cents/KWh	¢ chg.	Cents/KWh	¢ chg.	Cents/KWh	¢ chg.	Cents/KWh	¢ chg.	Cents/KWh	¢ chg.
2010	11.5		10.2		6.8		10.6		9.8	
2011	11.7	0.2	10.2	0.1	6.8	0.1	10.5	-0.1	9.9	0.1
2012	11.9	0.2	10.1	-0.2	6.7	-0.2	10.2	-0.3	9.8	-0.1
2013	12.1	0.3	10.3	0.2	6.9	0.2	10.6	0.3	10.1	0.2
2014	12.5	0.4	10.7	0.5	7.1	0.2	10.5	-0.1	10.4	0.4
2015	12.7	0.1	10.6	-0.1	6.9	-0.2	10.1	-0.4	10.4	0.0
2016	12.6	-0.1	10.4	-0.2	6.8	-0.2	9.6	-0.5	10.3	-0.1
2017	12.9	0.3	10.7	0.2	6.9	0.1	9.7	0.0	10.5	0.2
2018	12.9	0.0	10.7	0.0	6.9	0.0	9.7	0.0	10.5	0.0
2019	13.0	0.1	10.7	0.0	6.8	-0.1	9.7	0.0	10.5	0.0
2020	13.2	0.1	10.6	-0.1	6.7	-0.1	9.9	0.2	10.6	0.1
2021	13.7	0.5	11.2	0.6	7.2	0.5	10.2	0.3	11.1	0.5
2022	15.0	1.4	12.4	1.2	8.3	1.1	11.6	1.4	12.4	1.3
Total ¢ Change		3.5		2.2		1.6		1.0		2.5



Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Table 4: Total Western States Plus Electricity Consumption in MWh – 2010-2022

Year	Arizona	California	Colorado	Idaho	Montana	Nebraska	Nevada
2010	72,833,030	258,530,892	52,917,786	22,797,668	13,771,453	29,849,460	33,772,595
2011	74,943,645	261,941,700	53,458,285	23,271,724	13,788,081	29,676,084	33,916,479
2012	75,063,343	259,538,038	53,685,297	23,711,859	13,863,383	30,827,939	35,179,918
2013	75,662,037	261,332,459	53,441,649	24,208,056	14,045,174	30,700,605	35,211,215
2014	76,297,685	262,584,786	53,396,521	23,233,284	14,102,392	30,222,168	35,075,606
2015	77,349,416	261,170,437	54,116,046	23,058,814	14,206,911	29,495,073	36,019,690
2016	78,237,828	256,846,635	54,802,037	23,062,961	14,100,601	30,199,354	36,144,630
2017	77,646,262	257,267,937	54,830,186	23,793,790	14,709,656	30,359,007	36,657,786
2018	78,346,302	255,224,272	56,450,480	23,753,508	14,838,845	30,939,492	37,780,263
2019	77,929,170	250,378,710	56,520,823	23,985,275	15,321,271	30,383,190	36,982,386
2020	81,960,074	250,174,672	56,050,264	24,461,352	14,584,179	31,171,536	38,233,899
2021	81,219,990	247,249,865	56,351,209	25,285,616	14,961,561	32,341,170	39,032,042
2022	84,196,517	251,869,136	56,763,041	26,201,131	15,583,783	33,844,105	39,320,007
% Change	15.6	-2.6	7.3	14.9	13.2	13.4	16.4
Year	New Mexico	North Dakota	Oregon	South Dakota	Utah	Washington	Wyoming
2010	22,428,344	12,956,263	46,025,945	11,356,149	28,044,001	90,379,970	17,113,458
2011	23,041,665	13,737,016	47,171,446	11,679,600	28,858,946	93,724,917	17,417,762
2012	23,178,568	14,716,956	46,688,856	11,734,210	29,723,368	92,336,441	16,971,354
2013	23,065,026	16,032,967	47,640,978	12,209,799	30,474,034	92,882,723	17,053,514
2014	23,115,222	18,239,732	47,334,953	12,354,726	30,043,019	92,140,777	17,134,075
2015	23,093,553	18,128,948	47,263,974	12,101,979	30,192,350	90,116,086	16,924,762
2016	23,039,547	18,520,188	47,349,350	12,129,530	30,179,534	88,885,316	16,554,870
2017	23,009,584	20,140,426	50,043,816	12,313,675	30,589,021	91,948,172	16,778,067
2018	24,048,611	20,669,506	49,325,904	12,856,938	31,242,408	90,005,791	16,864,678
2019	24,880,134	21,559,255	50,404,386	12,868,931	31,142,565	91,052,796	16,763,496
2020	24,777,155	21,819,452	51,019,313	12,695,845	31,663,157	86,706,144	15,331,018
2021	25,393,743	22,863,107	54,135,205	13,041,391	32,677,627	88,198,668	15,784,712
2022	27,156,178	25,392,877	56,326,896	13,467,064	33,365,501	90,897,320	16,499,429
% Change	21.1	96.0	22.4	18.6	19.0	0.6	-3.6

Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Table 5: Western States Plus Total Electric Industry Generation in MWh – 2010-2022

Year	Arizona	California	Colorado	Idaho	Montana	Nebraska	Nevada
2010	111,750,957	204,125,596	50,720,792	12,024,564	29,791,181	36,630,006	35,146,248
2011	108,125,357	200,804,842	51,432,554	16,568,786	30,128,543	36,095,051	31,935,918
2012	110,904,994	199,518,567	52,556,701	15,499,089	27,804,782	34,217,292	35,173,263
2013	113,325,986	200,077,115	52,937,436	15,186,128	27,687,326	37,104,628	36,443,874
2014	112,257,187	198,807,622	53,847,386	15,184,417	30,257,616	39,431,291	36,000,537
2015	113,142,048	196,703,858	52,393,077	15,667,095	29,302,401	39,883,391	39,046,784
2016	108,763,449	196,963,215	54,418,480	15,660,938	27,783,529	36,524,869	39,787,005
2017	105,851,765	206,146,520	53,844,002	17,396,024	28,220,946	35,406,982	38,201,294
2018	111,925,144	195,465,638	55,386,279	18,172,120	28,212,831	36,966,216	39,640,241
2019	113,551,987	201,784,204	56,337,734	18,407,812	27,797,079	37,297,615	39,889,660
2020	109,305,057	193,083,537	54,115,011	17,686,135	23,353,290	36,848,681	40,424,745
2021	108,604,620	197,165,106	56,838,472	16,836,473	24,947,923	37,910,898	41,754,584
2022	104,698,773	203,383,857	58,044,009	16,278,410	27,088,740	40,692,718	42,591,838
% Change	-6.3	-0.4	14.4	35.4	-9.1	11.1	21.2
Year	New Mexico	North Dakota	Oregon	South Dakota	Utah	Washington	Wyoming
2010	36,251,542	34,739,542	55,126,999	10,049,636	42,249,355	103,472,729	48,119,254
2011	38,181,139	35,079,900	59,695,164	11,998,886	40,836,150	115,262,601	47,638,471
2012	36,635,909	36,125,159	60,932,730	11,473,397	39,402,961	116,835,473	49,588,606
2013	35,870,965	35,021,673	59,895,515	10,108,887	42,516,751	114,172,916	52,483,065
2014	32,306,210	36,462,508	60,119,907	10,995,240	43,784,526	116,334,363	49,696,183
2015	32,701,398	37,156,612	57,866,535	9,633,033	41,949,120	109,287,458	48,966,519
2016	32,912,045	37,856,452	60,182,013	11,524,184	38,133,928	114,086,582	46,656,630
2017	33,597,413	41,505,074	62,713,747	10,935,719	37,411,876	115,912,078	46,741,846
2018	32,673,682	42,615,321	64,113,560	12,616,396	39,375,424	116,756,729	46,112,136
2019	35,174,510	41,147,324	62,258,378	14,506,647	39,117,033	106,463,608	42,145,656
2020	34,075,584	42,176,424	63,624,782	14,146,539	37,087,309	116,114,468	42,010,989
2021	35,192,365	43,032,378	61,016,874	17,322,409	42,565,645	110,808,401	43,460,744
2022	40,889,036	44,400,956	61,317,617	17,900,462	39,386,043	116,690,498	46,347,492
% Change	12.8	27.8	11.2	78.1	-6.8	12.8	-3.7

Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Table 6: Western States Plus Electricity Consumption by Sector in MWh – Residential 2010-2022

Year	Arizona	California	Colorado	Idaho	Montana	Nebraska	Nevada
2010	32,448,138	87,256,946	18,102,386	8,136,736	4,742,794	10,106,673	11,614,669
2011	33,079,074	88,398,416	18,276,799	8,389,866	4,913,110	9,946,973	11,493,279
2012	32,922,970	90,109,995	18,220,365	8,159,349	4,778,365	9,680,143	12,122,718
2013	33,103,602	89,241,934	18,528,908	8,619,262	4,926,471	10,062,159	12,142,431
2014	32,346,079	89,360,680	18,092,932	8,134,913	4,969,243	10,028,238	11,916,521
2015	33,167,205	89,386,373	18,384,936	8,054,693	4,825,213	9,532,132	12,338,538
2016	33,690,783	88,311,069	18,833,722	8,172,022	4,852,547	9,738,351	12,691,942
2017	34,251,220	90,123,505	18,615,000	8,727,901	5,224,588	9,667,990	12,936,791
2018	34,660,297	89,099,985	19,286,952	8,427,578	5,197,686	10,412,008	13,449,743
2019	34,720,050	87,523,987	19,404,743	8,696,843	5,308,103	10,307,905	12,867,637
2020	38,707,416	94,934,563	20,482,502	8,970,751	5,379,965	10,514,944	14,321,607
2021	37,130,339	90,284,143	20,625,005	9,300,843	5,559,446	10,492,369	14,373,357
2022	38,367,633	89,542,208	20,593,942	9,963,653	5,894,499	10,983,649	14,306,529
% Change	18.2	2.6	13.8	22.5	24.3	8.7	23.2
Year	New Mexico	North Dakota	Oregon	South Dakota	Utah	Washington	Wyoming
2010	6,752,473	4,392,596	18,838,666	4,628,123	8,834,230	34,906,926	2,727,201
2011	6,873,748	4,552,228	19,429,175	4,646,384	8,946,741	36,376,143	2,802,726
2012	6,763,820	4,484,758	18,854,659	4,453,732	9,188,204	35,510,961	2,716,528
2013	6,803,987	5,038,846	19,328,558	4,824,150	9,401,748	35,983,486	2,829,496
2014	6,611,970	5,357,514	18,617,613	4,827,368	8,963,971	35,082,958	2,752,313
2015	6,641,724	4,862,542	18,269,007	4,571,325	9,117,153	34,071,987	2,676,702
2016	6,642,511	4,741,298	18,573,242	4,618,724	9,370,656	34,211,748	2,751,073
2017	6,497,207	4,848,305	20,065,930	4,652,890	9,510,783	37,282,901	2,772,371
2018	6,826,442	5,133,171	18,930,583	5,018,360	9,714,507	35,338,978	2,748,356
2019	6,871,561	5,125,431	19,286,182	5,057,032	9,739,525	36,512,424	2,849,378
2020	7,282,079	5,046,551	19,628,011	5,070,024	10,546,793	36,858,798	2,879,528
2021	7,088,358	4,888,401	20,285,346	5,043,964	10,950,415	38,021,233	2,897,498
2022	7,282,636	5,271,904	20,725,899	5,322,906	11,344,265	39,775,849	3,008,680
% Change	7.9	20.0	10.0	15.0	28.4	13.9	10.3

Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Table 7: Western States Plus Electricity Consumption by Sector in MWh – Commercial 2010-2022

Year	Arizona	California	Colorado	Idaho	Montana	Nebraska	Nevada
2010	28,942,918	121,151,697	19,597,222	5,864,885	4,789,182	9,532,438	8,969,727
2011	29,512,330	122,780,917	19,889,231	5,969,462	4,892,271	9,139,410	8,995,162
2012	29,692,256	121,791,536	19,997,226	5,978,118	4,917,509	9,232,889	9,314,611
2013	30,039,018	116,857,853	20,098,218	6,250,297	4,889,642	9,387,074	9,301,939
2014	29,289,879	119,494,062	20,129,360	6,127,911	4,903,160	9,525,524	9,418,091
2015	29,284,431	118,384,093	20,408,085	6,263,642	4,894,095	9,307,834	9,613,997
2016	29,564,157	116,774,684	20,800,136	6,279,129	4,831,636	9,306,827	9,929,076
2017	29,681,441	117,682,380	20,640,793	6,421,001	4,970,119	9,293,401	11,122,755
2018	29,683,550	115,786,492	21,023,300	6,436,893	4,921,231	9,553,396	12,123,896
2019	29,415,272	114,279,373	21,111,259	6,440,943	4,956,080	9,456,725	11,681,186
2020	29,128,178	107,006,347	20,042,218	6,309,927	4,702,353	9,090,239	11,983,740
2021	29,990,064	108,761,594	20,584,470	6,600,296	4,906,132	9,260,421	12,293,815
2022	31,507,070	114,141,384	21,059,419	6,836,725	5,019,659	9,618,755	12,427,663
% Change	8.9	-5.8	7.5	16.6	4.8	0.9	38.6
Year	New Mexico	North Dakota	Oregon	South Dakota	Utah	Washington	Wyoming
2010	9,015,729	4,714,115	15,453,588	4,367,781	10,367,847	28,833,281	4,317,140
2011	9,257,633	4,866,230	15,754,249	4,446,864	10,544,326	29,408,904	4,353,082
2012	9,165,533	5,108,616	15,803,814	4,556,608	10,802,800	29,239,604	4,245,450
2013	8,982,563	5,685,146	16,080,354	4,661,845	11,007,765	29,658,670	4,066,842
2014	8,976,354	5,403,497	16,039,418	4,572,324	11,053,251	29,040,310	4,000,291
2015	8,877,046	6,278,868	16,021,066	4,748,637	11,614,593	29,266,512	3,924,590
2016	8,805,876	6,346,158	16,060,478	4,698,053	11,565,312	28,989,062	3,762,315
2017	8,784,312	6,529,910	16,570,754	4,722,666	11,739,121	29,799,505	3,762,086
2018	9,035,272	6,835,913	16,470,027	4,903,243	12,083,833	29,396,404	3,757,211
2019	9,028,861	7,035,031	16,422,975	4,888,034	11,860,449	29,269,638	3,575,477
2020	8,406,884	6,641,700	15,748,914	4,696,475	11,395,032	27,307,412	3,320,024
2021	8,655,826	6,808,316	16,508,755	4,791,689	12,206,510	28,637,381	3,443,297
2022	9,084,022	8,392,425	16,654,576	4,936,093	12,870,552	29,780,448	3,610,790
% Change	0.8	78.0	7.8	13.0	24.1	3.3	-16.4

Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Table 8: Western States Plus Electricity Consumption by Sector in MWh – Industrial 2010-2022

Year	Arizona	California	Colorado	Idaho	Montana	Nebraska	Nevada
2010	11,441,974	49,301,025	15,171,843	8,796,047	4,239,477	10,210,349	13,179,708
2011	12,352,241	49,935,776	15,241,814	8,912,396	3,982,700	10,589,701	13,419,961
2012	12,448,117	46,951,714	15,415,235	9,574,392	4,167,509	11,914,907	13,734,461
2013	12,519,417	54,396,999	14,752,859	9,338,497	4,229,061	11,251,372	13,758,569
2014	14,661,727	52,898,430	15,110,188	8,970,460	4,229,989	10,668,406	13,732,695
2015	14,891,564	52,562,210	15,258,761	8,740,479	4,487,603	10,655,107	14,058,811
2016	14,975,656	50,979,124	15,103,434	8,611,810	4,416,418	11,154,176	13,515,234
2017	13,706,041	48,627,406	15,501,238	8,644,888	4,514,949	11,397,616	12,589,549
2018	13,994,441	49,587,913	16,047,258	8,889,037	4,719,928	10,974,088	12,198,273
2019	13,782,704	47,807,729	15,891,020	8,847,489	5,057,088	10,618,560	12,425,536
2020	14,113,139	47,630,882	15,431,465	9,180,674	4,501,861	11,566,353	11,924,592
2021	14,089,072	47,583,329	15,053,158	9,384,477	4,495,983	12,588,380	12,359,543
2022	14,311,610	47,500,423	15,018,320	9,400,753	4,669,625	13,241,701	12,578,639
% Change	25.1	-3.7	-1.0	6.9	10.1	29.7	-4.6
Year	New Mexico	North Dakota	Oregon	South Dakota	Utah	Washington	Wyoming
2010	6,660,142	3,849,552	11,708,420	2,360,245	8,808,211	26,632,814	10,069,117
2011	6,910,284	4,318,558	11,963,131	2,586,352	9,332,992	27,932,787	10,261,954
2012	7,249,215	5,123,582	12,005,579	2,723,870	9,694,190	27,578,904	10,009,376
2013	7,278,476	5,308,975	12,209,593	2,723,804	10,010,410	27,234,626	10,157,176
2014	7,526,898	7,478,721	12,654,475	2,955,034	9,965,115	28,012,775	10,381,471
2015	7,574,783	6,987,538	12,949,776	2,782,017	9,404,984	26,772,299	10,323,470
2016	7,591,160	7,432,732	12,691,616	2,812,753	9,186,991	25,678,420	10,041,482
2017	7,728,065	8,762,211	13,381,811	2,938,119	9,283,036	24,858,604	10,243,610
2018	8,186,897	8,700,422	13,899,298	2,935,335	9,392,709	25,263,272	10,359,111
2019	8,979,712	9,398,793	14,668,288	2,923,865	9,490,843	25,171,873	10,338,641
2020	9,088,192	10,131,201	15,616,782	2,929,346	9,672,119	22,442,186	9,131,466
2021	9,649,559	11,166,390	17,318,508	3,205,738	9,471,737	21,436,480	9,443,917
2022	10,789,520	11,728,548	18,923,722	3,208,065	9,104,680	21,227,090	9,879,959
% Change	62.0	204.7	61.6	35.9	3.4	-20.3	-1.9

Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Table 9: Western States Plus Electricity Consumption by Sector in MWh – Transportation 2010-2022

Year	Arizona	California	Colorado	Idaho	Montana	Nebraska	Nevada
2010	0	821,224	46,335	0	0	0	8,491
2011	0	826,591	50,441	0	0	0	8,077
2012	0	684,793	52,471	0	0	0	8,128
2013	0	835,673	61,664	0	0	0	8,276
2014	0	831,614	64,041	0	0	0	8,299
2015	6,216	837,761	64,264	0	0	0	8,344
2016	7,232	781,758	64,745	0	0	0	8,378
2017	7,560	834,646	73,155	0	0	0	8,691
2018	8,014	749,882	92,970	0	0	0	8,351
2019	11,144	767,621	113,801	0	0	0	8,027
2020	11,341	602,880	94,079	0	0	0	3,960
2021	10,515	620,799	88,576	0	0	0	5,327
2022	10,204	685,121	91,360	0	0	0	7,176
% Change		-16.6	97.2				-15.5
Year	New Mexico	North Dakota	Oregon	South Dakota	Utah	Washington	Wyoming
2010	0	0	25,271	0	33,713	6,949	0
2011	0	0	24,891	0	34,887	7,083	0
2012	0	0	24,804	0	38,174	6,972	0
2013	0	0	22,473	0	54,111	5,941	0
2014	0	0	23,447	0	60,682	4,734	0
2015	0	0	24,125	0	55,620	5,288	0
2016	0	0	24,014	0	56,575	6,086	0
2017	0	0	25,321	0	56,081	7,162	0
2018	0	0	25,996	0	51,359	7,137	0
2019	0	0	26,941	0	51,748	98,861	0
2020	0	0	25,606	0	49,213	97,748	0
2021	0	0	22,596	0	48,965	103,574	0
2022	0	0	22,699	0	46,004	113,933	0
% Change			-10.2		36.5	1,539.6	

Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Table 10: Total Western States Plus Electricity Price in cents/KWh – 2010-2022

Year	AZ	CA	CO	ID	MT	NE	NV	NM	ND	OR	SD	UT	WA	WY
2010	9.7	13.0	9.2	6.5	7.8	7.5	9.7	8.4	7.1	7.6	7.8	6.9	6.7	6.2
2011	9.7	13.1	9.4	6.4	8.2	7.9	9.0	8.7	7.5	8.0	8.1	7.1	6.8	6.6
2012	9.8	13.5	9.4	6.9	8.3	8.4	9.0	8.8	7.8	8.2	8.5	7.8	6.9	7.2
2013	10.1	14.3	9.9	7.6	8.6	8.7	9.0	9.3	8.2	8.4	8.9	8.2	7.1	7.6
2014	10.2	15.2	10.1	7.9	8.6	8.8	9.7	9.7	8.4	8.7	9.1	8.4	7.1	7.8
2015	10.3	15.4	9.9	8.1	8.9	8.9	9.5	9.6	8.8	8.8	9.5	8.5	7.4	8.0
2016	10.3	15.2	9.8	8.1	8.8	9.1	8.4	9.1	8.9	8.8	9.8	8.7	7.7	8.2
2017	10.6	16.1	10.0	8.3	8.9	9.1	8.8	9.6	8.8	8.8	10.1	8.6	7.9	8.3
2018	10.9	16.6	10.0	8.2	8.8	9.0	8.7	9.4	8.9	8.9	10.0	8.2	8.0	8.1
2019	10.5	16.9	10.2	7.9	9.0	9.1	8.8	9.0	8.9	8.8	10.0	8.2	8.0	8.1
2020	10.4	18.0	10.3	8.0	9.1	9.0	8.3	9.3	8.5	8.8	10.1	8.3	8.3	8.3
2021	10.7	19.7	10.9	8.2	9.5	8.8	8.6	9.8	8.7	9.0	10.4	8.3	8.8	8.3
2022	11.3	22.3	11.8	8.5	10.0	8.8	10.9	10.0	8.4	9.3	10.4	8.8	9.1	8.2
Total Price Change	1.6	9.3	2.6	2.0	2.1	1.3	1.2	1.6	1.3	1.7	2.6	1.9	2.4	2.0

Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Table 11: Western States Plus Electricity Price by Sector in cents/KWh – Residential 2010-2022

Year	AZ	CA	CO	ID	MT	NE	NV	NM	ND	OR	SD	UT	WA	WY
2010	11.0	14.8	11.0	8.0	9.2	8.9	12.4	10.5	8.1	8.9	9.0	8.7	8.0	8.8
2011	11.1	14.8	11.3	7.9	9.8	9.3	11.6	11.0	8.6	9.5	9.4	9.0	8.3	9.1
2012	11.3	15.3	11.5	8.7	10.1	10.0	11.8	11.4	9.1	9.8	10.1	9.9	8.5	9.9
2013	11.7	16.2	11.9	9.3	10.3	10.3	11.9	11.7	9.1	9.9	10.3	10.4	8.7	10.2
2014	11.9	16.3	12.2	9.7	10.2	10.4	12.9	12.3	9.2	10.5	10.5	10.7	8.7	10.5
2015	12.1	17.0	12.1	9.9	10.9	10.6	12.8	12.5	9.6	10.7	11.1	10.9	9.1	11.0
2016	12.2	17.4	12.1	10.0	10.9	10.8	11.4	12.0	10.2	10.7	11.5	11.0	9.5	11.1
2017	12.4	18.3	12.2	10.0	11.0	11.0	12.0	12.9	10.3	10.7	11.8	11.0	9.7	11.4
2018	12.8	18.8	12.2	10.2	11.0	10.7	11.9	12.7	10.3	11.0	11.6	10.4	9.8	11.3
2019	12.4	19.2	12.2	9.9	11.1	10.8	12.0	12.5	10.3	11.0	11.6	10.4	9.7	11.2
2020	12.3	20.5	12.4	10.0	11.2	10.8	11.3	12.9	10.4	11.2	11.8	10.4	9.9	11.1
2021	12.5	22.8	13.1	10.2	11.2	10.8	11.5	13.5	10.9	11.4	12.2	10.4	10.1	11.2
2022	13.0	25.8	14.2	10.4	11.3	10.8	13.8	13.8	10.9	11.4	12.1	10.8	10.3	11.1
Total Price Change	2.1	11.1	3.2	2.4	2.2	1.9	1.4	3.3	2.8	2.6	3.1	2.1	2.2	2.3

Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Table 12: Western States Plus Electricity Price by Sector in cents/KWh – Commercial 2010-2022

Year	AZ	CA	CO	ID	MT	NE	NV	NM	ND	OR	SD	UT	WA	WY
2010	9.5	13.1	9.1	6.6	8.6	7.6	9.8	8.6	7.2	7.6	7.6	7.2	7.4	7.4
2011	9.5	13.1	9.4	6.4	9.1	8.0	9.1	9.1	7.6	8.2	7.8	7.4	7.5	7.7
2012	9.5	13.4	9.4	6.9	9.1	8.4	8.8	9.3	8.0	8.3	8.1	8.1	7.7	8.2
2013	9.9	14.2	9.9	7.4	9.5	8.6	9.0	9.7	8.4	8.7	8.5	8.3	7.8	8.6
2014	10.1	15.6	10.1	7.8	9.6	8.7	9.5	10.3	8.8	8.8	8.9	8.5	8.0	8.9
2015	10.4	15.7	9.9	7.8	10.2	8.7	9.3	10.3	8.8	8.8	9.2	8.6	8.2	9.1
2016	10.4	15.1	9.6	7.8	10.2	8.8	7.9	9.8	9.2	8.9	9.6	8.8	8.4	9.4
2017	10.5	15.8	9.9	8.0	10.1	8.9	8.0	10.2	9.2	8.9	9.7	8.7	8.6	9.7
2018	10.6	16.3	10.0	7.9	10.1	8.8	7.7	10.0	9.1	8.9	9.6	8.2	8.7	9.6
2019	10.3	16.7	10.4	7.7	10.4	8.9	8.0	9.8	9.0	8.9	9.6	8.3	8.8	9.6
2020	10.1	17.5	10.3	7.8	10.5	8.9	7.5	10.3	9.0	9.0	9.7	8.3	8.9	9.7
2021	10.3	19.2	10.8	7.9	10.5	8.8	7.8	10.8	9.2	9.1	10.2	8.1	9.1	9.7
2022	10.8	21.8	11.6	8.3	10.7	8.8	10.1	11.1	8.5	9.4	10.2	8.4	9.5	9.6
Total Price Change	1.3	8.7	2.5	1.6	2.1	1.2	0.4	2.5	1.2	1.8	2.7	1.2	2.1	2.1

Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Table 13: Western States Plus Electricity Price by Sector in cents/KWh – Industrial 2010-2022

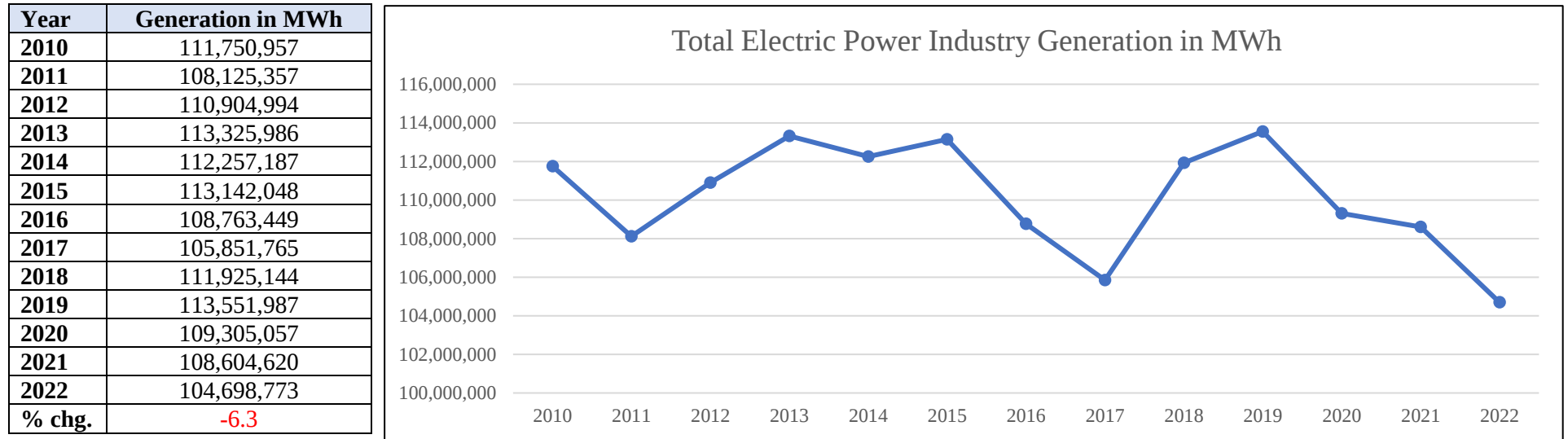
Year	AZ	CA	CO	ID	MT	NE	NV	NM	ND	OR	SD	UT	WA	WY
2010	6.6	9.8	6.9	5.2	5.6	6.0	7.4	6.0	5.8	5.4	6.1	4.9	4.1	5.0
2011	6.6	10.1	7.1	5.1	5.3	6.4	6.7	6.1	6.2	5.5	6.2	5.1	4.1	5.4
2012	6.5	10.5	7.0	5.5	5.1	7.0	6.5	5.8	6.6	5.6	6.6	5.6	4.1	6.0
2013	6.7	11.4	7.3	6.1	5.4	7.4	6.5	6.4	7.1	5.8	7.0	5.9	4.2	6.4
2014	6.5	12.3	7.5	6.4	5.5	7.5	7.1	6.6	7.6	6.0	7.0	6.1	4.3	6.6
2015	6.3	12.2	7.4	6.6	5.3	7.6	6.8	6.3	8.1	6.0	7.4	6.2	4.4	6.8
2016	6.1	11.9	7.4	6.6	5.1	7.7	5.9	5.8	8.0	6.1	7.6	6.3	4.4	6.9
2017	6.5	12.7	7.5	6.7	5.3	7.7	6.2	6.2	7.6	6.0	7.8	6.1	4.6	6.9
2018	6.6	13.2	7.5	6.5	5.2	7.6	6.1	5.8	8.0	5.9	7.8	5.9	4.7	6.7
2019	6.3	13.4	7.4	6.1	5.5	7.7	6.1	5.5	7.9	5.9	7.8	6.0	4.8	6.7
2020	6.1	14.3	7.5	6.2	5.2	7.4	5.6	5.6	7.3	5.7	7.8	5.9	5.1	6.9
2021	6.8	14.8	8.0	6.4	6.2	7.3	6.0	6.2	7.4	6.0	8.0	6.2	5.8	6.8
2022	7.9	17.1	8.6	6.7	7.5	7.2	8.5	6.6	7.3	6.8	8.0	6.8	6.2	6.9
Total Price Change	1.2	7.3	1.7	1.6	1.9	1.2	1.1	0.6	1.5	1.4	2.0	1.9	2.1	1.9

Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Table 14: Western States Plus Electricity Price by Sector in cents/KWh – Transportation 2010-2022

Year	AZ	CA	CO	ID	MT	NE	NV	NM	ND	OR	SD	UT	WA	WY
2010	0.0	8.3	9.3	0.0	0.0	0.0	9.4	0.0	0.0	7.0	0.0	8.7	7.4	0.0
2011	0.0	8.1	9.8	0.0	0.0	0.0	8.6	0.0	0.0	7.9	0.0	9.2	8.5	0.0
2012	0.0	7.2	9.7	0.0	0.0	0.0	8.4	0.0	0.0	8.2	0.0	9.8	8.1	0.0
2013	0.0	8.5	10.6	0.0	0.0	0.0	8.5	0.0	0.0	8.9	0.0	10.7	8.0	0.0
2014	0.0	8.9	10.8	0.0	0.0	0.0	9.3	0.0	0.0	9.2	0.0	10.3	8.5	0.0
2015	9.4	9.0	10.1	0.0	0.0	0.0	9.1	0.0	0.0	9.1	0.0	10.1	8.2	0.0
2016	9.9	9.8	9.8	0.0	0.0	0.0	7.8	0.0	0.0	9.3	0.0	9.8	8.9	0.0
2017	9.7	8.7	9.8	0.0	0.0	0.0	8.6	0.0	0.0	9.4	0.0	10.3	9.2	0.0
2018	10.0	8.6	9.0	0.0	0.0	0.0	8.3	0.0	0.0	9.2	0.0	10.6	9.4	0.0
2019	9.7	8.9	8.7	0.0	0.0	0.0	8.5	0.0	0.0	9.1	0.0	10.6	9.5	0.0
2020	9.4	10.1	8.6	0.0	0.0	0.0	8.8	0.0	0.0	9.5	0.0	10.7	9.9	0.0
2021	9.3	11.8	9.4	0.0	0.0	0.0	7.7	0.0	0.0	9.7	0.0	11.2	9.9	0.0
2022	9.6	13.8	9.9	0.0	0.0	0.0	9.7	0.0	0.0	10.5	0.0	12.4	10.1	0.0
Total Price Change	9.6	5.5	0.6	0.0	0.0	0.0	0.3	0.0	0.0	3.5	0.0	3.7	2.6	0.0

Source: LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Table 15 and Chart 4: Arizona Total Electric Power Industry Generation**Table 16: Arizona Electricity Consumption (MWh) and Price (cents/KWh) by Sector with Percent Change and Price Change**

Year	Residential		Commercial		Industrial		Transportation		Total	
	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh
2010	32,448,138	11.0	28,942,918	9.5	11,441,974	6.6	0	0.0	72,833,030	9.7
2011	33,079,074	11.1	29,512,330	9.5	12,352,241	6.6	0	0.0	74,943,645	9.7
2012	32,922,970	11.3	29,692,256	9.5	12,448,117	6.5	0	0.0	75,063,343	9.8
2013	33,103,602	11.7	30,039,018	9.9	12,519,417	6.7	0	0.0	75,662,037	10.1
2014	32,346,079	11.9	29,289,879	10.1	14,661,727	6.5	0	0.0	76,297,685	10.2
2015	33,167,205	12.1	29,284,431	10.4	14,891,564	6.3	6,216	9.4	77,349,416	10.3
2016	33,690,783	12.2	29,564,157	10.4	14,975,656	6.1	7,232	9.9	78,237,828	10.3
2017	34,251,220	12.4	29,681,441	10.5	13,706,041	6.5	7,560	9.7	77,646,262	10.6
2018	34,660,297	12.8	29,683,550	10.6	13,994,441	6.6	8,014	10.0	78,346,302	10.9
2019	34,720,050	12.4	29,415,272	10.3	13,782,704	6.3	11,144	9.7	77,929,170	10.5
2020	38,707,416	12.3	29,128,178	10.1	14,113,139	6.1	11,341	9.4	81,960,074	10.4
2021	37,130,339	12.5	29,990,064	10.3	14,089,072	6.8	10,515	9.3	81,219,990	10.7
2022	38,367,633	13.0	31,507,070	10.8	14,311,610	7.9	10,204	9.6	84,196,517	11.3
Change %/¢	18.2	2.1	8.9	1.3	25.1	1.2	-	9.6	15.6	1.6

Table 17: Arizona Total Electric Generation and Consumption in MWh (Sectors Total) and Consumption/Generation Ratio

Year	Generation	Consumption	Ratio
2010	111,750,957	72,833,030	65.2
2011	108,125,357	74,943,645	69.3
2012	110,904,994	75,063,343	67.7
2013	113,325,986	75,662,037	66.8
2014	112,257,187	76,297,685	68.0
2015	113,142,048	77,349,416	68.4
2016	108,763,449	78,237,828	71.9
2017	105,851,765	77,646,262	73.4
2018	111,925,144	78,346,302	70.0
2019	113,551,987	77,929,170	68.6
2020	109,305,057	81,960,074	75.0
2021	108,604,620	81,219,990	74.8
2022	104,698,773	84,196,517	80.4

Table 18 and Chart 5: California Total Electric Power Industry Generation

Year	Generation in MWh
2010	204,125,596
2011	200,804,842
2012	199,518,567
2013	200,077,115
2014	198,807,622
2015	196,703,858
2016	196,963,215
2017	206,146,520
2018	195,465,638
2019	201,784,204
2020	193,083,537
2021	197,165,106
2022	203,383,857
% chg.	-6.3

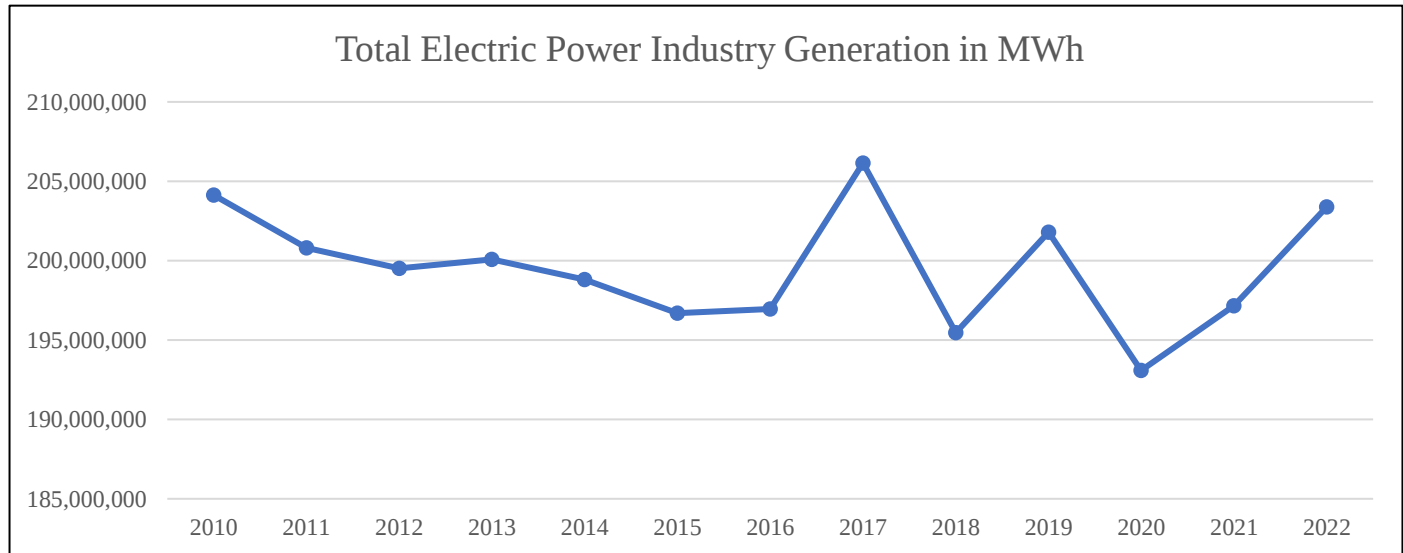
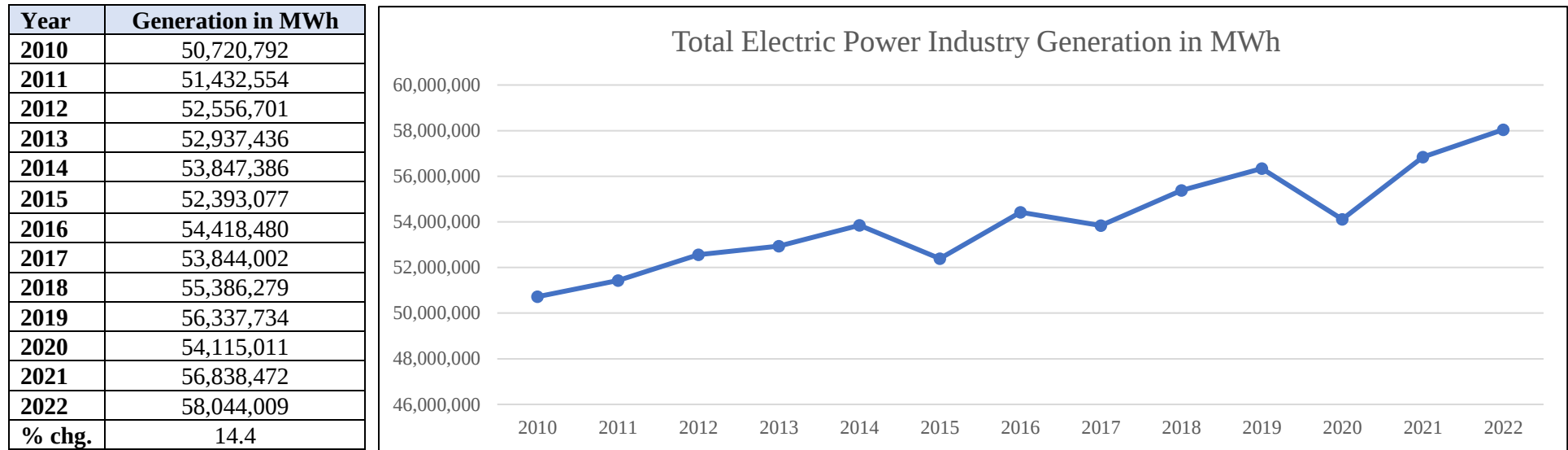


Table 19: California Electricity Consumption (MWh) and Price (cents/KWh) by Sector

Year	Residential		Commercial		Industrial		Transportation		Total	
	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh
2010	87,256,946	14.8	121,151,697	13.1	49,301,025	9.8	821,224	8.3	258,530,892	13.0
2011	88,398,416	14.8	122,780,917	13.1	49,935,776	10.1	826,591	8.1	261,941,700	13.1
2012	90,109,995	15.3	121,791,536	13.4	46,951,714	10.5	684,793	7.2	259,538,038	13.5
2013	89,241,934	16.2	116,857,853	14.2	54,396,999	11.4	835,673	8.5	261,332,459	14.3
2014	89,360,680	16.3	119,494,062	15.6	52,898,430	12.3	831,614	8.9	262,584,786	15.2
2015	89,386,373	17.0	118,384,093	15.7	52,562,210	12.2	837,761	9.0	261,170,437	15.4
2016	88,311,069	17.4	116,774,684	15.1	50,979,124	11.9	781,758	9.8	256,846,635	15.2
2017	90,123,505	18.3	117,682,380	15.8	48,627,406	12.7	834,646	8.7	257,267,937	16.1
2018	89,099,985	18.8	115,786,492	16.3	49,587,913	13.2	749,882	8.6	255,224,272	16.6
2019	87,523,987	19.2	114,279,373	16.7	47,807,729	13.4	767,621	8.9	250,378,710	16.9
2020	94,934,563	20.5	107,006,347	17.5	47,630,882	14.3	602,880	10.1	250,174,672	18.0
2021	90,284,143	22.8	108,761,594	19.2	47,583,329	14.8	620,799	11.8	247,249,865	19.7
2022	89,542,208	25.8	114,141,384	21.8	47,500,423	17.1	685,121	13.8	251,869,136	22.3
Change %/¢	2.6	11.1	-5.8	8.7	-3.7	7.3	-16.6	5.5	-2.6	9.3

Table 20: California Total Electric Generation and Consumption in MWh (Sectors Total) and Consumption/Generation Ratio

Year	Generation	Consumption	Ratio
2010	204,125,596	258,530,892	79.0
2011	200,804,842	261,941,700	76.7
2012	199,518,567	259,538,038	76.9
2013	200,077,115	261,332,459	76.6
2014	198,807,622	262,584,786	75.7
2015	196,703,858	261,170,437	75.3
2016	196,963,215	256,846,635	76.7
2017	206,146,520	257,267,937	80.1
2018	195,465,638	255,224,272	76.6
2019	201,784,204	250,378,710	80.6
2020	193,083,537	250,174,672	77.2
2021	197,165,106	247,249,865	79.7
2022	203,383,857	251,869,136	80.7

Table 21 and Chart 6: Colorado Total Electric Power Industry Generation**Table 22: Colorado Electricity Consumption (MWh) and Price (cents/KWh) by Sector**

Year	Residential		Commercial		Industrial		Transportation		Total	
2010	18,102,386	11.0	19,597,222	9.1	15,171,843	6.9	46,335	9.3	52,917,786	9.2
2011	18,276,799	11.3	19,889,231	9.4	15,241,814	7.1	50,441	9.8	53,458,285	9.4
2012	18,220,365	11.5	19,997,226	9.4	15,415,235	7.0	52,471	9.7	53,685,297	9.4
2013	18,528,908	11.9	20,098,218	9.9	14,752,859	7.3	61,664	10.6	53,441,649	9.9
2014	18,092,932	12.2	20,129,360	10.1	15,110,188	7.5	64,041	10.8	53,396,521	10.1
2015	18,384,936	12.1	20,408,085	9.9	15,258,761	7.4	64,264	10.1	54,116,046	9.9
2016	18,833,722	12.1	20,800,136	9.6	15,103,434	7.4	64,745	9.8	54,802,037	9.8
2017	18,615,000	12.2	20,640,793	9.9	15,501,238	7.5	73,155	9.8	54,830,186	10.0
2018	19,286,952	12.2	21,023,300	10.0	16,047,258	7.5	92,970	9.0	56,450,480	10.0
2019	19,404,743	12.2	21,111,259	10.4	15,891,020	7.4	113,801	8.7	56,520,823	10.2
2020	20,482,502	12.4	20,042,218	10.3	15,431,465	7.5	94,079	8.6	56,050,264	10.3
2021	20,625,005	13.1	20,584,470	10.8	15,053,158	8.0	88,576	9.4	56,351,209	10.9
2022	20,593,942	14.2	21,059,419	11.6	15,018,320	8.6	91,360	9.9	56,763,041	11.8
Change %/¢	13.8	3.2	7.5	2.5	-1.0	1.7	97.2	0.6	7.3	2.6

Table 23: Colorado Total Electric Generation and Consumption in MWh (Sectors Total) and Consumption/Generation Ratio

Year	Generation	Consumption	Ratio
2010	50,720,792	52,917,786	104.3
2011	51,432,554	53,458,285	103.9
2012	52,556,701	53,685,297	102.1
2013	52,937,436	53,441,649	101.0
2014	53,847,386	53,396,521	99.2
2015	52,393,077	54,116,046	103.3
2016	54,418,480	54,802,037	100.7
2017	53,844,002	54,830,186	101.8
2018	55,386,279	56,450,480	101.9
2019	56,337,734	56,520,823	100.3
2020	54,115,011	56,050,264	103.6
2021	56,838,472	56,351,209	99.1
2022	58,044,009	56,763,041	97.8

Table 24 and Chart 7: Idaho Total Electric Power Industry Generation

Year	Generation in MWh
2010	12,024,564
2011	16,568,786
2012	15,499,089
2013	15,186,128
2014	15,184,417
2015	15,667,095
2016	15,660,938
2017	17,396,024
2018	18,172,120
2019	18,407,812
2020	17,686,135
2021	16,836,473
2022	16,278,410
% chg.	35.4

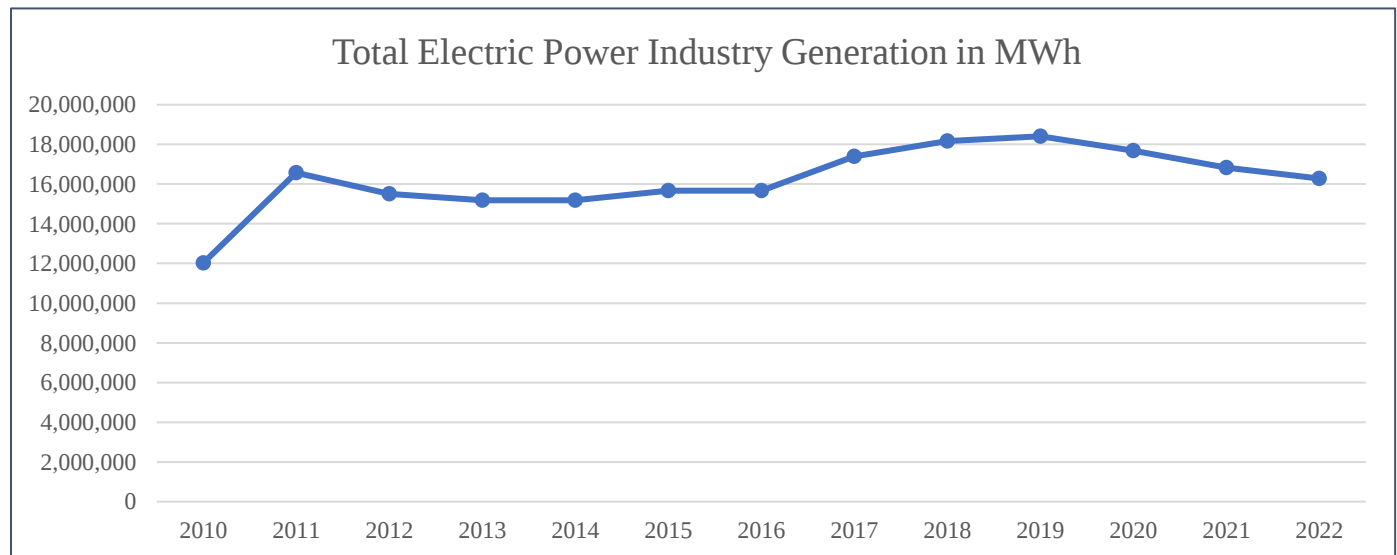


Table 25: Idaho Electricity Consumption (MWh) and Price (cents/KWh) by Sector

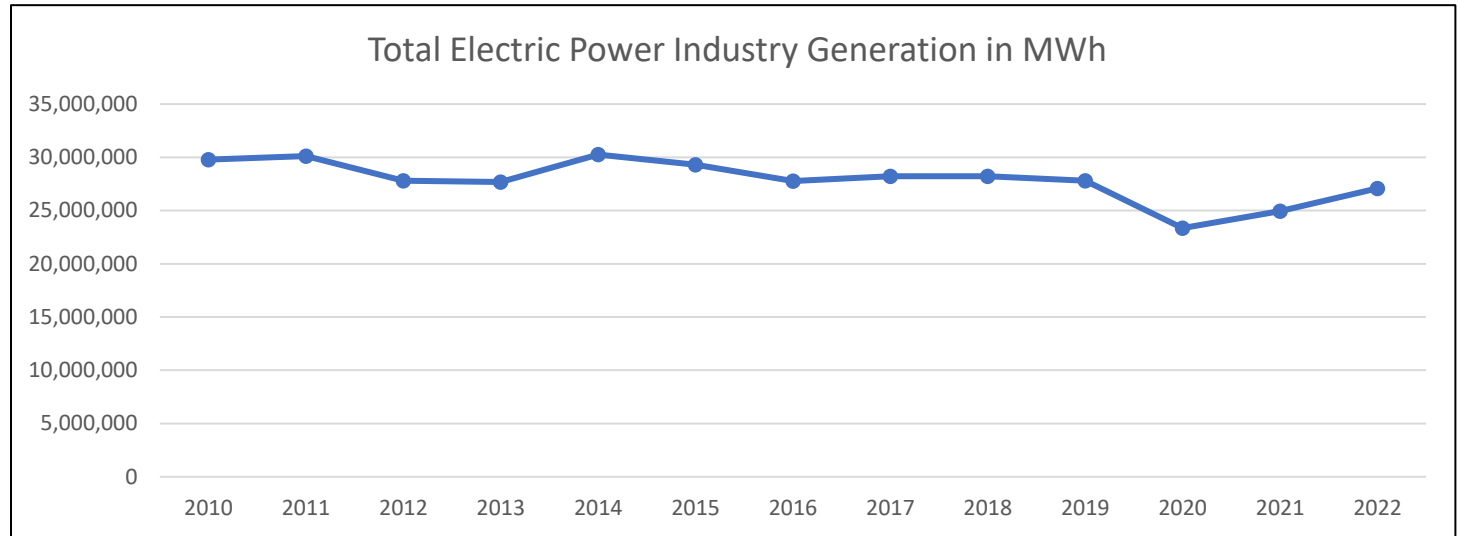
Year	Residential		Commercial		Industrial		Transportation		Total	
	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh
2010	8,136,736	8.0	5,864,885	6.6	8,796,047	5.2	0	0.0	22,797,668	6.5
2011	8,389,866	7.9	5,969,462	6.4	8,912,396	5.1	0	0.0	23,271,724	6.4
2012	8,159,349	8.7	5,978,118	6.9	9,574,392	5.5	0	0.0	23,711,859	6.9
2013	8,619,262	9.3	6,250,297	7.4	9,338,497	6.1	0	0.0	24,208,056	7.6
2014	8,134,913	9.7	6,127,911	7.8	8,970,460	6.4	0	0.0	23,233,284	7.9
2015	8,054,693	9.9	6,263,642	7.8	8,740,479	6.6	0	0.0	23,058,814	8.1
2016	8,172,022	10.0	6,279,129	7.8	8,611,810	6.6	0	0.0	23,062,961	8.1
2017	8,727,901	10.0	6,421,001	8.0	8,644,888	6.7	0	0.0	23,793,790	8.3
2018	8,427,578	10.2	6,436,893	7.9	8,889,037	6.5	0	0.0	23,753,508	8.2
2019	8,696,843	9.9	6,440,943	7.7	8,847,489	6.1	0	0.0	23,985,275	7.9
2020	8,970,751	10.0	6,309,927	7.8	9,180,674	6.2	0	0.0	24,461,352	8.0
2021	9,300,843	10.2	6,600,296	7.9	9,384,477	6.4	0	0.0	25,285,616	8.2
2022	9,963,653	10.4	6,836,725	8.3	9,400,753	6.7	0	0.0	26,201,131	8.5
Change %/¢	22.5	2.4	16.6	1.6	6.9	1.6	-	0.0	14.9	2.0

Table 26: Idaho Total Electric Generation and Consumption in MWh (Sectors Total) and Consumption/Generation Ratio

Year	Generation	Consumption	Ratio
2010	12,024,564	22,797,668	189.6
2011	16,568,786	23,271,724	140.5
2012	15,499,089	23,711,859	153.0
2013	15,186,128	24,208,056	159.4
2014	15,184,417	23,233,284	153.0
2015	15,667,095	23,058,814	147.2
2016	15,660,938	23,062,961	147.3
2017	17,396,024	23,793,790	136.8
2018	18,172,120	23,753,508	130.7
2019	18,407,812	23,985,275	130.3
2020	17,686,135	24,461,352	138.3
2021	16,836,473	25,285,616	150.2
2022	16,278,410	26,201,131	161.0

Table 27 and Chart 8: Montana Total Electric Power Industry Generation

Year	Generation in MWh
2010	12,024,564
2011	16,568,786
2012	15,499,089
2013	15,186,128
2014	15,184,417
2015	15,667,095
2016	15,660,938
2017	17,396,024
2018	18,172,120
2019	18,407,812
2020	17,686,135
2021	16,836,473
2022	16,278,410
% chg.	-9.1

**Table 28: Montana Electricity Consumption (MWh) and Price (cents/KWh) by Sector**

Year	Residential		Commercial		Industrial		Transportation		Total	
	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh
2010	4,742,794	9.2	4,789,182	8.6	4,239,477	5.6	0	0.0	13,771,453	7.8
2011	4,913,110	9.8	4,892,271	9.1	3,982,700	5.3	0	0.0	13,788,081	8.2
2012	4,778,365	10.1	4,917,509	9.1	4,167,509	5.1	0	0.0	13,863,383	8.3
2013	4,926,471	10.3	4,889,642	9.5	4,229,061	5.4	0	0.0	14,045,174	8.6
2014	4,969,243	10.2	4,903,160	9.6	4,229,989	5.5	0	0.0	14,102,392	8.6
2015	4,825,213	10.9	4,894,095	10.2	4,487,603	5.3	0	0.0	14,206,911	8.9
2016	4,852,547	10.9	4,831,636	10.2	4,416,418	5.1	0	0.0	14,100,601	8.8
2017	5,224,588	11.0	4,970,119	10.1	4,514,949	5.3	0	0.0	14,709,656	8.9
2018	5,197,686	11.0	4,921,231	10.1	4,719,928	5.2	0	0.0	14,838,845	8.8
2019	5,308,103	11.1	4,956,080	10.4	5,057,088	5.5	0	0.0	15,321,271	9.0
2020	5,379,965	11.2	4,702,353	10.5	4,501,861	5.2	0	0.0	14,584,179	9.1
2021	5,559,446	11.2	4,906,132	10.5	4,495,983	6.2	0	0.0	14,961,561	9.5
2022	5,894,499	11.3	5,019,659	10.7	4,669,625	7.5	0	0.0	15,583,783	10.0
Change %/¢	24.3	2.2	4.8	2.1	10.1	1.9	-	0.0	13.2	2.1

Table 29: Montana Total Electric Generation and Consumption in MWh (Sectors Total) and Generation/Consumption Ratio

Year	Generation	Consumption	Ratio
2010	29,791,181	13,771,453	46.2
2011	30,128,543	13,788,081	45.8
2012	27,804,782	13,863,383	49.9
2013	27,687,326	14,045,174	50.7
2014	30,257,616	14,102,392	46.6
2015	29,302,401	14,206,911	48.5
2016	27,783,529	14,100,601	50.8
2017	28,220,946	14,709,656	52.1
2018	28,212,831	14,838,845	52.6
2019	27,797,079	15,321,271	55.1
2020	23,353,290	14,584,179	62.5
2021	24,947,923	14,961,561	60.0
2022	27,088,740	15,583,783	57.5

Table 30 and Chart 9: Nebraska Total Electric Power Industry Generation

Year	Generation in MWh
2010	36,630,006
2011	36,095,051
2012	34,217,292
2013	37,104,628
2014	39,431,291
2015	39,883,391
2016	36,524,869
2017	35,406,982
2018	36,966,216
2019	37,297,615
2020	36,848,681
2021	37,910,898
2022	40,692,718
% chg	11.1

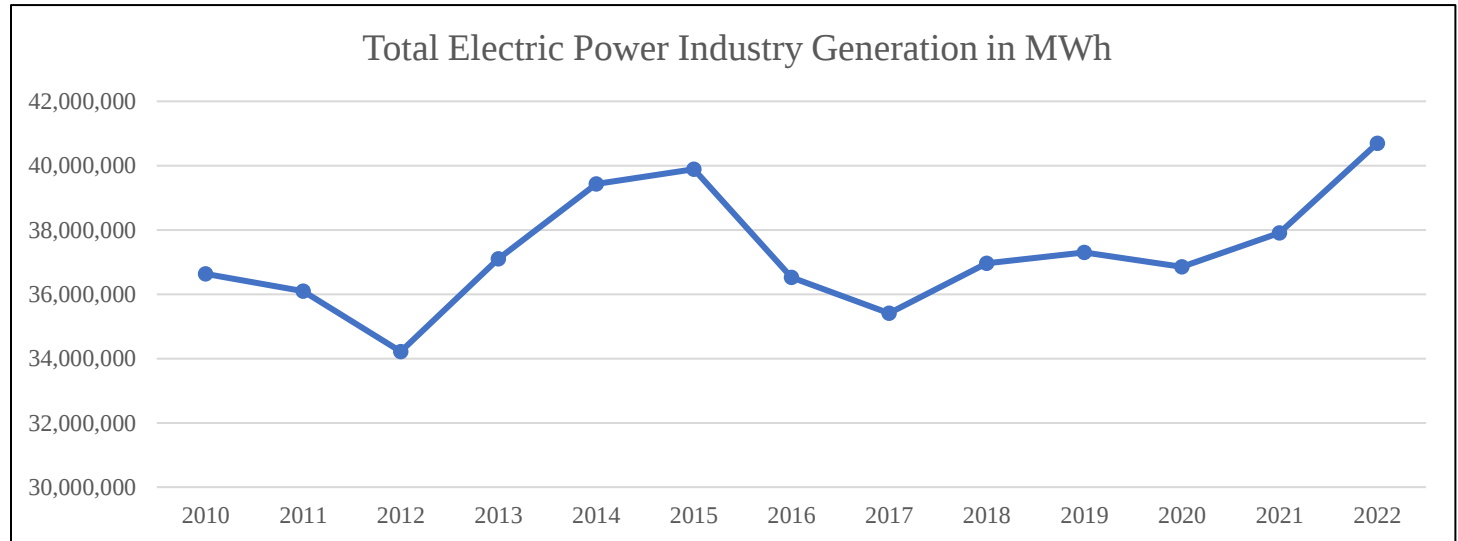
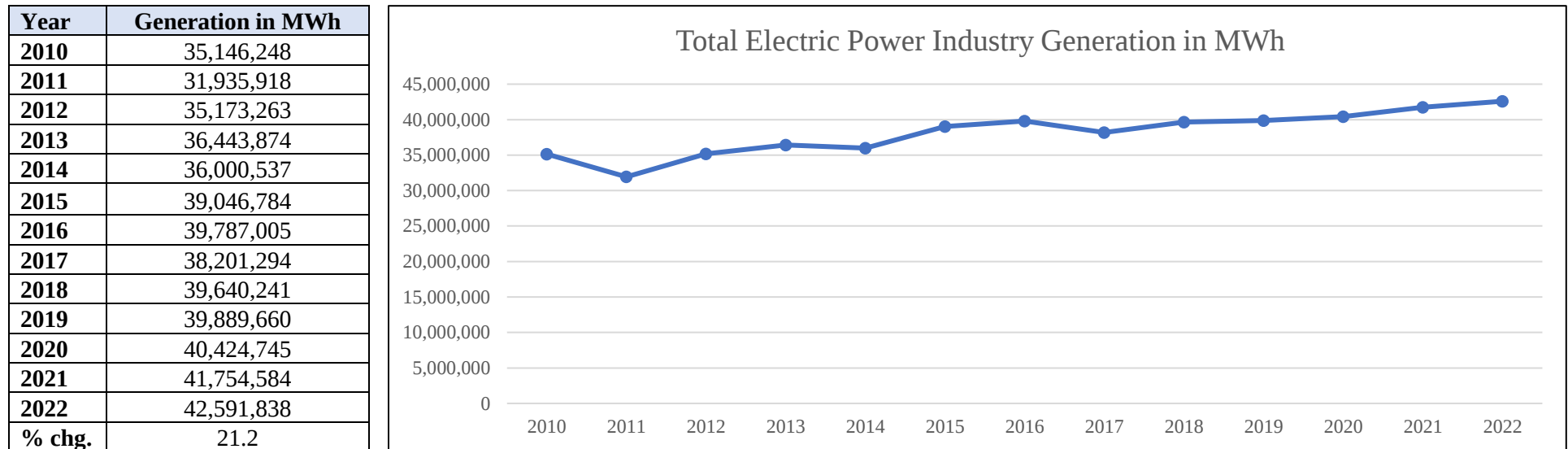


Table 31: Nebraska Electricity Consumption (MWh) and Price (cents/KWh) by Sector

Year	Residential		Commercial		Industrial		Transportation		Total	
	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh
2010	10,106,673	8.9	9,532,438	7.6	10,210,349	6.0	0	0.0	29,849,460	7.5
2011	9,946,973	9.3	9,139,410	8.0	10,589,701	6.4	0	0.0	29,676,084	7.9
2012	9,680,143	10.0	9,232,889	8.4	11,914,907	7.0	0	0.0	30,827,939	8.4
2013	10,062,159	10.3	9,387,074	8.6	11,251,372	7.4	0	0.0	30,700,605	8.7
2014	10,028,238	10.4	9,525,524	8.7	10,668,406	7.5	0	0.0	30,222,168	8.8
2015	9,532,132	10.6	9,307,834	8.7	10,655,107	7.6	0	0.0	29,495,073	8.9
2016	9,738,351	10.8	9,306,827	8.8	11,154,176	7.7	0	0.0	30,199,354	9.1
2017	9,667,990	11.0	9,293,401	8.9	11,397,616	7.7	0	0.0	30,359,007	9.1
2018	10,412,008	10.7	9,553,396	8.8	10,974,088	7.6	0	0.0	30,939,492	9.0
2019	10,307,905	10.8	9,456,725	8.9	10,618,560	7.7	0	0.0	30,383,190	9.1
2020	10,514,944	10.8	9,090,239	8.9	11,566,353	7.4	0	0.0	31,171,536	9.0
2021	10,492,369	10.8	9,260,421	8.8	12,588,380	7.3	0	0.0	32,341,170	8.8
2022	10,983,649	10.8	9,618,755	8.8	13,241,701	7.2	0	0.0	33,844,105	8.8
Change %/¢	8.7	1.9	0.9	1.2	29.7	1.2	-	0.0	13.4	1.3

Table 32: Nebraska Total Electric Generation and Consumption in MWh (Sectors Total) and Consumption/Generation Ratio

Year	Generation	Consumption	Ratio
2010	36,630,006	29,849,460	81.5
2011	36,095,051	29,676,084	82.2
2012	34,217,292	30,827,939	90.1
2013	37,104,628	30,700,605	82.7
2014	39,431,291	30,222,168	76.6
2015	39,883,391	29,495,073	74.0
2016	36,524,869	30,199,354	82.7
2017	35,406,982	30,359,007	85.7
2018	36,966,216	30,939,492	83.7
2019	37,297,615	30,383,190	81.5
2020	36,848,681	31,171,536	84.6
2021	37,910,898	32,341,170	85.3
2022	40,692,718	33,844,105	83.2

Table 33 and Chart 10: Nevada Total Electric Power Industry Generation**Table 34: Nevada Electricity Consumption (MWh) and Price (cents/KWh) by Sector**

Year	Residential		Commercial		Industrial		Transportation		Total	
	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh
2010	11,614,669	12.4	8,969,727	9.8	13,179,708	7.4	8,491	9.4	33,772,595	9.7
2011	11,493,279	11.6	8,995,162	9.1	13,419,961	6.7	8,077	8.6	33,916,479	9.0
2012	12,122,718	11.8	9,314,611	8.8	13,734,461	6.5	8,128	8.4	35,179,918	9.0
2013	12,142,431	11.9	9,301,939	9.0	13,758,569	6.5	8,276	8.5	35,211,215	9.0
2014	11,916,521	12.9	9,418,091	9.5	13,732,695	7.1	8,299	9.3	35,075,606	9.7
2015	12,338,538	12.8	9,613,997	9.3	14,058,811	6.8	8,344	9.1	36,019,690	9.5
2016	12,691,942	11.4	9,929,076	7.9	13,515,234	5.9	8,378	7.8	36,144,630	8.4
2017	12,936,791	12.0	11,122,755	8.0	12,589,549	6.2	8,691	8.6	36,657,786	8.8
2018	13,449,743	11.9	12,123,896	7.7	12,198,273	6.1	8,351	8.3	37,780,263	8.7
2019	12,867,637	12.0	11,681,186	8.0	12,425,536	6.1	8,027	8.5	36,982,386	8.8
2020	14,321,607	11.3	11,983,740	7.5	11,924,592	5.6	3,960	8.8	38,233,899	8.3
2021	14,373,357	11.5	12,293,815	7.8	12,359,543	6.0	5,327	7.7	39,032,042	8.6
2022	14,306,529	13.8	12,427,663	10.1	12,578,639	8.5	7,176	9.7	39,320,007	10.9
Change %/¢	23.2	1.4	38.6	0.4	-4.6	1.1	-15.5	0.3	16.4	1.2

Table 35: Nevada Total Electric Generation and Consumption in MWh (Sectors Total) and Consumption/Generation Ratio

Year	Generation	Consumption	Ratio
2010	35,146,248	33,772,595	96.1
2011	31,935,918	33,916,479	106.2
2012	35,173,263	35,179,918	100.0
2013	36,443,874	35,211,215	96.6
2014	36,000,537	35,075,606	97.4
2015	39,046,784	36,019,690	92.2
2016	39,787,005	36,144,630	90.8
2017	38,201,294	36,657,786	96.0
2018	39,640,241	37,780,263	95.3
2019	39,889,660	36,982,386	92.7
2020	40,424,745	38,233,899	94.6
2021	41,754,584	39,032,042	93.5
2022	42,591,838	39,320,007	92.3

Table 36 and Chart 11: New Mexico Total Electric Power Industry Generation

Year	Generation in MWh
2010	36,251,542
2011	38,181,139
2012	36,635,909
2013	35,870,965
2014	32,306,210
2015	32,701,398
2016	32,912,045
2017	33,597,413
2018	32,673,682
2019	35,174,510
2020	34,075,584
2021	35,192,365
2022	40,889,036
% chg.	12.8

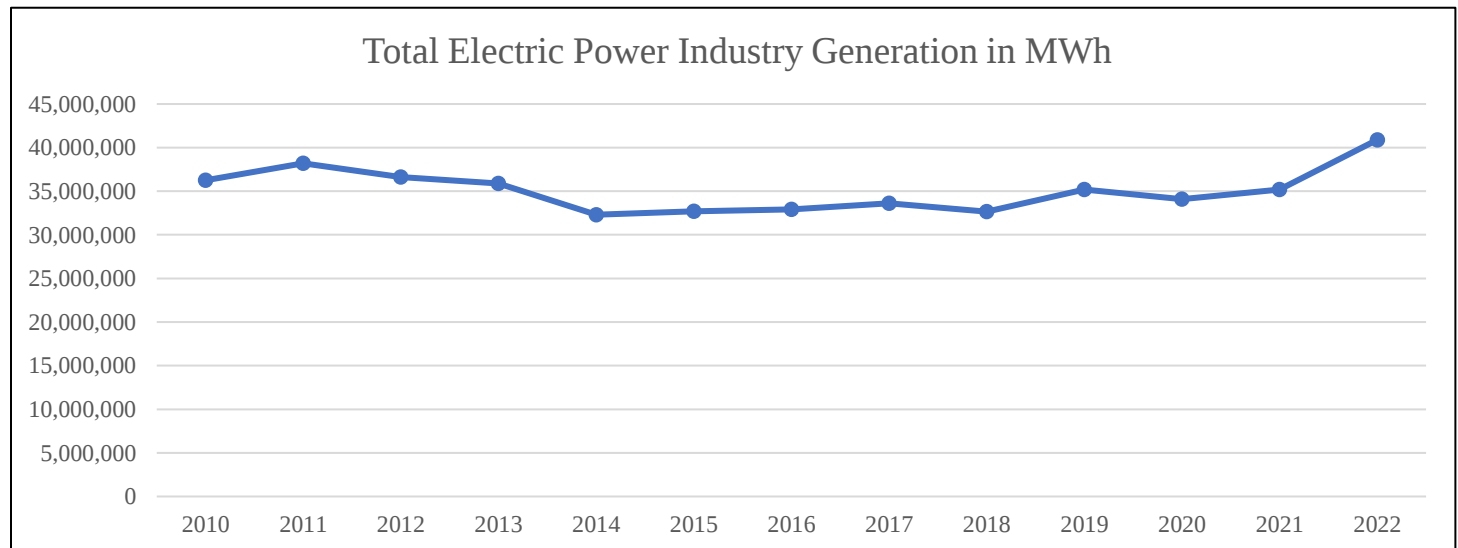


Table 37: New Mexico Electricity Consumption (MWh) and Price (cents/KWh) by Sector

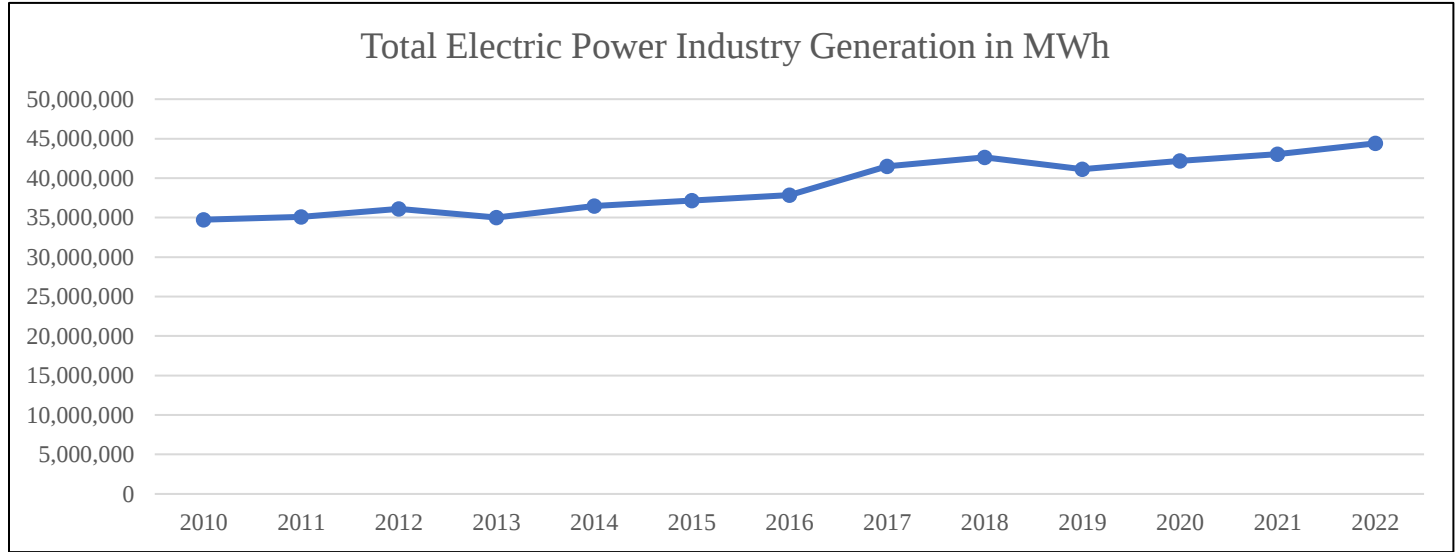
Year	Residential		Commercial		Industrial		Transportation		Total	
	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh
2010	6,752,473	10.5	9,015,729	8.6	6,660,142	6.0	0	0.0	22,428,344	8.4
2011	6,873,748	11.0	9,257,633	9.1	6,910,284	6.1	0	0.0	23,041,665	8.7
2012	6,763,820	11.4	9,165,533	9.3	7,249,215	5.8	0	0.0	23,178,568	8.8
2013	6,803,987	11.7	8,982,563	9.7	7,278,476	6.4	0	0.0	23,065,026	9.3
2014	6,611,970	12.3	8,976,354	10.3	7,526,898	6.6	0	0.0	23,115,222	9.7
2015	6,641,724	12.5	8,877,046	10.3	7,574,783	6.3	0	0.0	23,093,553	9.6
2016	6,642,511	12.0	8,805,876	9.8	7,591,160	5.8	0	0.0	23,039,547	9.1
2017	6,497,207	12.9	8,784,312	10.2	7,728,065	6.2	0	0.0	23,009,584	9.6
2018	6,826,442	12.7	9,035,272	10.0	8,186,897	5.8	0	0.0	24,048,611	9.4
2019	6,871,561	12.5	9,028,861	9.8	8,979,712	5.5	0	0.0	24,880,134	9.0
2020	7,282,079	12.9	8,406,884	10.3	9,088,192	5.6	0	0.0	24,777,155	9.3
2021	7,088,358	13.5	8,655,826	10.8	9,649,559	6.2	0	0.0	25,393,743	9.8
2022	7,282,636	13.8	9,084,022	11.1	10,789,520	6.6	0	0.0	27,156,178	10.0
Change %/¢	7.9	3.3	0.8	2.5	62.0	0.6	-	0.0	21.1	1.6

Table 38: New Mexico Total Electric Generation and Consumption in MWh (Sectors Total) and Consumption/Generation Ratio

Year	Generation	Consumption	Ratio
2010	36,251,542	22,428,344	61.9
2011	38,181,139	23,041,665	60.3
2012	36,635,909	23,178,568	63.3
2013	35,870,965	23,065,026	64.3
2014	32,306,210	23,115,222	71.6
2015	32,701,398	23,093,553	70.6
2016	32,912,045	23,039,547	70.0
2017	33,597,413	23,009,584	68.5
2018	32,673,682	24,048,611	73.6
2019	35,174,510	24,880,134	70.7
2020	34,075,584	24,777,155	72.7
2021	35,192,365	25,393,743	72.2
2022	40,889,036	27,156,178	66.4

Table 39 and Chart 12: North Dakota Total Electric Power Industry Generation

Year	Generation in MWh
2010	34,739,542
2011	35,079,900
2012	36,125,159
2013	35,021,673
2014	36,462,508
2015	37,156,612
2016	37,856,452
2017	41,505,074
2018	42,615,321
2019	41,147,324
2020	42,176,424
2021	43,032,378
2022	44,400,956
% chg.	27.8

**Table 40: North Dakota Electricity Consumption (MWh) and Price (cents/KWh) by Sector**

Year	Residential		Commercial		Industrial		Transportation		Total	
	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh
2010	4,392,596	8.1	4,714,115	7.2	3,849,552	5.8	0	0.0	12,956,263	7.1
2011	4,552,228	8.6	4,866,230	7.6	4,318,558	6.2	0	0.0	13,737,016	7.5
2012	4,484,758	9.1	5,108,616	8.0	5,123,582	6.6	0	0.0	14,716,956	7.8
2013	5,038,846	9.1	5,685,146	8.4	5,308,975	7.1	0	0.0	16,032,967	8.2
2014	5,357,514	9.2	5,403,497	8.8	7,478,721	7.6	0	0.0	18,239,732	8.4
2015	4,862,542	9.6	6,278,868	8.8	6,987,538	8.1	0	0.0	18,128,948	8.8
2016	4,741,298	10.2	6,346,158	9.2	7,432,732	8.0	0	0.0	18,520,188	8.9
2017	4,848,305	10.3	6,529,910	9.2	8,762,211	7.6	0	0.0	20,140,426	8.8
2018	5,133,171	10.3	6,835,913	9.1	8,700,422	8.0	0	0.0	20,669,506	8.9
2019	5,125,431	10.3	7,035,031	9.0	9,398,793	7.9	0	0.0	21,559,255	8.9
2020	5,046,551	10.4	6,641,700	9.0	10,131,201	7.3	0	0.0	21,819,452	8.5
2021	4,888,401	10.9	6,808,316	9.2	11,166,390	7.4	0	0.0	22,863,107	8.7
2022	5,271,904	10.9	8,392,425	8.5	11,728,548	7.3	0	0.0	25,392,877	8.4
Change %/¢	20.0	2.8	78.0	1.2	204.7	1.5		0.0	96.0	1.3

Table 41: North Dakota Total Electric Generation and Consumption in MWh (Sectors Total) and Consumption/Generation Ratio

Year	Generation	Consumption	Ratio
2010	34,739,542	12,956,263	37.3
2011	35,079,900	13,737,016	39.2
2012	36,125,159	14,716,956	40.7
2013	35,021,673	16,032,967	45.8
2014	36,462,508	18,239,732	50.0
2015	37,156,612	18,128,948	48.8
2016	37,856,452	18,520,188	48.9
2017	41,505,074	20,140,426	48.5
2018	42,615,321	20,669,506	48.5
2019	41,147,324	21,559,255	52.4
2020	42,176,424	21,819,452	51.7
2021	43,032,378	22,863,107	53.1
2022	44,400,956	25,392,877	57.2

Table 42 and Chart 13: Oregon Total Electric Power Industry Generation

Year	Generation in MWh
2010	55,126,999
2011	59,695,164
2012	60,932,730
2013	59,895,515
2014	60,119,907
2015	57,866,535
2016	60,182,013
2017	62,713,747
2018	64,113,560
2019	62,258,378
2020	63,624,782
2021	61,016,874
2022	61,317,617
% chg.	11.2

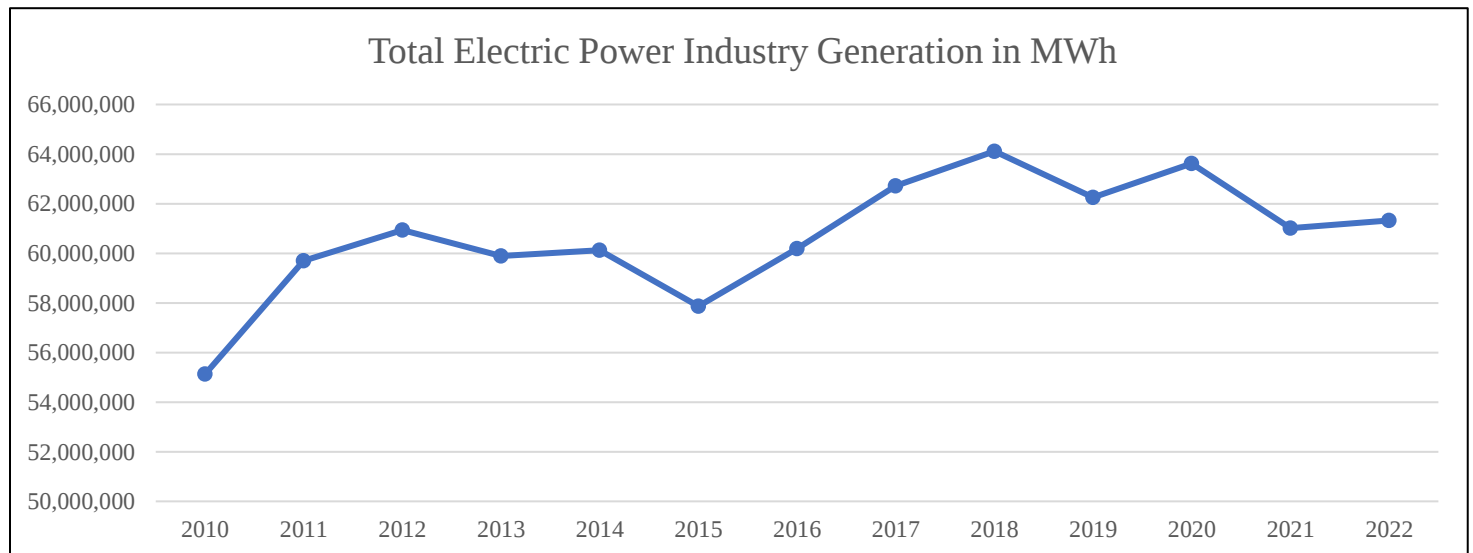


Table 43: Oregon Electricity Consumption (MWh) and Price (cents/KWh) by Sector

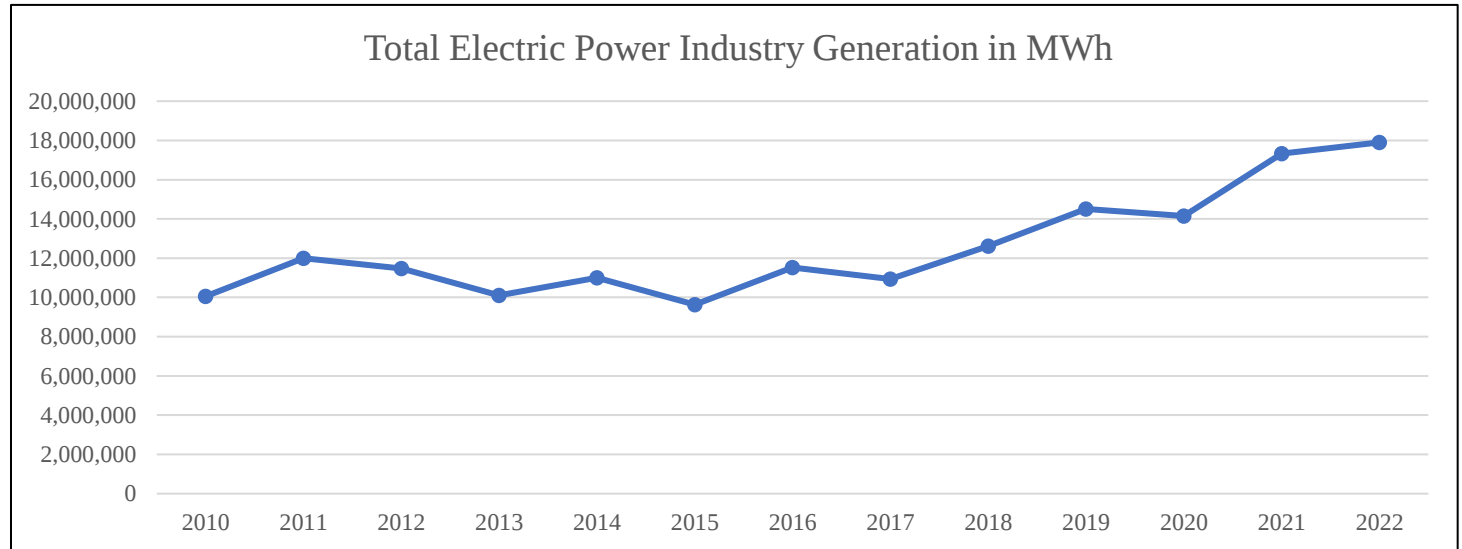
Year	Residential		Commercial		Industrial		Transportation		Total	
	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh
2010	18,838,666	8.9	15,453,588	7.6	11,708,420	5.4	25,271	7.0	46,025,945	7.6
2011	19,429,175	9.5	15,754,249	8.2	11,963,131	5.5	24,891	7.9	47,171,446	8.0
2012	18,854,659	9.8	15,803,814	8.3	12,005,579	5.6	24,804	8.2	46,688,856	8.2
2013	19,328,558	9.9	16,080,354	8.7	12,209,593	5.8	22,473	8.9	47,640,978	8.4
2014	18,617,613	10.5	16,039,418	8.8	12,654,475	6.0	23,447	9.2	47,334,953	8.7
2015	18,269,007	10.7	16,021,066	8.8	12,949,776	6.0	24,125	9.1	47,263,974	8.8
2016	18,573,242	10.7	16,060,478	8.9	12,691,616	6.1	24,014	9.3	47,349,350	8.8
2017	20,065,930	10.7	16,570,754	8.9	13,381,811	6.0	25,321	9.4	50,043,816	8.8
2018	18,930,583	11.0	16,470,027	8.9	13,899,298	5.9	25,996	9.2	49,325,904	8.9
2019	19,286,182	11.0	16,422,975	8.9	14,668,288	5.9	26,941	9.1	50,404,386	8.8
2020	19,628,011	11.2	15,748,914	9.0	15,616,782	5.7	25,606	9.5	51,019,313	8.8
2021	20,285,346	11.4	16,508,755	9.1	17,318,508	6.0	22,596	9.7	54,135,205	9.0
2022	20,725,899	11.4	16,654,576	9.4	18,923,722	6.8	22,699	10.5	56,326,896	9.3
Change %/¢	10.0	2.6	7.8	1.8	61.6	1.4	-10.2	3.5	22.4	1.7

Table 44: North Dakota Total Electric Generation and Consumption in MWh (Sectors Total) and Consumption/Generation Ratio

Year	Generation	Consumption	Ratio
2010	55,126,999	46,025,945	83.5
2011	59,695,164	47,171,446	79.0
2012	60,932,730	46,688,856	76.6
2013	59,895,515	47,640,978	79.5
2014	60,119,907	47,334,953	78.7
2015	57,866,535	47,263,974	81.7
2016	60,182,013	47,349,350	78.7
2017	62,713,747	50,043,816	79.8
2018	64,113,560	49,325,904	76.9
2019	62,258,378	50,404,386	81.0
2020	63,624,782	51,019,313	80.2
2021	61,016,874	54,135,205	88.7
2022	61,317,617	56,326,896	91.9

Table 45 and Chart 14: South Dakota Total Electric Power Industry Generation

Year	Generation in MWh
2010	10,049,636
2011	11,998,886
2012	11,473,397
2013	10,108,887
2014	10,995,240
2015	9,633,033
2016	11,524,184
2017	10,935,719
2018	12,616,396
2019	14,506,647
2020	14,146,539
2021	17,322,409
2022	17,900,462
% chg.	78.1

**Table 46: South Dakota Electricity Consumption (MWh) and Price (cents/KWh) by Sector**

Year	Residential		Commercial		Industrial		Transportation		Total	
	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh
2010	4,628,123	9.0	4,367,781	7.6	2,360,245	6.1	0	0.0	11,356,149	7.8
2011	4,646,384	9.4	4,446,864	7.8	2,586,352	6.2	0	0.0	11,679,600	8.1
2012	4,453,732	10.1	4,556,608	8.1	2,723,870	6.6	0	0.0	11,734,210	8.5
2013	4,824,150	10.3	4,661,845	8.5	2,723,804	7.0	0	0.0	12,209,799	8.9
2014	4,827,368	10.5	4,572,324	8.9	2,955,034	7.0	0	0.0	12,354,726	9.1
2015	4,571,325	11.1	4,748,637	9.2	2,782,017	7.4	0	0.0	12,101,979	9.5
2016	4,618,724	11.5	4,698,053	9.6	2,812,753	7.6	0	0.0	12,129,530	9.8
2017	4,652,890	11.8	4,722,666	9.7	2,938,119	7.8	0	0.0	12,313,675	10.1
2018	5,018,360	11.6	4,903,243	9.6	2,935,335	7.8	0	0.0	12,856,938	10.0
2019	5,057,032	11.6	4,888,034	9.6	2,923,865	7.8	0	0.0	12,868,931	10.0
2020	5,070,024	11.8	4,696,475	9.7	2,929,346	7.8	0	0.0	12,695,845	10.1
2021	5,043,964	12.2	4,791,689	10.2	3,205,738	8.0	0	0.0	13,041,391	10.4
2022	5,322,906	12.1	4,936,093	10.2	3,208,065	8.0	0	0.0	13,467,064	10.4
Change %/¢	15.0	3.1	13.0	2.7	35.9	2.0		0.0	18.6	2.6

Table 47: South Dakota Total Electric Generation and Consumption in MWh (Sectors Total) and Consumption/Generation Ratio

Year	Generation	Consumption	Ratio
2010	10,049,636	11,356,149	113.0
2011	11,998,886	11,679,600	97.3
2012	11,473,397	11,734,210	102.3
2013	10,108,887	12,209,799	120.8
2014	10,995,240	12,354,726	112.4
2015	9,633,033	12,101,979	125.6
2016	11,524,184	12,129,530	105.3
2017	10,935,719	12,313,675	112.6
2018	12,616,396	12,856,938	101.9
2019	14,506,647	12,868,931	88.7
2020	14,146,539	12,695,845	89.7
2021	17,322,409	13,041,391	75.3
2022	17,900,462	13,467,064	75.2

Table 48 and Chart 15: Utah Total Electric Power Industry Generation

Year	Generation in MWh
2010	42,249,355
2011	40,836,150
2012	39,402,961
2013	42,516,751
2014	43,784,526
2015	41,949,120
2016	38,133,928
2017	37,411,876
2018	39,375,424
2019	39,117,033
2020	37,087,309
2021	42,565,645
2022	39,386,043
% chg.	-6.8

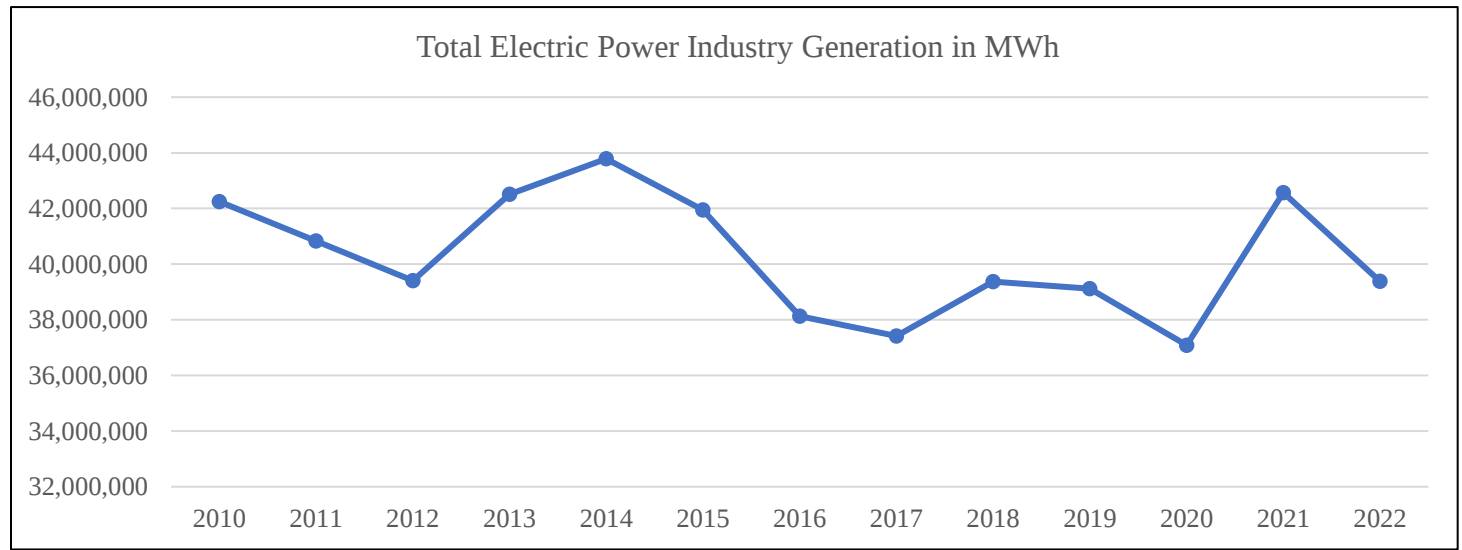
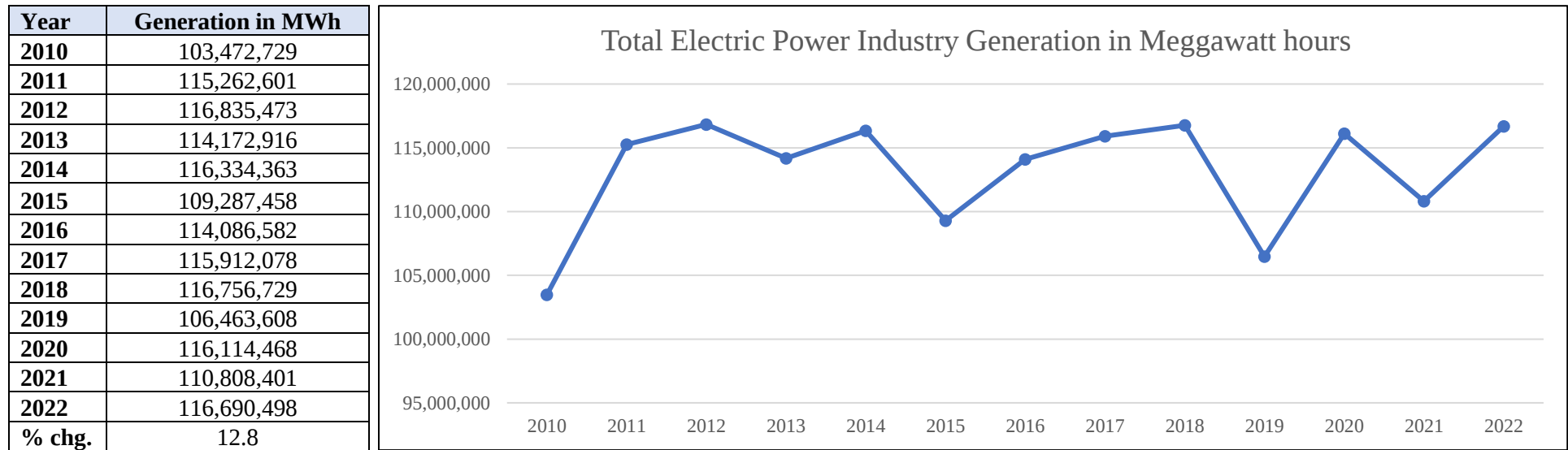


Table 49: Utah Electricity Consumption (MWh) and Price (cents/KWh) by Sector

Year	Residential		Commercial		Industrial		Transportation		Total	
	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh
2010	8,834,230	8.7	10,367,847	7.2	8,808,211	4.9	33,713	8.7	28,044,001	6.9
2011	8,946,741	9.0	10,544,326	7.4	9,332,992	5.1	34,887	9.2	28,858,946	7.1
2012	9,188,204	9.9	10,802,800	8.1	9,694,190	5.6	38,174	9.8	29,723,368	7.8
2013	9,401,748	10.4	11,007,765	8.3	10,010,410	5.9	54,111	10.7	30,474,034	8.2
2014	8,963,971	10.7	11,053,251	8.5	9,965,115	6.1	60,682	10.3	30,043,019	8.4
2015	9,117,153	10.9	11,614,593	8.6	9,404,984	6.2	55,620	10.1	30,192,350	8.5
2016	9,370,656	11.0	11,565,312	8.8	9,186,991	6.3	56,575	9.8	30,179,534	8.7
2017	9,510,783	11.0	11,739,121	8.7	9,283,036	6.1	56,081	10.3	30,589,021	8.6
2018	9,714,507	10.4	12,083,833	8.2	9,392,709	5.9	51,359	10.6	31,242,408	8.2
2019	9,739,525	10.4	11,860,449	8.3	9,490,843	6.0	51,748	10.6	31,142,565	8.2
2020	10,546,793	10.4	11,395,032	8.3	9,672,119	5.9	49,213	10.7	31,663,157	8.3
2021	10,950,415	10.4	12,206,510	8.1	9,471,737	6.2	48,965	11.2	32,677,627	8.3
2022	11,344,265	10.8	12,870,552	8.4	9,104,680	6.8	46,004	12.4	33,365,501	8.8
Change %/¢	28.4	2.1	24.1	1.2	3.4	1.9	36.5	3.7	19.0	1.9

Table 50: Utah Total Electric Generation and Consumption in MWh (Sectors Total) and Consumption/Generation Ratio

Year	Generation	Consumption	Ratio
2010	42,249,355	28,044,001	66.4
2011	40,836,150	28,858,946	70.7
2012	39,402,961	29,723,368	75.4
2013	42,516,751	30,474,034	71.7
2014	43,784,526	30,043,019	68.6
2015	41,949,120	30,192,350	72.0
2016	38,133,928	30,179,534	79.1
2017	37,411,876	30,589,021	81.8
2018	39,375,424	31,242,408	79.3
2019	39,117,033	31,142,565	79.6
2020	37,087,309	31,663,157	85.4
2021	42,565,645	32,677,627	76.8
2022	39,386,043	33,365,501	84.7

Table 51 and Chart 16: Washington Total Electric Power Industry Generation**Table 52: Washington Electricity Consumption (MWh) and Price (cents/KWh) by Sector**

Year	Residential		Commercial		Industrial		Transportation		Total	
	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh
2010	34,906,926	8.0	28,833,281	7.4	26,632,814	4.1	6,949	7.4	90,379,970	6.7
2011	36,376,143	8.3	29,408,904	7.5	27,932,787	4.1	7,083	8.5	93,724,917	6.8
2012	35,510,961	8.5	29,239,604	7.7	27,578,904	4.1	6,972	8.1	92,336,441	6.9
2013	35,983,486	8.7	29,658,670	7.8	27,234,626	4.2	5,941	8.0	92,882,723	7.1
2014	35,082,958	8.7	29,040,310	8.0	28,012,775	4.3	4,734	8.5	92,140,777	7.1
2015	34,071,987	9.1	29,266,512	8.2	26,772,299	4.4	5,288	8.2	90,116,086	7.4
2016	34,211,748	9.5	28,989,062	8.4	25,678,420	4.4	6,086	8.9	88,885,316	7.7
2017	37,282,901	9.7	29,799,505	8.6	24,858,604	4.6	7,162	9.2	91,948,172	7.9
2018	35,338,978	9.8	29,396,404	8.7	25,263,272	4.7	7,137	9.4	90,005,791	8.0
2019	36,512,424	9.7	29,269,638	8.8	25,171,873	4.8	98,861	9.5	91,052,796	8.0
2020	36,858,798	9.9	27,307,412	8.9	22,442,186	5.1	97,748	9.9	86,706,144	8.3
2021	38,021,233	10.1	28,637,381	9.1	21,436,480	5.8	103,574	9.9	88,198,668	8.8
2022	39,775,849	10.3	29,780,448	9.5	21,227,090	6.2	113,933	10.1	90,897,320	9.1
Change %/¢	13.9	2.2	3.3	2.1	-20.3	2.1	1539.6	2.6	0.6	2.4

Table 53: Washington Total Electric Generation and Consumption in MWh (Sectors Total) and Consumption/Generation Ratio

Year	Generation	Consumption	Ratio
2010	103,472,729	90,379,970	87.3
2011	115,262,601	93,724,917	81.3
2012	116,835,473	92,336,441	79.0
2013	114,172,916	92,882,723	81.4
2014	116,334,363	92,140,777	79.2
2015	109,287,458	90,116,086	82.5
2016	114,086,582	88,885,316	77.9
2017	115,912,078	91,948,172	79.3
2018	116,756,729	90,005,791	77.1
2019	106,463,608	91,052,796	85.5
2020	116,114,468	86,706,144	74.7
2021	110,808,401	88,198,668	79.6
2022	116,690,498	90,897,320	77.9

Table 54 and Chart 17: Wyoming Total Electric Power Industry Generation

Year	Generation in MWh
2010	48,119,254
2011	47,638,471
2012	49,588,606
2013	52,483,065
2014	49,696,183
2015	48,966,519
2016	46,656,630
2017	46,741,846
2018	46,112,136
2019	42,145,656
2020	42,010,989
2021	43,460,744
2022	46,347,492
% chg.	-3.7

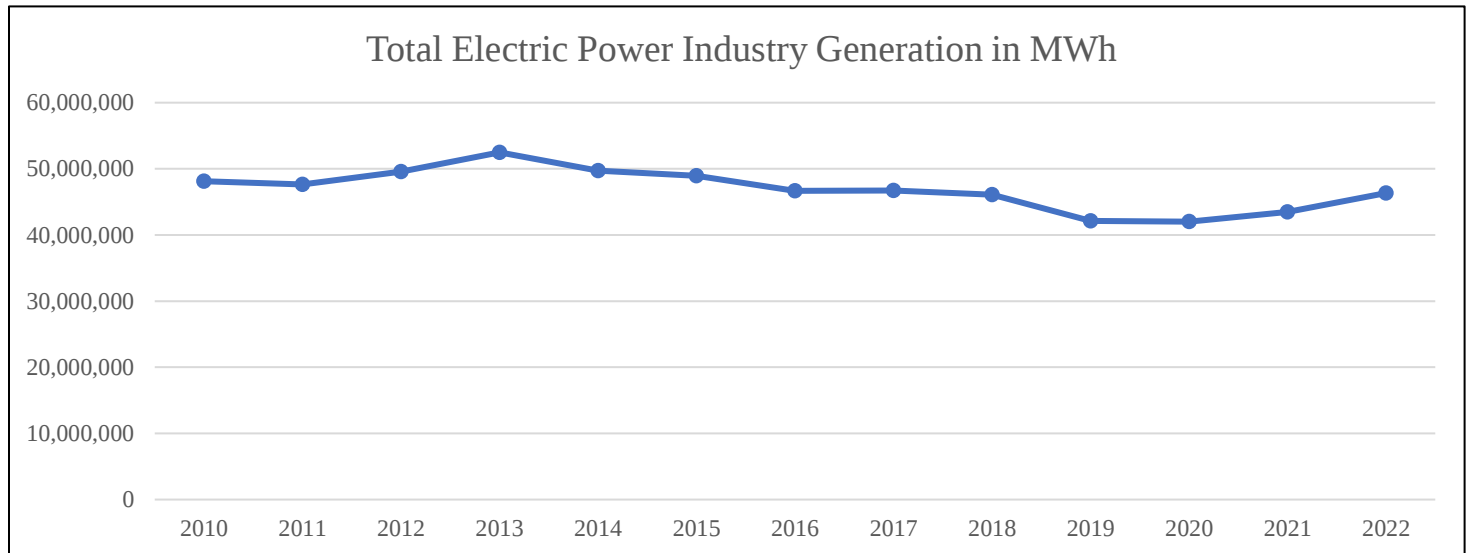


Table 55: Wyoming Electricity Consumption (MWh) and Price (cents/KWh) by Sector

Year	Residential		Commercial		Industrial		Transportation		Total	
	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh	MWh	¢/KWh
2010	2,727,201	8.8	4,317,140	7.4	10,069,117	5.0	0	0.0	17,113,458	6.2
2011	2,802,726	9.1	4,353,082	7.7	10,261,954	5.4	0	0.0	17,417,762	6.6
2012	2,716,528	9.9	4,245,450	8.2	10,009,376	6.0	0	0.0	16,971,354	7.2
2013	2,829,496	10.2	4,066,842	8.6	10,157,176	6.4	0	0.0	17,053,514	7.6
2014	2,752,313	10.5	4,000,291	8.9	10,381,471	6.6	0	0.0	17,134,075	7.8
2015	2,676,702	11.0	3,924,590	9.1	10,323,470	6.8	0	0.0	16,924,762	8.0
2016	2,751,073	11.1	3,762,315	9.4	10,041,482	6.9	0	0.0	16,554,870	8.2
2017	2,772,371	11.4	3,762,086	9.7	10,243,610	6.9	0	0.0	16,778,067	8.3
2018	2,748,356	11.3	3,757,211	9.6	10,359,111	6.7	0	0.0	16,864,678	8.1
2019	2,849,378	11.2	3,575,477	9.6	10,338,641	6.7	0	0.0	16,763,496	8.1
2020	2,879,528	11.1	3,320,024	9.7	9,131,466	6.9	0	0.0	15,331,018	8.3
2021	2,897,498	11.2	3,443,297	9.7	9,443,917	6.8	0	0.0	15,784,712	8.3
2022	3,008,680	11.1	3,610,790	9.6	9,879,959	6.9	0	0.0	16,499,429	8.2
Change %/¢	10.3	2.3	-16.4	2.1	-1.9	1.9		0.0	-3.6	2.0

Table 56: Wyoming Total Electric Generation and Consumption in MWh (Sectors Total) and Consumption/Generation Ratio

Year	Generation	Consumption	Ratio
2010	48,119,254	17,113,458	35.6
2011	47,638,471	17,417,762	36.6
2012	49,588,606	16,971,354	34.2
2013	52,483,065	17,053,514	32.5
2014	49,696,183	17,134,075	34.5
2015	48,966,519	16,924,762	34.6
2016	46,656,630	16,554,870	35.5
2017	46,741,846	16,778,067	35.9
2018	46,112,136	16,864,678	36.6
2019	42,145,656	16,763,496	39.8
2020	42,010,989	15,331,018	36.5
2021	43,460,744	15,784,712	36.3
2022	46,347,492	16,499,429	35.6

Source: Tables 15-56 and Charts 4-17 LSO compilation of data from the U.S. Energy Information Administration Annual Electric Power Industry Report, released October 2023.

Attachment B-1: Net Generation for Other Renewables in Thousand Megawatt Hours 2016-2023

State	2016	2017	2018	2019	2020	2021	2022	2023	Change 2020-2023 4 years	Change 2018-2023 6 years	Change 2016-2023 8 years
All sectors : Alabama	3,367	3,606	3,804	3,742	3,675	3,805	4,085	4,371	696	567	1,004
All sectors : Alaska	212	185	200	180	168	170	180	150	-18	-50	-62
All sectors : Arizona	4,522	5,683	5,890	6,063	6,704	8,521	8,838	9,365	2,661	3,475	4,843
All sectors : Arkansas	1,396	1,467	1,569	1,545	1,205	1,321	1,578	1,511	306	-58	115
All sectors : California	49,712	54,544	58,632	58,921	60,871	66,585	69,916	71,348	10,477	12,716	21,636
All sectors : Colorado	10,122	10,435	10,972	12,233	15,056	17,025	19,474	19,840	4,784	8,868	9,718
All sectors : Connecticut	893	845	873	900	1,008	1,035	940	1,022	14	149	129
All sectors : Delaware	124	118	114	120	131	136	147	226	95	112	102
All sectors : District Of Columbia	53	47	57	64	68	74	80	83	15	26	30
All sectors : Florida	4,867	5,886	7,497	8,351	10,535	13,277	15,348	17,183	6,648	9,686	12,316
All sectors : Georgia	5,454	7,005	6,994	7,536	9,635	10,714	12,674	12,501	2,866	5,507	7,047
All sectors : Hawaii	1,347	1,322	1,202	1,089	1,342	1,632	1,666	1,767	425	565	420
All sectors : Idaho	3,212	3,554	3,785	3,721	3,948	3,828	3,527	3,706	-242	-79	494
All sectors : Illinois	11,179	12,794	12,391	14,934	16,696	20,011	25,325	23,961	7,265	11,570	12,782
All sectors : Indiana	5,558	5,840	6,188	7,001	7,094	8,859	11,453	10,953	3,859	4,765	5,395
All sectors : Iowa	20,324	21,587	21,557	26,536	34,412	37,525	46,367	42,170	7,758	20,613	21,846
All sectors : Kansas	14,172	18,661	18,979	21,198	24,085	25,813	29,823	27,420	3,335	8,441	13,248
All sectors : Kentucky	477	515	470	419	390	461	494	573	183	103	96
All sectors : Louisiana	2,876	2,741	2,609	2,250	2,155	2,286	2,273	2,280	125	-329	-596
All sectors : Maine	4,455	5,042	5,058	4,749	4,517	4,671	4,963	4,320	-197	-738	-135
All sectors : Maryland	1,281	1,365	1,488	1,405	1,410	1,524	1,524	1,746	336	258	465
All sectors : Massachusetts	2,030	2,181	2,369	2,379	2,649	2,769	3,087	3,111	462	742	1,081
All sectors : Michigan	7,200	7,749	8,106	8,283	8,992	10,489	12,268	11,584	2,592	3,478	4,384
All sectors : Minnesota	11,836	13,666	13,400	13,402	14,621	15,421	18,179	17,628	3,007	4,228	5,792
All sectors : Mississippi	1,524	1,563	1,765	1,718	1,847	1,791	1,801	1,972	125	207	448
All sectors : Missouri	1,293	2,233	3,059	3,078	3,571	6,774	7,790	7,049	3,478	3,990	5,756
All sectors : Montana	2,160	2,190	2,209	2,423	3,125	3,538	4,081	4,825	1,700	2,616	2,665
All sectors : Nebraska	3,900	5,197	5,670	7,327	9,259	9,745	12,776	12,015	2,756	6,345	8,115
All sectors : Nevada	6,877	7,857	8,546	9,103	9,715	10,893	13,311	14,192	4,477	5,646	7,315
All sectors : New Hampshire	2,122	2,022	1,793	1,647	1,393	1,437	1,339	1,194	-199	-599	-928
All sectors : New Jersey	1,838	1,877	1,948	1,984	2,061	2,105	2,204	2,233	172	285	395
All sectors : New Mexico	4,389	5,818	7,474	8,339	9,051	12,407	16,480	17,576	8,525	10,102	13,187
All sectors : New York	6,323	6,605	6,438	6,926	7,322	7,219	8,233	8,663	1,341	2,225	2,340
All sectors : North Carolina	5,983	8,397	9,263	10,524	11,281	12,660	13,636	13,680	2,399	4,417	7,697
All sectors : North Dakota	8,178	11,361	10,734	11,213	13,634	14,937	16,250	14,477	843	3,743	6,299
All sectors : Ohio	2,033	2,421	2,576	2,870	3,127	3,902	4,605	4,526	1,399	1,950	2,493
All sectors : Oklahoma	20,437	23,930	27,729	29,378	29,833	32,935	37,946	37,356	7,523	9,627	16,919
All sectors : Oregon	8,382	7,576	9,233	8,392	11,008	12,025	10,921	11,955	947	2,722	3,573
All sectors : Pacific Noncontiguous	1,560	1,508	1,403	1,269	1,510	1,802	1,846	1,918	408	515	358
All sectors : Pennsylvania	5,942	6,098	5,894	5,322	5,799	5,444	5,403	5,151	-648	-743	-791

Attachment B-1: Net Generation for Other Renewables in Thousand Megawatt Hours 2016-2023

State	2016	2017	2018	2019	2020	2021	2022	2023	Change 2020-2023 4 years	Change 2018-2023 6 years	Change 2016-2023 8 years
All sectors : Rhode Island	246	366	399	469	615	664	789	839	224	440	593
All sectors : South Carolina	2,381	2,479	2,802	3,027	3,797	4,284	4,414	4,504	707	1,702	2,123
All sectors : South Dakota	3,715	2,960	2,837	2,791	5,558	9,351	10,326	9,439	3,881	6,602	5,724
All sectors : Tennessee	1,050	1,083	1,191	1,283	1,104	1,066	1,126	1,430	326	239	380
All sectors : Texas	59,944	70,827	80,496	89,447	102,353	115,677	138,702	149,285	46,932	68,789	89,341
All sectors : Utah	2,445	3,628	3,543	3,386	3,828	4,805	5,114	5,163	1,335	1,620	2,718
All sectors : Vermont	828	852	906	951	1,026	1,008	1,034	934	-92	28	106
All sectors : Virginia	4,113	4,122	4,936	4,696	4,791	6,912	8,322	8,830	4,039	3,894	4,717
All sectors : Washington	10,050	8,824	9,705	8,263	10,700	10,859	9,457	9,181	-1,519	-524	-869
All sectors : West Virginia	1,432	1,682	1,770	1,631	1,904	1,634	2,017	2,099	195	329	667
All sectors : Wisconsin	2,988	3,122	3,114	3,248	2,992	3,032	3,775	4,046	1,054	932	1,058
All sectors : Wyoming	4,389	4,321	4,058	4,343	5,678	8,627	9,966	8,810	3,132	4,752	4,421

Source: U.S. Energy Information Administration. Data downloaded from:

<https://www.eia.gov/electricity/data/browser/#/topic/0?agg=1,2,0&fuel=02&geo=00vvvvvvvvvo&sec=g&freq=A&start=2001&end=2023&ctype=linechart<ype=pin&rtype=s&maptype=0&rse=0&pin=>

Last accessed November 7, 2024.

Note: "Other renewables" includes wind, all utility scale solar, geothermal, and biomass. It does not include either hydro-electric pumped storage, conventional hydroelectric, nuclear, or other.

Taxation of Electricity Generated by Wind, Coal, and Natural Gas

ATTACHMENT C



WYOMING LEGISLATIVE SERVICE OFFICE

Joint Corporations Interim Electricity Taxation Subcommittee

August 20, 2024

Analysis Parameters

Estimated taxes included and structured (when applicable):

- Sales and Use Taxes, Construction **
- Sales and Use Taxes, Operations
- Ad valorem Industrial Property, Plant, and Equipment
- Production of Electricity from Wind
- Ad valorem/Gross Products (GP) Tax of Feedstock
- Severance Taxes***
- Federal Mineral Royalties (FMRs) – State Share (49%)****
- Coal Lease Bonuses (CLBs) – State Share (49%)*****

*Subtotals are provided at underlines.

** Sales and Use Taxes, Construction estimates are based on the average annual impact assistance payment utilizing data reported by the Department of Environmental Quality over the last 20 years by feedstock (natural gas, coal, and wind).

***[*2022 Budget Session HB105 Ch. 102*](#) decreased the total severance tax rate for surface coal to 6.5% from 7%.

**** FMR calculations incorporate CREG assumptions of the production of coal (88%) and natural gas (80%) occurring on federal lands. The remaining percentage of production for both feedstocks includes some component of state or private land.

***** Coal Lease Bonuses are calculated as an average amount per ton since 2007.



Analysis Parameters

This analysis only compares the associated taxes for three feedstocks: wind, natural gas, and coal. It does not include more business-specific taxes or taxes that are not currently relevant to Wyoming.

Payments and Taxes not included:

- Federal income taxes, black lung taxes, and abandoned mine land fees
- Leases, right of ways, or other payments
- State royalties
- Franchise taxes
- Corporate asset payments or filing fees



Electricity Generated from Wind Taxation

Summary/Major Elements: W.S. 39-22-101 et seq.

- Imposes an excise tax upon the privilege of producing electricity from wind resources.
- Tax of \$1 per megawatt hour (MWh) or portion thereof is imposed.
- Tax becomes effective 3 years after the turbine first produces electricity.
- Tax is distributed 60% to the counties where the generating facility is located; and 40% to the General Fund.
- Tax was effective January 1, 2012.



Wind Energy MWH Tax History

County	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Albany County	\$ 442,039	\$ 345,970	\$ 437,692	\$ 414,016	\$ 425,776	\$ 376,767	\$ 671,438	\$ 570,415	\$ 711,243	\$ 4,395,356
Carbon County	\$ 968,202	\$ 758,794	\$ 938,544	\$ 883,658	\$ 890,689	\$ 792,821	\$ 1,013,362	\$ 1,086,069	\$ 964,305	\$ 8,296,444
Converse County	\$ 1,882,260	\$ 1,587,758	\$ 1,829,847	\$ 1,789,989	\$ 1,823,138	\$ 2,057,346	\$ 2,454,451	\$ 2,061,328	\$ 2,089,171	\$ 17,575,288
Laramie County	\$ 292,127	\$ 234,024	\$ 274,809	\$ 236,834	\$ 257,624	\$ 239,945	\$ 240,304	\$ 113,696	\$ 74,598	\$ 1,963,961
Natrona County	\$ 129,522	\$ 96,668	\$ 110,483	\$ 103,935	\$ 101,143	\$ 87,835	\$ 83,387	\$ 47,582	\$ 45,355	\$ 805,910
Uinta County	\$ 716,217	\$ 731,485	\$ 783,689	\$ 620,746	\$ 665,601	\$ 570,736	\$ 371,920	\$ 390,393	\$ 405,425	\$ 5,256,212
County Total	\$ 2,658,220	\$ 2,252,819	\$ 2,625,038	\$ 2,429,507	\$ 2,498,383	\$ 2,475,270	\$ 2,900,917	\$ 2,561,690	\$ 2,574,058	\$ 22,975,903
State Total	\$ 1,772,147	\$ 1,501,880	\$ 1,750,026	\$ 1,619,671	\$ 1,665,588	\$ 1,650,180	\$ 1,933,945	\$ 1,707,793	\$ 1,716,039	\$ 15,317,268
Grand Total	\$ 4,430,367	\$ 3,754,699	\$ 4,375,064	\$ 4,049,178	\$ 4,163,971	\$ 4,125,450	\$ 4,834,862	\$ 4,269,483	\$ 4,290,097	\$ 38,293,171

Source: LSO analysis of Department of Revenue 2023 Annual Report



Taxation of Coal Producers

Process: Convert taxes, FMRs and CLBs per unit of production (ton) to amount per MWh.

- Calculate estimated payments paid per ton of coal.
- Calculate estimated tons of coal needed per MWh for Wyoming electrical production.
- Calculate estimated payments paid on coal per MWh.

Conversions to \$/MWh are based on the assumptions:

- EIA Coal Lbs per KWh converted to Tons per MWh is 0.57, nationally. A factor of 0.625 is applied for 8,600 BTU (Powder River) coal and 0.538 for 10,000 BTU (Southwest Wyoming) coal based upon average heat content of U.S. coal as reported by EIA. The actual efficiency of the generator varies considerably according to EIA.
- CLB's per ton are derived from a weighted average amount per ton multiplied by the State share of FMRs per ton (49%).



Est. Receipts to Wyoming per Ton of Coal

Example 1

Price Per Ton	\$14.00
BTU of Example Coal	8,600
Sales and Use Taxes, Construction	N/A
Sales and Use Taxes, Operations	N/A
Ad Valorem, Property/Plant/Equip.	N/A
<u>Subtotal 1</u>	<u>N/A</u>
Ad Valorem GP 6%	\$0.65
Severance Taxes 6.5%	\$0.67
<u>Subtotal 2</u>	<u>\$1.32</u>
FMRs	\$0.71
CLBs	\$0.49
<u>Subtotal 3</u>	<u>\$1.20</u>
Grand Total	\$2.52

Example 2

Price Per Ton	\$30.00
BTU of Example Coal	10,000
Sales and Use Taxes, Construction	N/A
Sales and Use Taxes, Operations	N/A
Ad Valorem, Property/Plant/Equip.	N/A
<u>Subtotal 1</u>	<u>N/A</u>
Ad Valorem GP 6%	\$1.39
Severance Taxes 6.5%	\$1.44
<u>Subtotal 2</u>	<u>\$2.83</u>
FMRs	\$1.51
CLBs	\$0.49
<u>Subtotal 3</u>	<u>\$2.00</u>
Grand Total	\$4.83



Est. Coal Tax Receipts to WY per MWh

Example 1

Price Per Ton	\$14.00
BTU of Example Coal	8,600
Sales and Use Taxes, Construction	\$0.45
Sales and Use Taxes, Operations	\$0.12
Ad Valorem, Property/Plant/Equip.	\$0.93
<u>Subtotal 1</u>	<u>\$1.50</u>
Ad Valorem GP 6%	\$0.41
Severance Taxes 6.5%	\$0.42
<u>Subtotal 2</u>	<u>\$0.83</u>
FMRs	\$0.44
CLBs	\$0.31
<u>Subtotal 3</u>	<u>\$0.75</u>
Grand Total	\$3.08

Example 2

Price Per Ton	\$30.00
BTU of Example Coal	10,000
Sales and Use Taxes, Construction	\$0.45
Sales and Use Taxes, Operations	\$0.12
Ad Valorem, Property/Plant/Equip.	\$0.93
<u>Subtotal 1</u>	<u>\$1.50</u>
Ad Valorem GP 6%	\$0.76
Severance Taxes 6.5%	\$0.79
<u>Subtotal 2</u>	<u>\$1.55</u>
FMRs	\$0.83
CLBs	\$0.29
<u>Subtotal 3</u>	<u>\$1.12</u>
Grand Total	\$4.17



Natural Gas

Process: Convert taxes and FMRs imposed per unit of production (MCF) to amount per MWh.

- Example 1: \$3.50 per MCF – Current CREG estimate
- Example 2: \$5.00 per MCF – Prior 5 fiscal year actual average Wyoming natural gas price, rounded

Estimates are based on the assumption;

- 7.42 MCF/MWh based on U.S. Energy Information Administration data.



Est. Natural Gas Payments Paid per MCF

Example 1

Price Per MCF	\$3.50
Sales and Use Taxes, Construction	N/A
Sales and Use Taxes, Operations	N/A
Ad Valorem, Property/Plant/Equip.	N/A
<u>Subtotal 1</u>	<u>N/A</u>
Ad Valorem GP 6%	\$0.15
Severance Taxes 6%	\$0.14
<u>Subtotal 2</u>	<u>\$0.29</u>
FMRs	\$0.16
<u>Subtotal 3</u>	<u>\$0.16</u>
Grand Total	\$0.45

Example 2

Price Per MCF	\$5.00
Sales and Use Taxes, Construction	N/A
Sales and Use Taxes, Operations	N/A
Ad Valorem, Property/Plant/Equip.	N/A
<u>Subtotal 1</u>	<u>N/A</u>
Ad Valorem GP 6%	\$0.21
Severance Taxes 6%	\$0.20
<u>Subtotal 2</u>	<u>\$0.41</u>
FMRs	\$0.23
<u>Subtotal 3</u>	<u>\$0.23</u>
Grand Total	\$0.64



Est. Natural Gas Tax Receipts to WY per MWh

Example 1

Price Per MCF	\$3.50
Sales and Use Taxes, Construction	\$0.65
Sales and Use Taxes, Operations	\$0.12
Ad Valorem, Property/Plant/Equip.	\$0.93
<u>Subtotal 1</u>	<u>\$1.70</u>
Ad Valorem GP 6%	\$1.09
Severance Taxes 6%	\$1.04
<u>Subtotal 2</u>	<u>\$2.13</u>
FMRs	\$1.19
<u>Subtotal 3</u>	<u>\$1.19</u>
Grand Total	\$5.02

Example 2

Price Per MCF	\$5.00
Sales and Use Taxes, Construction	\$0.65
Sales and Use Taxes, Operations	\$0.12
Ad Valorem, Property/Plant/Equip.	\$0.93
<u>Subtotal 1</u>	<u>\$1.70</u>
Ad Valorem GP 6%	\$1.56
Severance Taxes 6%	\$1.49
<u>Subtotal 2</u>	<u>\$3.05</u>
FMRs	\$1.70
<u>Subtotal 3</u>	<u>\$1.70</u>
Grand Total	\$6.45



Est. Total Tax Receipts per MWh

	Wind	Coal (8,600 BTU)	Natural Gas
Price Per Ton OR MCF	N/A	\$14.00	\$3.50
Sales and Use Taxes, Construction	\$0.34	\$0.45	\$0.65
Sales and Use Taxes, Operations	\$0.12	\$0.12	\$0.12
Ad Valorem, Property/ Plant/Equip.	\$0.83	\$0.93	\$0.93
<u>Subtotal 1</u>	<u>\$1.29</u>	<u>\$1.50</u>	<u>\$1.70</u>
Ad Valorem GP 6%	N/A	\$0.41	\$1.09
Severance Taxes 6.5 or 6%	N/A	\$0.42	\$1.04
<u>Subtotal 2</u>	<u>N/A</u>	<u>\$0.83</u>	<u>\$2.13</u>
FMRs	N/A	\$0.44	\$1.19
CLBs	N/A	\$0.31	N/A
<u>Subtotal 3</u>	<u>N/A</u>	<u>\$0.75</u>	<u>\$1.19</u>
Production of Electricity from Wind	\$1.00	N/A	N/A
<u>Subtotal 4</u>	<u>\$1.00</u>	<u>N/A</u>	<u>N/A</u>
Grand Total	\$2.29	\$3.08	\$5.02



Summary

The purpose of this analysis is to provide a set of individually listed taxes that could be included (or excluded) dependent on individual preferences and contingent on price and BTUs. Currently, with all taxes included, the total revenues per MWh by feedstock to the state are as follows: Natural Gas at \$3.50/MCF (\$5.02/MWh), Coal at \$14.00/ton and 8,600 BTU (\$3.08/MWh), and Wind (\$2.29/MWh).

- Natural gas has several taxes included that are higher than both wind and coal, being: sales and use tax, operations and construction, ad valorem gross products (GP), severance taxes, and FMRs on a per MWh basis.
- Note for consideration, the sales and use taxes - operations are as of 2021, estimated by LSO and the Department of Revenue consistent with [2024 HB 147](#).



Questions?



Attachment D-1: System and Financing Cost Assumptions

The table below shows updated inputs to the E3 model related to system and financing costs. Orange cells represent inputs that were changed from their 2010 values. Dark yellow cells represent inputs that the E3 model calculated with a formula.

	Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	Oregon	Utah	Washington	Wyoming
System Cost & Performance											
System Size (MW)	300	300	300	300	300	300	300	300	300	300	300
System lifetime (Years)	20	20	20	20	20	20	20	20	20	20	20
Annual Capacity Factor	37.0%	41.5%	49.6%	40.6%	50.5%	34.3%	50.5%	40.6%	37.9%	40.6%	50.5%
Degradation Factor (%/yr)	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%
System Cost - US average (\$/kW)	\$1,511	\$1,511	\$1,511	\$1,511	\$1,511	\$1,511	\$1,511	\$1,511	\$1,511	\$1,511	\$1,511
System Cost - Regional Multiplier	0.950	1.230	0.930	0.970	0.940	1.080	0.900	1.070	0.960	1.070	0.930
System Cost - Regional Cost (\$/W)	\$1,435	\$1,859	\$1,405	\$1,466	\$1,420	\$1,632	\$1,360	\$1,617	\$1,451	\$1,617	\$1,405
Fixed O&M Cost - US Average (\$/kW)	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00
Fixed O&M Cost - Regional Multiplier	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Fixed O&M Cost - Regional (\$/kW)	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00
Fixed O&M Cost - Escalator (%/yr)	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
Variable O&M Cost (\$/kWh)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Variable O&M Cost - Escalator (%/yr)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Insurance Expense (\$/kW)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Insurance Escalator (%/yr)	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Royalty Payment to Landowner	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Financing Assumptions											
Percent Financed with Equity	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%
After-Tax WACC	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%
Debt Interest Rate	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%
Cost of Equity	11.67%	12.07%	11.62%	11.76%	11.86%	11.18%	11.77%	11.94%	11.65%	11.18%	11.18%
Target average DSCR	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Debt Period in Years	18	18	18	18	18	18	18	18	18	18	18

Data sources include the 2010 E3 Wind Energy Cost Model; "Estimating the Impact of State Tax and Incentive Policies on the Cost of Wind Development in the West" by Godby et. al, 2024;

Attachment D-2: Tax Assumptions

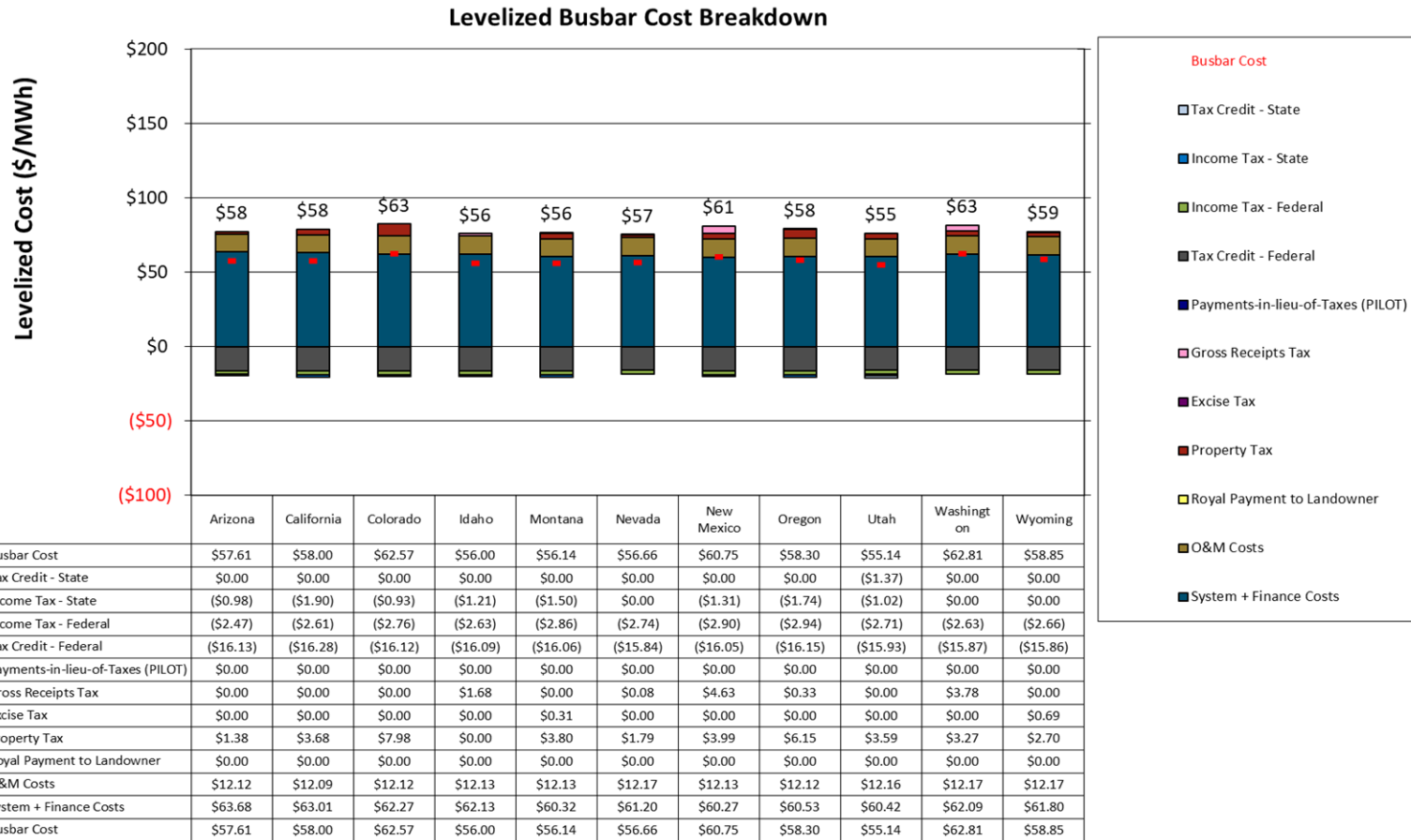
The table below shows updated inputs to the E3 model related to tax costs. Orange cells represent inputs that were changed from their 2010 values. Dark yellow cells represent inputs that the E3 model calculated with a formula.

	Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	Oregon	Utah	Washington	Wyoming
Tax Assumptions											
COD Year	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023
Income Tax - Federal	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%
Income Tax - State	4.90%	8.84%	4.40%	5.80%	6.75%		5.90%	7.60%	4.55%		
Income Tax - MACRS Term	5	5	5	5	5	5	5	5	5	5	5
Tax Credit - Federal ITC (%)	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Tax Credit - Federal ITC (Eligible % of Capital Cost)	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
Tax Credit - Federal ITC Expiration	2024	2024	2024	2024	2024	2024	2024	2024	2024	2024	2024
Tax Credit - Federal PTC (\$/MWh)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tax Credit - Federal PTC Expiration	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033
Tax Credit - Federal PTC (Years)	10	10	10	10	10	10	10	10	10	10	10
Tax Credit - Federal PTC Escalator (%)	1.89%	1.89%	1.89%	1.89%	1.89%	1.89%	1.89%	1.89%	1.89%	1.89%	1.89%
Tax Credit - State expiry (end year)											
Tax Credit - State Tax Credit (%)									0%	0%	
Tax Credit - State Tax Credit (\$/MWh)									\$3.50		
Tax Credit - State Tax Credit (\$ millions)											
Tax Credit - State Tax Credit Annual Max (% capex)											
Tax Credit - State Tax Credit Annual Max (\$mill)									\$999		
Tax Credit - State Tax Credit Duration (Years)									4		
Sales Tax - State Rate (no exemption)	5.60%	7.25%	2.90%	6.00%	0.00%	6.85%			6.10%	6.50%	4.00%
Sales Tax - State Rate for Wind	5.60%	3.94%	0.00%	4.50%		2.60%			0.00%	3.25%	4.00%
Sales Tax - Average Local Rate	2.78%	1.60%	4.91%	0.03%		1.39%			1.15%	2.88%	1.44%
Sales Tax - State & Local Combined	8.38%	5.54%	4.91%	4.53%	0.00%	3.99%	0.00%	0.00%	1.15%	6.13%	5.44%
Sales Tax - % of Capital Cost Subject to Sales Tax	66.67%	66.67%	66.67%	66.67%	66.67%	66.67%	66.67%	66.67%	66.67%	66.67%	66.67%
Sales Tax - Maximum per MW											
Sales Tax - Exemption Expiration (end year)		2030	2042	2030		2025			2042	2029	
Gross Receipts Tax - State Rate				3.00%		0.14%	4.875%	0.57%		6.01%	
Gross Receipts Tax - Average Local Rate				0.00%			2.74%			0.00%	
Gross Receipts Tax - State & Local Combined	0.00%	0.00%	0.00%	3.00%	0.00%	0.14%	7.62%	0.57%	0.00%	6.01%	0.00%
Property Tax - Rate Input (cost basis)	1.86%	1.00%	2.19%	0.00%	1.63%	1.11%	1.04%	1.74%	1.01%	0.800%	0.74%
Property Tax - During Exemption Period	0.37%	1.00%	0.58%	0.00%	0.82%	0.50%	1.04%	1.74%	1.01%	0.80%	0.74%
Property Tax - Exemption Expiration (end year)	2042			2050	2028	2042					
Property Tax - Straight-line Depreciation (0=None)	20	20	20		20	20	25	20	20	27	20
Property Tax - Depreciation Floor	10%	20%	15%		15%	0%	20%	20%	20%	15%	20%
Excise Tax - State (\$/MWh)					\$0.35						\$1.00
Excise Tax - Starting Year					1						3
Payments-In-Lieu-Of-Taxes (PILOT) - (\$/kW)											
Payments-In-Lieu-Of-Taxes (PILOT) - (\$/MWh)											

Data sources include the 2010 E3 Wind Energy Cost Model; "Estimating the Impact of State Tax and Incentive Policies on the Cost of Wind Development in the West" by Godby et. al, 2024; "Energy Tax Provisions: Overview and Budgetary Cost" by Congressional Research Service, 2024; Wall Street Journal MarketData Money Rates, 2024; "Tax Foundation Facts & Figures: How does your state compare?" by Tax Foundation, 2024, and LSO analysis of other states' tax structures.

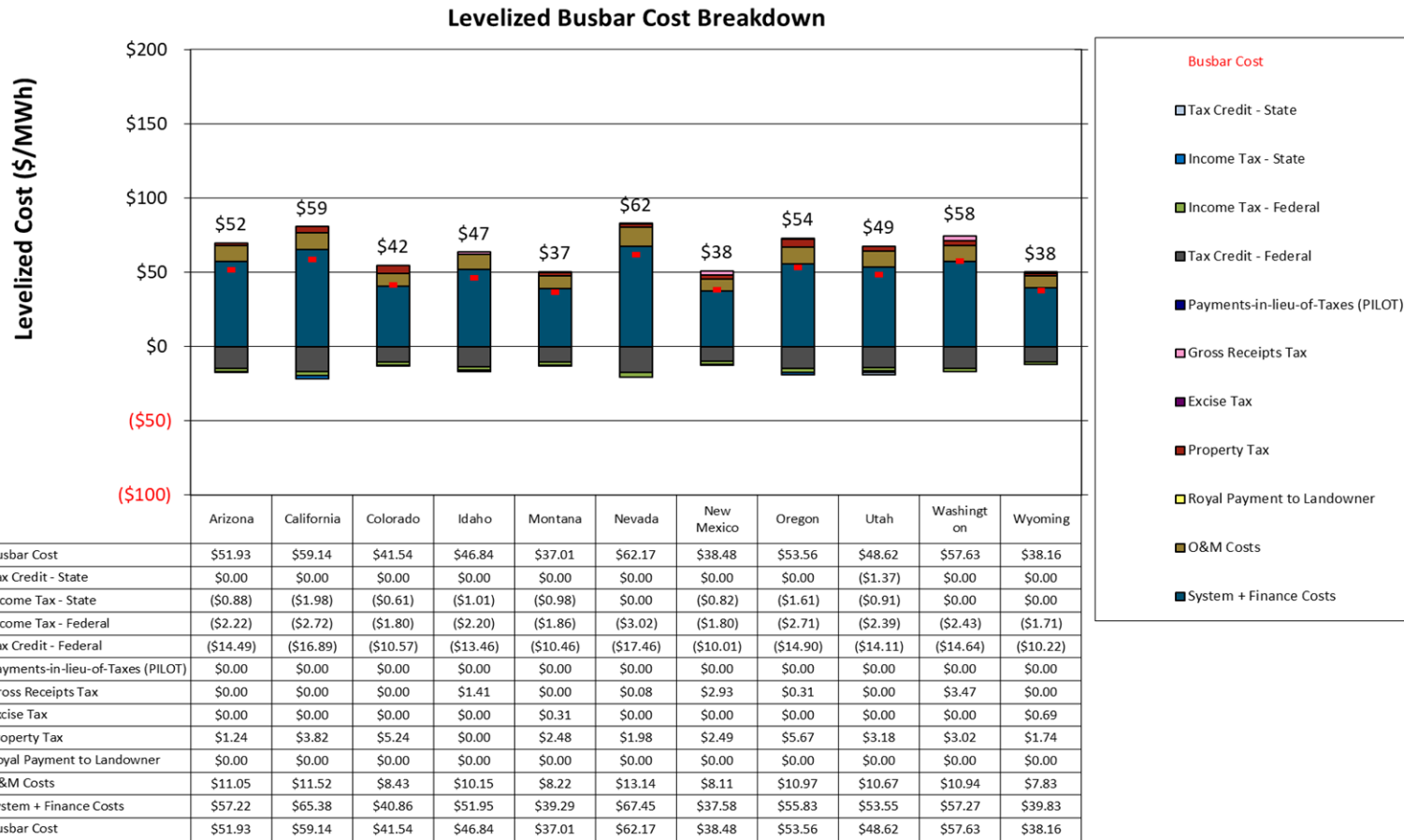
Attachment D-3: Model Output with No Regional Cost Adjustments or Capacity Factors

The graph and table below break down the levelized busbar costs for each state. This version assumes no regional cost adjustments (system cost at \$1,511 per kWh for each state) and a capacity factor for all states of 35%.



Attachment D-4: Model Output with Regional Cost Adjustments and Capacity Factors

The graph and table below break down the levelized busbar costs for each state. This version assumes regional cost adjustments and state-specific capacity factors as provided in the system and financing costs inputs page.



Attachment D-5: Ranking Comparison

	2010 E3		2024 UW Report, 35% Capacity		2024 LSO Update of E3, 35% Capacity		2024 LSO Update of E3, Regional Capacity	
	Pro Forma Cost	Rank	Pro Forma Cost	Rank	Pro Forma Cost	Rank	Pro Forma Cost	Rank
Arizona	\$93.36	5	\$56.42	5	\$57.61	5	\$51.93	7
California	\$95.89	6	\$60.08	10	\$58.00	6	\$59.14	10
Colorado	\$91.50	4	\$55.63	4	\$62.57	10	\$41.54	4
Idaho	\$102.11	9	\$57.17	6	\$56.00	2	\$46.84	5
Montana	\$76.62	1	\$55.51	3	\$56.14	3	\$37.01	1
Nevada	\$103.27	10	\$57.64	7	\$56.66	4	\$62.17	11
New Mexico	\$88.53	3	\$61.04	11	\$60.75	9	\$38.48	3
Oregon	\$96.26	7	\$55.33	2	\$58.30	7	\$53.56	8
Utah	\$98.17	8	\$54.69	1	\$55.14	1	\$48.62	6
Washington	\$109.60	11	\$59.30	9	\$62.81	11	\$57.63	9
Wyoming	\$81.91	2	\$58.08	8	\$58.85	8	\$38.16	2

HOUSE BILL NO. HB0147

Electrical generation tax.

Sponsored by: Representative(s) Larsen, L and Walters and
Senator(s) Case

A BILL

for

1 AN ACT relating to taxation and revenue; imposing an excise
2 tax on the production of electricity; providing credits for
3 other taxes paid; providing for administration and
4 rulemaking authority; providing penalties; providing for
5 distribution of the tax; and providing for an effective
6 date.

7

8 *Be It Enacted by the Legislature of the State of Wyoming:*

9

10 **Section 1.** W.S. 39-24-101 through 39-24-111 are
11 created to read:

12

13

CHAPTER 24

14

TAX ON ELECTRICAL GENERATION

15

1 **39-24-101. Definitions.**

2

3 There are no specific applicable provisions for definitions
4 for this chapter.

5

6 **39-24-102. Administration.**

7

8 The department of revenue shall enforce the provisions of
9 this chapter. The department shall promulgate rules
10 necessary for the implementation and enforcement of this
11 chapter.

12

13 **39-24-103. Imposition.**

14

15 There is levied an excise tax upon the privilege of
16 producing and selling electricity in this state. The tax
17 shall be imposed upon the sale of any electricity produced
18 in Wyoming on or after January 1, 2025, and shall be paid
19 by the person producing the electricity. The tax shall be
20 imposed on the annual gross energy earnings from energy
21 produced in Wyoming.

22

23 **39-24-104. Taxation rate.**

1

2 The tax rate shall be three and one-half percent (3.5%) of
3 the annual gross energy earnings from energy produced in
4 this state.

5

6 **39-24-105. Exemptions.**

7

8 (a) No tax shall be imposed upon electricity that is
9 produced from any generating facility owned or operated by
10 the federal government or the state of Wyoming.

11

12 (b) No tax shall be imposed upon electricity that is
13 produced for the personal consumption of the producer,
14 including any excess production of electricity that does
15 not exceed five hundred (500) kilowatt hours in any
16 twenty-four (24) hour period.

17

18 **39-24-106. Licensing; permits.**

19

20 There are no specific applicable provisions for licenses
21 and permits for this chapter.

22

23 **39-24-107. Compliance; collection procedures.**

1

2 (a) Returns and reports. Any person producing
3 electricity for sale within this state that is subject to
4 the tax imposed by this chapter shall report:

5

6 (i) The annual gross energy earnings from energy
7 produced in Wyoming on or before February 1 of the year
8 immediately following the year in which the electricity was
9 produced;

10

11 (ii) Sales of electricity in Wyoming that are or
12 could be subject to sales or use tax under W.S. 39-15-103
13 or 39-16-103, regardless of any exemption that may apply to
14 sales of electricity. Sales of electricity shall be
15 reported by jurisdiction as required by rule of the
16 department.

17

18 (b) Payment. Any person owing a tax under this
19 chapter shall pay the tax one (1) time each year on or
20 before February 1 of the year immediately following the
21 year in which the electricity was produced. The tax shall
22 be collected by the department of revenue.

23

1 (c) Timelines. There are no specific applicable
2 provisions for timelines for this chapter.

3

4 **39-24-108. Enforcement.**

5

6 (a) Audits. There are no specific applicable
7 provisions for audits for this chapter.

8

9 (b) Interest. Interest at an annual rate equal to
10 the average prime interest as determined by the state
11 treasurer during the preceding fiscal year, plus four
12 percent (4%), shall be added to all delinquent taxes under
13 this chapter. To determine the average prime interest rate,
14 the state treasurer shall average the prime interest rate
15 for at least seventy-five percent (75%) of the thirty (30)
16 largest banks in the United States. The interest rate on
17 delinquent taxes shall be adjusted on January 1 of each
18 year following the year in which the taxes first became
19 delinquent. In no instance shall the delinquent interest
20 rate be less than twelve percent (12%) nor greater than
21 eighteen percent (18%).

22

23 (c) Penalties. The following shall apply:

1

2 (i) If any person fails to make or file a return
3 and remit the tax as required by W.S. 39-24-107, the
4 department shall impose a penalty of five percent (5%) of
5 the taxes due for each thirty (30) day period, or a
6 fraction thereof, elapsing between the due date of the
7 return and the date filed, unless the person for good cause
8 obtains from the department an extension of time for filing
9 before the due date for filing. In the event of an
10 extension, the person shall pay the interest due on
11 delinquent payments set forth in subsection (b) of this
12 section. In no event shall the total penalty imposed by
13 this subsection exceed twenty-five percent (25%) of the tax
14 due. The department, for good cause, may waive a penalty
15 imposed for failure to file a return for any one (1)
16 calendar year, provided that:

17

18 (A) The return was filed within five (5)
19 business days following the due date, including a due date
20 determined by an approved extension period; and

21

1 (B) The taxpayer requests the waiver in
2 writing within fifteen (15) days after the return was
3 filed, setting forth the reasons for the late filing.

4

5 (ii) If any part of a tax deficiency is due to
6 the negligence or intentional disregard of this chapter or
7 department rules there shall be added a penalty of five
8 percent (5%) of the amount of the deficiency plus interest
9 as provided by subsection (b) of this section. The taxes,
10 penalty and interest shall be paid by the taxpayer within
11 ten (10) days after receipt of notice and demand by the
12 department;

13

14 (iii) Taxes due together with interest,
15 penalties and costs shall be collectible by the department
16 by appropriate judicial proceedings;

17

18 (iv) The department may credit or waive
19 penalties imposed by this section as part of a settlement
20 or for any other good cause.

21

22 (d) Liens. Any delinquent tax is a lien upon the
23 property of any person owing tax under this chapter from

1 and after the time the tax is due until the tax is paid.
2 The tax lien shall have preference over all liens except
3 any valid mortgage or other liens of record filed or
4 recorded before the date the tax became due.

5

6 (e) Tax sales. There are no specific applicable
7 provisions for tax sales for this chapter.

8

9 **39-24-109. Tax remedies.**

10

11 (a) Credits. The following shall apply:

12

13 (i) Each taxpayer is entitled to a credit
14 against tax liability under this chapter for all excise,
15 sales, use, severance and ad valorem taxes paid in the tax
16 year by the same taxpayer to any taxing authority in
17 Wyoming. If the taxpayer produces electricity in this state
18 used in the production process of any mineral that is taxed
19 under the provisions of W.S. 39-14-101 et seq., the person
20 producing the electricity shall be entitled to a credit
21 equal to the amount of the tax paid on the minerals
22 consumed in the production of the electricity;

23

1 (ii) To qualify for a credit under this
2 subsection for severance taxes paid by another person, the
3 person producing the electricity shall provide
4 documentation that adequately demonstrates, as determined
5 by department rules, the amount of taxes paid on the
6 minerals that were consumed in the production of the
7 electricity. The taxpayer shall report the credit to the
8 department on the return filed under W.S. 39-24-107;

9

10 (iii) In no case shall any refund be due or
11 payable if the amount of any credit claimed under this
12 section exceeds the amount of tax due under this chapter.

13

14 **39-24-110. Statute of limitations.**

15

16 There are no specific applicable provisions for a statute
17 of limitations for this chapter.

18

19 **39-24-111. Distribution.**

20

21 (a) The proceeds from the tax imposed by this chapter
22 shall be distributed on March 1 of each year for taxes
23 attributable to the preceding year as follows:

1

2 (i) Subject to subsection (b) of this section,
3 an amount of proceeds equal to the amount of taxes that
4 would be due if the sales of electricity reported under
5 W.S. 39-24-107(a)(ii) were subject to sales tax as provided
6 in W.S. 39-15-101 through 39-15-111, notwithstanding any
7 tax exemption for sales of electricity, shall be
8 distributed as follows:

9

10 (A) Credit sixty-nine percent (69%) to the
11 state general fund for deposit by the state treasurer;

12

13 (B) Deduct one percent (1%) from the
14 remaining share to cover all administrative expenses and
15 costs attributable to the remaining share and credit for
16 deposit by the state treasurer into the general fund for
17 that amount;

18

19 (C) The balance shall then be paid to the
20 treasurers of the counties, cities and towns for payment
21 into their respective general funds. The percentage of the
22 balance that will be distributed to each county and its
23 cities and towns will be determined by computing the

1 percentage that net sales taxes collected attributable to
2 vendors in each county including its cities and towns bear
3 to total net sales taxes collected of vendors in all
4 counties including their cities and towns. This percentage
5 of the balance shall be distributed within each county as
6 follows:

7
8 (I) To each county in the proportion
9 that the population of the county situated outside the
10 corporate limits of its cities and towns bears to the total
11 population of the county including cities and towns;

12
13 (II) To each city and town within the
14 county in the proportion the population of the city or town
15 bears to the population of the county.

16
17 (ii) Any remaining amount of proceeds after the
18 distributions specified in paragraph (i) of this subsection
19 shall be deposited in the general fund.

20
21 (b) If the amount of proceeds available under
22 subsection (a) of this section are less than the amount of
23 taxes that would be due if the sales of electricity

1 reported under W.S. 39-24-107(a)(ii) were subject to sales
2 tax as provided in W.S. 39-15-101 through 39-15-111, the
3 amount to be distributed under paragraph (a)(i) of this
4 section shall be reduced proportionally to the state and to
5 each county, city and town based on the ratio of the amount
6 of proceeds that are available compared to the amount of
7 taxes that would be due if the sales of electricity
8 reported under W.S. 39-24-107(a)(ii) were subject to sales
9 tax as provided in W.S. 39-15-101 through 39-15-111.

10

11 **Section 2.** W.S. 39-11-101(a)(xviii) is amended to
12 read:

13

14 **39-11-101. Definitions.**

15

16 (a) As used in this act unless otherwise specifically
17 provided:

18

19 (xviii) "This act" means W.S. 39-11-101 through
20 ~~39-23-111~~ 39-24-111.

21

	<u>FISCAL NOTE</u>		
	FY 2025	FY 2026	FY 2027
NON-ADMINISTRATIVE IMPACT			
Anticipated Revenue increase			
GENERAL FUND	\$0	\$9,200,000	\$9,200,000
LOCAL SOURCES FUND	\$0	\$8,800,000	\$8,800,000

Source of revenue increase:

This bill imposes an excise tax on the production of electricity produced in Wyoming on or after January 1, 2025. The tax rate is 3.5 percent of the annual gross energy earnings from energy produced in this state. Electricity producers shall report and pay the proposed tax on or before February 1 of the year immediately following the year of production. Each taxpayer is entitled to a credit against tax liability for all excise, sales, use, severance and ad valorem taxes paid in the tax year by the same taxpayer to any Wyoming taxing authority.

Assumptions:

The above estimate is based calendar year 2022 Wyoming electricity generation, consumption and sales data from the Energy Information Administration (EIA). Estimated credits for sales and use taxes, mineral taxes, ad valorem taxes and wind generation taxes are based on data from the EIA, the January 2024 Consensus Revenue Estimating Group (CREG) report, the Department of Revenue (DOR) and the 2023 DOR Annual Report. The total tax at the 3.5 percent rate before the tax liability reduction for tax credits is estimated at approximately \$133 million per year, with total tax credits allowed estimated at approximately \$115 million per year, resulting in a net tax liability (tax paid) of \$18 million per year.

The proposed tax will be distributed 69 percent to the General Fund with the remaining share distributed to local governments after deducting 1 percent for administration. If the proceeds are less than the taxes that would be due if the electricity sales were subject to sales tax, the amount distributed to the state and to local governments shall be reduced proportionally based on the ratio of the available proceeds compared to taxes that would be due if the sales of electricity were subject to sales tax. The total annual sales tax that would be due on electricity is estimated at approximately \$43.4 million, based on FY23 taxable sales and a combined sales tax rate of 5.48 percent. The estimate in the table above reflects the distribution with this proportional reduction.

NOTICE-AGENCY ESTIMATE OF ADMINISTRATIVE IMPACT REQUESTED

This bill has administrative impact that appears to increase duties or responsibilities of one or more state agencies and may impact agency spending or staffing requirements. As introduced, the bill does not modify any state agency budget or current personnel authorizations.

The following state agencies will be asked to provide their estimate of the administrative fiscal impact prior to the first committee meeting held to consider the bill:

Department of Revenue

Prepared by: Dean Temte, LSO Phone: 777-7881

(Information provided by Bret Fanning, Department of Revenue, 777-5220)